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**Investigating Indonesian Teachers' Experience, Motivation, and
Confidence in English-Medium Content Teaching through a
Professional Development Blended Learning Environment**

A thesis
submitted in fulfilment
of the requirements for the degree
of
Doctor of Philosophy in Education
at
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by
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Abstract

A blended learning approach has been adopted in many English language learning environments in secondary and higher education because it is seen as having the potential to maximise the benefits of both face-to-face and online learning. This research investigated a blended learning approach for the professional development of teachers working at Indonesian vocational schools who learned English so they could teach their subject in that language. This research was prompted by the lack of preparedness and confidence among Indonesian teachers in vocational high schools to use English as a medium of instruction in the classroom, even though they had attended training courses in a face-to-face mode. The face-to-face training programme was a one-off brief course with limited capacity, able to accommodate only one teacher from one school. After the training programme was concluded, teachers returned to their home schools; were isolated from their peers in the training course; and consequently the learning interaction was not maintained.

To understand the teachers' learning and thinking in the blended learning programme, the conceptual framework for the research was developed based on social constructivist and adult learning theories that were applied in the blended learning course. The development of teachers' pedagogical content knowledge (PCK) in an English-medium teaching environment, the quality principles of a blended learning approach, and the concepts of motivation and confidence were considered to better understand the complexities involved in the blended learning model.

As this research sought to discover the subjective experiences and multiple perspectives perceived by the teacher participants undertaking a blended learning course, a qualitative case study approach was adopted. A case study method allowed me to work closely with the teacher participants to obtain their perspectives and was helpful to understand complex phenomena such as motivation and confidence. Sixteen teachers from three Indonesian vocational schools participated in an English language learning course using a blended learning approach. Data were collected through pre- and post-surveys, semi-

structured interviews, teachers' reflective journals, classroom observations, and documents, and analysed using thematic data analysis and an inductive approach.

The findings of the research were categorized according to the research questions. Teacher participants reported that peer interaction and collaboration both in face-to-face and online sections of the blended learning course were the technology-mediated learning activities that contributed to the enhancement of their teaching skills in an English-medium content teaching environment. Teacher participants also reported that their motivation to learn and confidence to use English for content teaching increased. The teachers' self-reports were consistent with observation data. Factors that contributed to the increased motivation and confidence were reported, including the learning experiences of the teacher participants, peers feedback, and positive responses from students subsequently taught by teachers who undertook the course. Online cohort-based interaction was reported as having contributed to the gradual increase of using English for content teaching. The learning experience in the blended learning course inspired the teachers to integrate social networking sites such as Facebook and Edmodo in their teaching practice.

This discussion of blended learning practice is structured around several key themes and topics. The first looks at how mediated interaction occurred in the blended learning course, including social mediation, self-mediation, and artefact mediation. The second examines factors that made collaboration occur in the blended learning course. A third theme is that of the increased confidence of the teachers involved. The transformation of instrumental into integrative motivation through factors such as social interaction is a fourth topic of interest. The fifth is how teachers developed their PCK in an English-medium content teaching environment. How English language learning was sustained through online interaction, in relation to important issues of behavioural change and social presence, constituted the sixth topic. Lastly, the research will discuss the social constructivist perspectives involved in the blended learning course.

The research suggests a blended learning design has the potential to enhance the teaching skills, motivation, and confidence of Indonesian teachers in an English-medium content teaching environment. The design of a blended learning course should promote peer interaction and collaboration and lead to meaning-making and knowledge co-construction.

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For from Him and through Him and for Him are all things.

To Him be the glory forever! Amen. (Romans 11:36)

Table of Contents

Abstract.....	i
Acknowledgements.....	iii
Table of Contents	v
List of Tables	ix
List of Figures.....	x
Chapter One – Introduction.....	1
1.1. Introduction	1
1.2. Research Problem.....	1
1.3. The Aims of the Research	3
1.4. Research Questions	4
1.5. The Research Perspectives	5
1.5.1. Influential Factors Associated with the First Perspective.....	6
1.5.2. Influential Factors Associated with the Second Perspective	11
1.6. Method.....	13
1.7. The Structure of the Thesis	14
1.8. Summary	15
Chapter Two – The Context of the Research	16
2.1. Introduction	16
2.2. General Information about Indonesian Education.....	16
2.3. Language Policy: English as the Medium of Instruction	17
2.4. English Language Teaching in Indonesian Schools.....	19
2.6. English Language Communication Skills at Vocational Schools	20
2.7. English Language Training Courses for Indonesian Teachers.....	21
2.8. Internet and ICT in Indonesia.....	23
2.9. Summary	24
Chapter Three – Literature Review	25
3.1. Introduction	25
3.2. The role of social media within a blended learning professional development course.....	25
3.2.1. The Use of Facebook for Learning Purposes	26
3.2.2. Blended Learning: A Model for Teacher Professional Development .	30
3.3. The Integration of Content and a Foreign Language.....	40
3.3.1. Content-Based Language Instruction (CBLI).....	41
3.3.2. Content Teachers in an EFL Context.....	42
3.4. Motivation in Foreign Language Learning.....	45
3.4.1. Motivation in a Facebook-Integrated Learning Environment	45
3.4.2. Motivation in a Blended Learning Environment	47
3.4.3. Motivation in Teacher Professional Development	48
3.4.4. Motivation Assessment.....	49

3.5. Confidence in Foreign Language Learning	52
3.5.1. Factors that Enhance Confidence in Using English as a Foreign Language	52
3.5.2. Assessing Changes in Confidence	55
3.6. Summary	55
Chapter Four – Conceptual Framework	57
4.1. Introduction	57
4.2. The Theoretical Foundation of Learning	57
4.2.1. Sociocultural and Activity Theory	58
4.2.2. Constructivist Theories	64
4.2.3. Social Constructivism	65
4.2.4. Distributed Cognition	69
4.2.5. Situated Learning	70
4.3. Concepts Framing the Blended Learning Programme	71
4.3.1. Developing Teachers' PCK in a Professional Development Programme	72
4.3.2. Principles Undergirding Effective Adult Learning	72
4.3.3. Blended Learning Approach	77
4.3.4. Motivation and Confidence	89
4.4. Summary	91
Chapter Five – Methodology	93
5.1. Introduction	93
5.2. Research Design	93
5.2.1. The Selection of Methodology	95
5.2.2. The Selection of the Case Study Method	96
5.3. Data Collection Procedures and Instruments	97
5.3.1. Questionnaire Survey	99
5.3.2. Reflective Journals	100
5.3.3. Observation	100
5.3.4. Interviews	102
5.3.5. Student Focus Group Interview	103
5.3.6. Documents	103
5.4. Gaining Access to Schools	104
5.5. Research Sites	105
5.5.1. School 1, Singaraja	106
5.5.2. School 2, Jakarta	106
5.5.3. School 3, Bogor	107
5.5.4. Literacy Leaders in Research Sites	108
5.6. The Intervention	109
5.6.1. The blended learning course design	109
5.6.2. The blended learning course implementation	110
5.7. Data Analysis	120

5.7.1. Thematic Data Analysis.....	121
5.7.2. Crosschecking Data Resources	123
5.8. Trustworthiness	124
5.8.1. Engagement	124
5.8.2. Observation.....	125
5.8.3. Data Triangulation	125
5.8.4. Member Check.....	126
5.8.5. Peer Debriefing	126
5.8.6. Potential Trustworthiness Problems	126
5.9. Summary	127
Chapter Six – Research Findings.....	129
6.1. Introduction	129
6.2. Technology-mediated learning activities	129
6.2.1. Peer Interaction and Collaboration	130
6.2.2. Online Interaction	137
6.2.3. Teaching Strategies Adopted by Participants	138
6.2.4. Active Engagement in the Absence of Marking	138
6.2.5. Reflection.....	139
6.2.6. Self-Regulated Learning	140
6.2.7. Participants’ Perspectives on the Blended Learning Course	141
6.2.8. Themes for Further Discussion.....	143
6.3. Confidence in Using English for Content Instruction	144
6.3.1. Changes in Confidence	144
6.3.2. Circumstances Affecting Confidence	145
6.3.3. Theme for Further Discussion	151
6.4. Motivation to Learn and to Use English.....	151
6.4.1. Changes in Motivation.....	151
6.4.2. Factors Affecting Motivation	159
6.4.3. Themes for Further Discussion.....	161
6.5. The Impact of the Blended Learning Course on Teaching Practice.....	161
6.5.1. The Use of English	162
6.5.2. The Use of Social Media for Online Learning Interaction	169
6.5.3. Other aspects of the blended learning course	170
6.5.4. Themes for Further Discussion.....	171
6.6. Students’ Perspectives on Teachers’ Use of English	172
6.7. Summary	175
Chapter Seven – Discussion.....	176
7.1. Introduction	176
7.2. Theme 1: Mediated Interaction in the Blended Learning Course	176
7.2.1. Social Mediation	176
7.2.2. Self-Mediation	180

7.2.3. Artefact Mediation	180
7.3. Theme 2: Collaboration in the Blended Learning Environment	183
7.3.1. The Context of the Teacher Participants	183
7.3.2. The Design of the Blended Learning Course.....	184
7.4. Theme 3: Confidence from Positive Online Peer Interaction	186
7.5. Theme 4: Motivational Transformation	187
7.6. Theme 5: Teachers' PCK Development in an English-Medium Content Teaching Environment	189
7.7. Theme 6: Sustaining the Learning through Online Interaction	191
7.7.1. Change of Behaviour	191
7.7.2. Social Presence	192
7.8. Theme 7: Social Constructivist Perspectives on the Blended Learning Course.....	194
7.9. The sustainability of blended learning approaches within Indonesian education	197
7.10. Summary	200
Chapter Eight – Conclusion, Implications, and Recommendations.....	202
8.1. Introduction	202
8.2. Summary of the Findings	202
8.3. Implications of the Research	204
8.4. Potential Changes and Development from the Blended Learning Course	207
8.3.1. Revisiting the Design of the Blended Learning Course	207
8.3.2. Distribution of Responsibilities	208
8.3.3. ICT-Related Training for Teachers.....	208
8.4. Limitations of the Research.....	209
8.5. Recommendations	210
8.5.1. Recommendations for Future Research.....	210
8.5.2. Recommendations for Teacher Training Centres	211
8.5.3. Recommendations for Teacher Participants and Schools.....	211
8.6. Summary	212
References	213
Appendices	246

List of Tables

Table 1. <i>Characteristics and Research Questions</i>	5
Table 2. <i>Internet Speed in ASEAN Countries</i>	23
Table 3. <i>Characteristics, Research Questions, and Methods</i>	98
Table 4. <i>Objectives of the Course</i>	110
Table 5 <i>Demographic Characteristics of Participants</i>	112
Table 6. <i>Outline of the Course (face-to-face)</i>	115
Table 7. <i>Self-reported Changes in Motivation</i>	152
Table 8. <i>Conversion of options to describe the levels of motivation</i>	154
Table 9. <i>Summary of the changes in integrative motivation</i>	154
Table 10. <i>Pre- and post-survey of perceived changes in instrumental motivation</i>	157
Table 11. <i>Responses to amotivation statement</i>	158

List of Figures

Figure 1. <i>Map of Indonesia, licensed under the Creative Commons</i>	16
Figure 2. <i>The design of the research</i>	94
Figure 3. <i>The design of the blended learning course</i>	109
Figure 4. <i>Facebook Group "English for Classroom Instruction"</i>	118
Figure 5. <i>Edmodo page "English learning for teachers"</i>	119
Figure 6. <i>The relationship between English, pedagogy, and social and cultural understanding</i>	131
Figure 7. <i>Participants' self-reported change of confidence</i>	145
Figure 8. <i>Participants' self-reported change in integrative motivation</i>	155
Figure 9. <i>Participants' self-reported change in instrumental motivation</i>	156
Figure 10. <i>The self-reported use of English in developing learning materials before the blended learning course</i>	163
Figure 11. <i>The self-reported use of English in developing learning materials after the blended learning course</i>	163
Figure 12. <i>The mean self-reported percentage of class time for English classroom management</i>	164
Figure 13. <i>The mean self-reported percentage of time for English use in content teaching</i>	165
Figure 14. <i>Percentage of English and Indonesian used for classroom management and content delivery during the first observation</i>	166
Figure 15. <i>Percentage of English and Indonesian used for classroom management and content delivery during the second observation</i>	166
Figure 16. <i>The role of social presence to sustain online learning</i>	193

Chapter One – Introduction

1.1. Introduction

A blended learning approach has been adopted in many English language learning environments in secondary and higher education because it is seen to have the potential to maximise the benefits of face-to-face and online learning. This research investigated a blended learning approach for the professional development of teachers working in Indonesian vocational schools who learned English in order to teach their subject in that language. This chapter explains the research problem, the aims, questions, perspectives underpinning the research, and the methods adopted in the research. The chapter ends with a description of the structure of the thesis and a summary of the chapter.

1.2. Research Problem

This research stems from the lack of preparedness and confidence among Indonesian teachers in vocational high schools to use English for content teaching – teaching some subjects other than the English language – in the classroom, even though they have previously attended training courses for this purpose (Vocational Education and Development Centre for Business and Tourism Jakarta, 2005). Although English is a foreign language in Indonesia, the government regards English language communication skills as central to development. The guidelines for quality improvement state that students must achieve high levels of English-language proficiency (Ministry of Education and Culture, 2007a) and that one means of achieving this goal is through the use of English as a medium of instruction in mathematics, science, and vocational high school training courses. The reason behind the requirement of English-medium instruction is to provide students with more exposure to an English-speaking environment so that English language learning and acquisition are more likely to occur. The English-speaking environment is believed to better prepare students in a competitive international job market.

One of the problems in the implementation of English-medium content teaching in Asian countries is teachers' lack of English language communication

skills (Nunan, 2003). In Indonesia, a number of English language training courses have been offered to teachers so that they could improve these skills and effectively use English in their teaching. The training courses are generally one-off, short-term programmes and there are few opportunities for teachers to improve their English language proficiency. In many cases, teachers need to attend residential programmes away from their families and have to leave their teaching jobs.

There have been few studies examining the effect of short training courses on teachers' performance in Indonesian schools. For example, a study of the influence of short training courses on Indonesian teachers' performance in Semarang showed that the training course was not effective enough in improving the teachers' performance, even though the training did contribute a little to the improvement of teachers' competence (Kunartinah & Sukoco, 2010).

In their study, performance was defined as the working result of an individual based on his or her role in an organization and measured using the organization's own standards. Competence was defined as the knowledge, skills, and capabilities relevant to the work required of an individual. Since teachers who had learned English were among the participants in the study, I assume that performance included English-medium content teaching and that competence included teachers' English language communication skills. Accordingly, the study shows that the short-term training courses improved teachers' English proficiency but did not improve their ability to teach their subjects in English.

The problem originates with the nature of English language learning opportunities for teachers in vocational high schools in Indonesia. There are a number of unpublished reports from the formal monitoring and evaluation (ME) follow-up programmes by the Ministry of Education and Culture (MEC) explaining that when these teachers returned to their schools, their English language use was not sustained (Vocational Education and Development Centre for Business and Tourism Jakarta, 2005).

Also, from my own informal observations and discussions with teachers in different schools, some problematic issues emerged, which are consistent with those identified in the formal evaluations. Since the programme allows for only one participant from a school, the participant has no companions to sustain his or her English language communication skills and is isolated from other training

participants. Related problems include teachers' lack of English language proficiency and confidence, inadequacies that are probably exacerbated because English-language learning is not sustained. Given that they have limited opportunities to practise English, there is a need for programmes to help sustain their learning.

In the vocational high school sector, there are 144,846 teachers (Ministry of Education and Culture, 2009). Considering the large number of teachers in Indonesian vocational high schools and that English is a foreign language, it will take a considerable amount of time and money to provide face-to-face training courses and for teachers to improve their English proficiency. It is necessary to change the training course strategy so that more teachers receive opportunities to attend English-language training courses over an extended time-frame.

Online course delivery is a potential way to complement face-to-face English-language training courses. The combination of face-to-face and online learning, known as a blended learning approach, has the potential to support the use of English among Indonesian vocational high school teachers after they have completed face-to-face training. This research investigated the question of whether a blended learning approach can support Indonesian vocational high school teachers in the field in their ongoing English language acquisition and thus lead to enhancing the ability, motivation and confidence of Indonesian teachers working at vocational high schools to use English for content teaching.

1.3. The Aims of the Research

This research has three main aims. First, it aims to add knowledge to existing research about how the English language learning of Indonesian vocational high school teachers could be mediated by cultural and technological tools in a blended learning environment.

Secondly, it seeks to understand the role of authentic learning environments in Indonesian vocational teachers' English language learning for content teaching. In the research, the authentic language learning environment for teacher professional development course considered adult learning and social constructivist learning theories. One of the principles of adult learning stresses authentic learning that involves real-world problems relevant to their contexts (Doyle, 2011).

The third aim is to explore the use of a blended learning approach for professional development to sustain English language use for content teaching within the Indonesian educational environment.

1.4. Research Questions

As indicated in the discussion of the research problem, there is a need for Indonesian teachers in vocational schools to sustain their English learning and enhance their motivation and confidence to use English as a medium of instruction in the classroom. A blended learning programme can potentially provide a vehicle to meet the need. The research investigated the effects of using a blended learning environment to sustain the English language learning of Indonesian vocational high school teachers. The research is guided by two primary research questions:

1. How can cultural and technological tools in a blended learning environment be designed to mediate the English language learning of Indonesian vocational high school teachers?
2. How do the mediated learning activities in a blended learning programme affect the motivation and confidence of Indonesian vocational high school teachers to use English as a medium of instruction in the classroom?

Subsequently, four specific research questions emerged from the two primary questions as shown in Table 1 below.

Table 1. *Characteristics and Research Questions*

	Characteristics to be considered	Research Questions
1	The use of social media within a blended learning professional development course to mediate the English language learning of Indonesian vocational high school teachers. [Aim 1]	How could social media within a blended learning professional development course mediate the English language learning of Indonesian vocational high school teachers?
2	The use of adult learning and social constructivist theories in the design of a blended learning course. [Aim 2]	Is blended learning associated with changes in the confidence of Indonesian vocational high school teachers to use English for their teaching?
3	The use of adult learning and social constructivist theories in the design of a blended learning course. [Aim 2]	Is blended learning associated with changes in the motivation of Indonesian vocational high school teachers to learn and use English in their teaching?
4	The effect of online, cohort-based interaction on teachers' use of English as a medium of instruction. [Aim 3]	What is the effect of online cohort-based interaction on sustaining teachers' use of English as a medium of instruction?

1.5. The Research Perspectives

Two perspectives inform the research. The first is that online learning as an extension of the face-to-face tutorial has the potential to sustain learning and thus improve teachers' English language proficiency (ability) and their confidence in using English for teaching in the classroom. The second is that online social interaction among cohort members has the potential to improve teachers' motivation to learn English and consequently can have a positive influence on their English-medium content teaching skills.

1.5.1. Influential Factors Associated with the First Perspective

The first perspective relates to the first two research questions. Three interrelated issues associated with the first perspective are (1) sustaining the learning process, (2) improving English language proficiency, and (3) building confidence. When the language learning process is sustained, both language proficiency and confidence in using a language should improve over time (Ushioda, 2001). Language learning, in particular, requires frequent interaction to maintain the learning process.

It has been argued that a blended learning approach can stimulate language interaction through which language proficiency can be improved (Bañados, 2006; Bueno-Alastuey & López Pérez, 2013). The learning of the target language is more likely to be enhanced either through language acquisition or explicit teaching. When learners interact in the target language either in face-to-face or an online mode, language acquisition occurs through which the language learning is enhanced (Dalton-Puffer, 2007). Therefore the use of the target language in the blended learning course needs to be maximized so that learners are exposed to it and their language learning is sustained and enhanced.

To obtain the maximum potential of the online section of the blended learning course, Wu et al. (2010) suggested human and technological factors as keys, which are then categorized into four factors. The first is the cognitive factor, which includes learners' abilities and beliefs about the use of technology. The second is the ICT factor, which includes the availability of computer and internet access as well as the selection of communicative tools. The third is the course design factor, which emphasizes that a blended learning course should be carefully designed to meet the needs of the learning participants and to enhance participants' engagement and interaction. The fourth is the linguistic self-confidence factor, which plays an important role in foreign language learning and interaction.

These four factors address the first perspective – the potential of online learning to sustain the English language learning of Indonesian teachers and to improve their English language proficiency and confidence in using the target language in their teaching. Provided that the four factors as described above are anticipated and prepared before conducting a blended learning course, a blended

learning approach has potential for sustaining English language development in the Indonesian context. The four factors are discussed in the following sections.

1.5.1.1. Cognitive Factors

As mentioned earlier, cognitive factors in the current context refer to teachers' beliefs about learning in general that could influence their attitudes toward blended learning. These include 1) computer "self-efficacy" (Compeau & Higgins, 1995), and 2) performance expectation (J.-H. Wu, Tennyson, & Hsia, 2010). As self-efficacy refers to the degree to which a learner feels capable of learning from a given method (Bandura, 1990, 2012; Leidner & Jarvenpaa, 1995), computer self-efficacy is the confidence of a learner in his ability to operate a computer for learning purposes. Performance expectations are understood to be the learner's belief that he or she could perform better through blended learning (J.-H. Wu et al., 2010). It is widely believed that the greater the degree of computer self-efficacy, the greater the level of performance expectations one has.

It is therefore important to help teachers become familiar with the use of the information and communication technology (ICT) tools that will be applied in the study. The selection of ICT communicative tools was based on the purpose of the study and the teachers' current level of ICT skills. The ICT tools needed to be user-friendly, meaning that participants should be able to operate the tools using their existing skills, with minimal additional training (Awazu et al., 2009). I believe that utilizing user-friendly communicative tools contributes to teachers' computer self-efficacy and performance expectations because the tools are not a barrier but a supporting tool.

1.5.1.2. Information and Communication Technology (ICT) Factors

The communicative tools used in this study were those that support synchronous and asynchronous interaction. The former refers to communication between two or more people in real time but in different places. This type of communication is supported by Skype and live chat as provided in Facebook, for example. Asynchronous interaction refers to communication between two or more people at different times and in different places. This type of communication is supported by text messaging features in tools such as Facebook, Edmodo, and email.

An assumption underpinning this research is that user-friendly communication tools should improve teachers' performance expectations in blended learning. This assumption is based on two previous studies (Ge, Yamashiro, & Lee, 2000; Ragoonaden & Bordeleau, 2000) of an online collaborative learning environment. The two studies suggest that it is important to ensure that the technology does not leave the learning participants with frustration, anxiety, stress, and confusion and should not impede the flow of collaboration among learning participants. It is also important to know the technological knowledge and skill of the learning participants in order to anticipate technological problems. Therefore, selecting appropriate communication tools is essential in order to avoid an unnecessary burden and stress and to support online collaboration (Chen, 2007). I consider social media networking tools such as Facebook, Edmodo, and Skype to be user-friendly for Indonesian teachers because teachers at Indonesian vocational high schools already have basic computer skills, including the ability to use the internet, as outlined in the Indonesian teachers' competency standard (Ministry of Education and Culture, 2007b).

Teachers in Indonesian vocational high schools must have four competencies: pedagogical, personality, social, and professional competencies. Technological knowledge and skills are included under pedagogical and professional competencies. One out of ten pedagogical competencies is "memanfaatkan teknologi informasi dan komunikasi untuk kepentingan pembelajaran" (Ministry of Education and Culture, 2007b, p. 17) – to utilize information and communication technology (ICT) in teaching. One out of five professional competencies is "memanfaatkan teknologi informasi dan komunikasi untuk mengembangkan diri" (Ministry of Education and Culture, 2007b, p. 21) – to utilize ICT for communication and self-development.

I assume that teachers at Indonesian vocational high schools, especially at the schools that have been selected by the government to meet the international standard, have achieved the standards mentioned. My assumption is supported by the fact that classrooms at vocational high schools have LCD projectors for teaching and learning activities. Moreover, 60.3 million Indonesians are Facebook users and are ranked as the fourth largest group of Facebook users in the world, as

of May 2014 (Statistita, 2015). I also assume that many vocational high school teachers are included in the large number of users.

In my view, an email list, blog, social media networking, and Skype are user-friendly tools for teachers at Indonesian vocational high schools and therefore offer the possibility of asynchronous interaction and collaboration. For synchronous interaction, video communication tools such as Skype and the video call features in Facebook, along with text-based synchronous tools such as chat in social networks and Yahoo messenger, are considered user-friendly tools. These asynchronous and synchronous modes of interaction have become more accessible to Indonesian teachers now as many communication tools, like hand-held mobile devices, allow users to access the internet. The ICT laboratory with internet access at schools and the reasonable, affordable cost of accessing the internet at internet cafes in Indonesia facilitate teachers' participation in online learning environments.

1.5.1.3. Course Design Factors

In the context of teacher professional development as discussed in this research, course design refers to the learning strategies developed and enacted in the blended learning environment. Some pedagogical principles need to be considered when selecting a learning strategy. First, a learning strategy must be selected based on the goal of the learning (Bañados, 2006). It is also important to consider a learning approach that uses learning objectives and activities as a vehicle for learning a foreign language (Met, 1991). Secondly, adult learning principles need to be integrated in the course, such as the consideration that adult learners are more task and goal-oriented (Knowles, 1984). To foster adult learning, Merriam (2008) suggests that “reflection and dialogue, whether with the self, another, or a group” (p. 97) need to be encouraged. Adult learners relate new information to their prior knowledge and experience (Cercone, 2008).

The English language learning course for Indonesian teachers in this research was tailored for a specific purpose: to enhance English language communication skills in an English-medium content teaching environment. To meet this goal, the learning content and strategy must promote activities and tasks that can enhance English language communication skills in a classroom context.

The teachers participating in the course need to practise their English language communication skills for teaching their subjects.

Such an English for professional communication course is called English for occupational purposes (EOP) and is classified in the category of English for specific purposes (ESP) (Tsou, 2009). In an ESP course, the selection of content and method is based on the learners' reason for learning and their learning needs (Hutchinson & Waters, 1987). An ESP learning environment must be active, constructive, collaborative, intentional, conversational, contextualized, and reflexive (Tarnopolsky, 2012). The course design of the English language learning for Indonesian teachers in this research is described in the methodology chapter.

A thorough consideration and anticipation of these three factors (cognitive, ICT, and course design factors) generated English language learning activities in the context of the current research. These generated activities addressed the first research question, which is to identify factors that affect positively, negatively, or neutrally the English language learning process for Indonesian teachers of vocational high schools. Another factor is the linguistic self-confidence factor, which addresses the second research question.

1.5.1.4. Linguistic Self-Confidence Factors

Another key issue is teachers' linguistic confidence. This issue addresses the second research question, which asks if blended learning correlates with any change in confidence. Greater confidence in the use of a foreign language emerges in part from greater proficiency in the target language (Gaudet & Clement, 2009). According to Molberg (2010), there are two constructs that contribute to self-confidence in foreign language use: (1) anxiety which depends on the level of comfort in using the target language, and (2) competence which depends on perceived proficiency in the target language. When learners believe that their level of language competence and level of comfort are high, they are more likely to use the language in a given context or circumstances.

Consistent practice sustains learning and more frequent interaction in the target language improves competence in that language, which in turn helps to increase confidence (B. Yu & Shen, 2012). Research designed to predict the roles of linguistic confidence, integrative motivation, and second language proficiency on the cross-cultural and academic adaptation of international Chinese students in

Australia found that linguistic confidence was the strongest and most critical predictor of both socio-cultural and academic adaptation (B. Yu & Shen, 2012).

Sawir (2005) also found three major deficiencies for international students in Australia: linguistic confidence, English language proficiency, and motivation, and the greatest difficulty was lack of confidence. One factor influencing linguistic confidence was prior English language learning experience in teacher-centred classrooms that focused on grammatical knowledge and reading skills instead of communicative competence. Regular, pleasant interaction with speakers of the target language contributes to enhancing linguistic confidence (Clément, Dornyei, & Noels, 1994; Hummel, 2013; Noels, Pon, & Clément, 1996; W.-C. V. Wu, Yen, & Marek, 2011).

Linguistic confidence can also be improved through online courses which offer consistent practice in using the target language (Spolsky, 2011). These studies inform the present research and the view that communicative competence must be enhanced through consistent practice which in turn will lead to increased linguistic self-confidence for learners. Accordingly, a blended learning course needs to consider the learners' engagement in using the target language for communication.

1.5.2. Influential Factors Associated with the Second Perspective

The second perspective, which relates to the last two research questions, is that the online interaction of the blended learning environment has the potential to increase teachers' motivation to learn English and consequently enables them to use English for teaching their subjects. Online cohort-based interaction occurs when they post problems and provide feedback concerning the problems. As they use English to discuss their problems in their online interaction, English language learning may occur and contribute to their English language development. When the online interaction is encouraging to participants, it could have a positive impact on their motivation.

1.5.2.1. Motivation

The issue of motivation in second language learning is central to the third research question, which asks if blended learning correlates with changes in teachers' motivation to use English in their teaching. In foreign language learning,

motivation has been viewed as a key factor for success. Lucas et al. (2010) define it as “the individual’s attitudes, desires, and effort” (p. 3), driving and maintaining the learning process to acquire the target language. In the context of foreign language learning, motivation is recognized as one of the most important determinants to achieve and attain a target language (Lucas et al., 2010). Another definition of motivation is the degree to which attention and effort are invested in various actions, which may or may not be the ones that the teacher expected (Brophy, 2010).

An assumption about motivation underpinning this research is that both instrumental and integrative motivations are powerful in encouraging teachers’ active learning participation, as found in previous studies (Gardner & MacIntyre, 1991; C. H. Lin & Warschauer, 2011). Instrumental motivation in foreign language learning refers to practical reasons for learning the language, such as passing an examination or securing career promotion, whereas integrative motivation refers to such reasons as being able to better understand people and being included among people who speak the language (Gardner & Lambert, 1972). The selection of appropriate topics for discussion, the relevance of learning materials to the needs, the learning strategies, and interaction with peers all have influence on motivation because motivation is not static but dynamic. Therefore, a blended learning course needs to consider all these issues to increase teachers’ motivation in foreign language learning. More issues dealing with motivation in foreign language learning are discussed in the Literature Review and the Conceptual Framework chapters.

1.5.2.2. Online Cohort-Based Interaction

A discussion of online interaction addresses the fourth research question, which is to investigate the effect of online cohort-based interaction on Indonesian vocational high school teachers’ use of English for content teaching. The term “cohort” is defined as “a group of people who stay together from the beginning to the end of a programme and who grow through the process while developing community and support, experiencing essentially the same stimulus material and challenges of the work environment” (Fenning, 2004, p. 3).

This definition is appropriate for the group of Indonesian teachers who participated in the blended learning course of this research. The teachers studied

in three different schools in the face-to-face section of the blended learning course but the three groups of teachers met in the online section. They shared a common interest and learning goal, namely the use of English for teaching their subjects. They constituted a group of adult learners who participated in a constructivist, socio-cultural learning framework, in which it is maintained that learning is mediated by language and interaction among members of the group and that each individual integrates new information into their existing knowledge to achieve meaningful learning (Fenning, 2004).

The cohort-based learning of the Indonesian teachers occurred in a blend of face-to-face and online learning. One of the determining factors in the success of online learning is active participation in a learning environment that promotes a sense of community (Sadera, Robertson, Song, & Midon, 2009), indicated by “membership, influence, integration, and fulfilment of needs, and shared emotional connection” (p. 278). Then, in the design of the blended learning course, community building within the cohort must be purposefully developed and maintained.

D. Conrad (2005) suggests that certain critical factors need to be considered, such as how much time learners spend online, the duration of the programme, and how much interaction is expected. Considering these critical factors, a four-month blended learning programme for Indonesian teachers was designed to allow ample time for them to interact. Interaction among teachers from the beginning to the end of the blended learning period was encouraged, as this interaction was expected to build knowledge. To create good discussion in an online learning environment, careful planning and facilitation are important (P. Albion & Ertmer, 2004). To trigger quality interaction among the learning participants, it is important to include relevant, meaningful content, reality-based discussion, and collaboration. More discussion about pedagogical issues in an online learning environment is provided in the Conceptual Framework chapter of this thesis.

1.6. Method

To answer the research questions, an “intervention” – an English language learning programme for Indonesian teachers in vocational high schools using a blended learning approach – was needed. As already noted, a blended learning

approach is a combination of face-to-face and online learning interaction. To minimise technological difficulties and to encourage active participation, a social media software tool (Facebook) was used in the blended learning course. Other aspects of the blended learning course design included face-to-face English language instruction, online interaction in English (peer collaboration for lesson planning and materials development), and peer-based micro-teaching for formative feedback. In this blended learning course, I acted as the learning facilitator. Instead of inviting teachers to travel to one place, I travelled to the schools for the face-to-face tutorials.

The teachers from the various schools did not meet in person but interacted and collaborated in the online environment. Data were collected from the reflective journals of the teacher participants, from semi-structured interviews, classroom observations in which teacher participants used English as the medium of instruction, the online interaction script, and document analysis. Perspectives from students who attended their classes were also obtained. Braun and Clarke's (2006) approach to thematic analysis was adopted to analyse the data. The blended learning course design, data collection, and data analysis procedures are described in detail in Chapter 5 (Methodology).

1.7. The Structure of the Thesis

The thesis is organized into eight chapters. This introductory chapter provides an overview of the research, including the research questions, perspectives underpinning the research, and the significance and scope of the research. Chapter Two provides the context of the research and includes information relating to education, curriculum development, issues in English language teaching, the background of the Indonesian language policy, and the research sites. Chapter Three provides a review of relevant literature, including computer assisted language learning (CALL) for teacher professional development, the integration of content and foreign language learning, and motivation and confidence in foreign language learning. A blended learning approach is included in the CALL environment section.

The Conceptual Framework chapter (Chapter Four) follows and provides a framework for the research. Chapter Five describes and justifies the qualitative research methodology used in this research, the research setting and design, the

ethical clearance process, and a description of the blended learning activities carried out in an intervention programme. The data collection procedures and methods of analysis employed in this research are discussed together with a treatment of the measures taken to maintain the validity and trustworthiness of the research. Chapter Six describes the findings of the research and signals issues for further discussion. Chapter Seven discusses key issues emerging from the findings. Chapter Eight provides the conclusions, implications, and recommendations for further research, for the Indonesian government, for schools and the teacher participants.

1.8. Summary

This chapter has presented an overview of the research. It began with describing the research problem, the questions, the perspectives underpinning the research, and the methods. A description of each chapter of the thesis has also been provided. This research is expected to contribute to existing discussions concerning foreign language learning using a blended learning approach for teachers' professional development. The next chapter presents the research context to better understand the importance of a teacher professional development course for Indonesian teachers, the English language learning experiences of teachers in Indonesia, and the ICT infrastructure which may be a support or an obstacle for the implementation of a blended learning course.

Chapter Two – The Context of the Research

2.1. Introduction

This chapter provides the context that underpins the research. It starts with a discussion of Indonesian education in general and is followed by an account of the language policy which required teachers to use English as a medium of instruction. The description of the vocational education system and the importance of English communication skills will help to better understand why this language policy was established. A discussion of the issues concerning English language teaching in Indonesia and English language training courses for Indonesian teachers will provide a description of the English language learning experience of many teachers in Indonesia. Finally, this chapter discusses the infrastructure in Indonesian schools that could support the implementation of a blended learning course for teachers' professional development.

2.2. General Information about Indonesian Education

Located in Southeast Asia, the republic of Indonesia is an archipelago consisting of around 17,000 islands and is the fourth most populous country in the world, with more than 240 million people (Badan Pusat Statistik, 2012). Indonesia has one official language, Bahasa Indonesia, but also has more than 500 local languages (Dardjowidjojo, 2000; Imperiani, 2012). The population is distributed among thirty-four provinces, as shown in the map in Figure 1 below.



Figure 1. *Map of Indonesia, licensed under the Creative Commons*

Given the wide distribution of the population, it is not surprising that educational problems vary from one area to another. This variation is expressed in terms of infrastructure, learning facilities, teacher development, and learner

characteristics. Furthermore, the central government's decentralization policy has contributed to the diversity of these educational problems (Bjork, 2003, 2004; Yuwono, 2005). Nevertheless, local governments at provincial and district levels have to follow the national competency standard as outlined in the national curriculum.

Indonesian education has a 6-3-3 system that includes six years in primary school, three years in junior high school, and three years in senior high school. Primary and junior high schools are categorized as primary education, and the senior high schools are categorized as secondary education, which covers general high schools and vocational and technical high schools (Ministry of Education and Culture, 2012; President of Republic of Indonesia, 2003). General high schools prepare their graduates for higher education, whereas vocational high schools prepare their graduates to be workers in various industries. However, graduates from vocational and technical high schools are not limited to industrial work only. They still have an opportunity to continue their studies at higher levels of education.

Bahasa Indonesia is the official language in Indonesia and is used as the medium of instruction in schools, whereas English is a foreign language. However, a language policy established by the Ministry of Education and Culture required some schools to use English as the medium of instruction and this policy forms part of the contextual background of the present research. The following section discusses the language policy.

2.3. Language Policy: English as the Medium of Instruction

The language policy that required English to be used as the medium of instruction stemmed from a significant reform in education, as regulated in Law 20/2003. The most significant reform was in Article 50, section 3, which stated that “Pemerintah dan/atau Pemerintah Daerah menyelenggarakan sekurang-kurangnya satu satuan pendidikan pada semua jenjang pendidikan untuk dikembangkan menjadi satuan pendidikan yang bertaraf internasional” (President of Republic of Indonesia, 2003). The English translation is “the government and/or local government will establish at least one education unit (school) providing all levels of education (primary to senior high school) to be developed as a school following international standards (RSBI).” These international

standards involved the use of English as the medium of instruction, in agreement with Law 56/1998 that allows the use of a foreign language as the medium of instruction (President of Republic of Indonesia, 1998, 2003) in selected schools.

The government believes that it is important to improve the quality of human resources for national development and for global competition. English language communication skills are seen to be an important component in quality improvement. Consequently, government regulations stipulated that foreign languages, especially English, could be used as the medium of instruction in particular subject areas (President of Republic of Indonesia, 1998, 2003). This policy was further strengthened and supported by the Minister of National Education (2007) in the quality assurance guidelines, which stated that in several selected schools in Indonesia English should be used as the medium of instruction for specific subjects, including mathematics, the sciences, and vocational courses (Ministry of Education and Culture, 2007a).

Several efforts were made by the Ministry of Education and Culture as well as by local governments to support the schools selected to meet the international standard. They were provided with support, such as improving the managerial skills of school principals and other educational personnel, improving infrastructure and learning facilities, and providing teacher development programmes (Atweh & Abadi, 2009). Teachers were sent to training centres to improve their English language proficiency so that they could use English for content teaching.

However, an unpublished report of a monitoring and evaluation programme showed that the use of English as the medium of content instruction had not progressed as expected, due to teachers' lack of English communication skills (Vocational Education and Development Centre for Business and Tourism Jakarta, 2005).

Thus the issue of teachers' lack of preparedness to use English as a medium of instruction provided both a context and a rationale for this research. The following section discusses issues associated with English language teaching in Indonesia to provide a picture of the English learning experiences of many Indonesians.

2.4. English Language Teaching in Indonesian Schools

In elementary school, English is not mandatory but some elementary schools in big cities began to offer English (Jakarta Globe, 2012) to students in grades 4, 5 and 6. Elementary schools in rural areas do not offer English to their students, due to a shortage of qualified teachers. English is offered in junior and senior high schools, on average for four contact hours per week (Dardjowidjojo, 2000; Imperiani, 2012; Lowenberg, 1991; Soedijarto, Thamrin, Karyadi, Siskandar, & Sumiyati, 2010), with one contact hour equal to forty-five minutes, as mentioned in the 1975 curriculum.

Dardjowidjojo (2000) states that different approaches to English language teaching were adopted together with the introduction of each new curriculum. Initially, in 1945 a grammar-translation method was used, an oral approach in association with the 1968 curriculum, then an audio-lingual approach with the 1975 curriculum, and a communicative approach with the curricula in 1984 and 1994. However, even though it was called “communicative,” this communicative language teaching was not successfully implemented due to:

- Teachers’ lack of confidence in using English in the classroom;
- Limited time allocated to English teaching;
- Large classes of forty students;
- A crowded curriculum;
- The measurement of success, which was the national examination with its focus on structural knowledge (Musthafa, 2001).

Until 2001, the textbook and the final national examination were still dominated by expected knowledge of structural, grammatical content. In addition, a major shortcoming was that the 1984 and 1994 curricula did not clearly explain how a communicative approach should be implemented (Dardjowidjojo, 2000). The number of contact hours for English in general high schools varied from two to four hours per week. In vocational schools, the number of contact hours for English varied from two to seven hours per week, depending on the vocational area.

Students in tourism and hospitality, for example, had more English classes compared to their peers in technical areas. In the current curriculum (Curriculum 2013), the number of contact hours for English is even less – only 2 hours per

week (Kementerian Pendidikan dan Kebudayaan, 2012). English as a medium of instruction was only used in the English classroom, not for other subjects. Many teachers of English would use the Indonesian language to explain English grammar. Consequently, many Indonesians, including those who are now working as teachers in Indonesian vocational high schools, do not have experience in learning a subject through the medium of English. At university level, two to three hours per week of English is offered to all students in non-language departments for the first two semesters only (Imperiani, 2012). It varies from one university to another. The following section will discuss the importance of English language communication skills at Indonesian vocational high schools.

2.6. English Language Communication Skills at Vocational Schools

Indonesian Government Regulation 29/1990, chapter 1, section 3, states that vocational secondary education prioritizes the development of students' skills needed in particular types of jobs (President of Republic of Indonesia, 1990, 2003). Vocational education in Indonesia is managed by the Directorate of Technical and Vocational Education (DTVE), under the Directorate General of Primary and Secondary Education, Ministry of Education and Culture. As I mentioned earlier, English language communication skills are perceived as important for students to complement their vocational skills because they enhance students' capabilities and opportunities for finding better jobs. The Directorate of Technical and Vocational Education (DTVE) of MEC supports outstanding students at vocational high schools and sends them to participate in the World Skills Olympics – a vocational skills competition event. Participation in such skills competitions has raised the students' understanding of the importance of vocational skills as well as of English language communication training.

The main goal for enhancing the English language communication skills of students at Indonesian vocational high schools is to prepare them for the global job market. Some programmes are designed to meet that goal. One of them is an annual skill Olympics at national level for all fields of vocational and technical education, including an English debating competition. The national skill Olympics is followed by local governments at provincial and district levels and the best representatives are selected to participate at the national level. The national

winner then participates in the ASEAN and World Skills Olympics. The participation of Indonesian students in the regional and international competitions requires excellent English language communication skills.

Another programme that requires students to have good English language communication skills is the dual-system programme, which arranges for young people to do an internship in relevant industries, either at local, national, or international locations. Many Indonesian vocational schools have established linkages with industries in various countries, such as Malaysia, Brunei Darussalam, Singapore, Thailand, Saudi Arabia, Australia, and the United Kingdom, to enable their students to work and learn in the workplace. For the internship programme, particularly at the international level, students must have sufficient English communication skills to be able to communicate in English with staff and customers in the workplace.

Teaching students' English skills (as a school subject) in vocational schools solely through English language teachers is clearly inadequate because of the limited contact hours. An English speaking environment at school is important and needs to be created. Aware that not everyone in the school can speak English, step-by-step efforts are considered. At the initial stage, only teachers of mathematics, science and vocational training courses are expected to use English as the medium of instruction. With more teachers using English to teach content, students will be more exposed to an English language speaking environment and acquisition of the language is more likely to occur. The following section discusses how Indonesian vocational school teachers were trained at a teacher training centre to improve their English language proficiency.

2.7. English Language Training Courses for Indonesian Teachers

Teacher training centres in Indonesia are under the direction of the Ministry of Education and Culture and were established to provide professional development courses for practising teachers. These training centres specialise in various vocational subjects and other subject fields. One of the teacher training centres is the Centre for Development and Empowerment of Teachers and Education Personnel (CEDETEP) for Business and Tourism (Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan bidang Bisnis dan Pariwisata in Bahasa Indonesia), which was previously named the

Vocational Education Development Centre (VEDC) for Business and Tourism in Jakarta. I work at this centre as a teacher trainer. One of the training courses offered at the teacher training centre is an English language training course for teachers working in Indonesian vocational high schools.

The training courses are conducted in face-to-face mode and many teachers have to travel far from their home to the teacher training centre, leaving their teaching jobs and families to attend the courses, which take two to four weeks. In a given fiscal year, there are only two such English language training courses provided for teachers across the country and each training course can only accommodate twenty-four teachers.

In the training course, the use of English expressions in a classroom context is modelled for the teachers and includes such topics as how to start the class, vocational vocabulary or terminology related to the teachers' subject matter, managing questions and answers, and how to end the lesson. Teachers work together to develop learning materials and lesson plans in English. There is also a session for peer teaching in which teachers practise content delivery in English to get corrective feedback. The pedagogy for teaching in the English language is integrated into the peer-teaching sessions when providing corrective feedback.

The training course is conducted intensively for two weeks from 8 a.m. to 5 p.m. Monday to Friday, and from 8 a.m. to 12 p.m. on Saturdays. However, the essential problem, mentioned in the Introduction, is that when the teachers return to their schools, their English language learning is not sustained. This became known through an unpublished report of a formal monitoring and evaluation (ME) programme undertaken by the teacher training centre (Vocational Education and Development Centre for Business and Tourism Jakarta, 2005). As schools send only one teacher to participate in the training course, teachers have no colleagues to maintain their English and are isolated from other teacher participants. Accordingly, it is necessary for the teacher training centre to consider ways of sustaining English language learning. A blended learning approach might be more appropriate in an Indonesian context as it provides online learning interaction in addition to face-to-face instruction. The following section discusses the infrastructure that would be needed for the implementation of a blended learning approach.

2.8. Internet and ICT in Indonesia

The internet speed in Indonesia is 4.1 megabytes per second (Mbps), the third lowest among Southeast Asian countries in the region. It was reported that the average ASEAN internet speed is 12.4 Mbps (ASEAN Briefing, 2014). Internet speed rankings in the region are given in Table 2 below.

Table 2. *Internet Speed in ASEAN Countries*

No	Country	Internet speed at Mbps
1	Singapore	61.0
2	Thailand	17.7
3	Vietnam	13.1
4	Cambodia	5.7
5	Malaysia	5.5
6	Myanmar	4.9
7	Brunei Darussalam	4.9
8	Indonesia	4.1
9	Lao PDR	4.0
10	Philippines	0.6

* Source: ASEAN Briefing, 2014

With an internet speed of 4.1 Mbps, 16.72% of the total population in Indonesia are internet users (Internet Lives Stats, 2014). In Indonesia, the internet costs US\$26.04 per MB and is considered expensive compared to neighbouring countries such as Singapore (US\$2.93 per MB) and Malaysia (US\$11.54 per MB (Info Komputer, 2014).

Information and communication technology (ICT) supported by the internet has been utilized in the Indonesian education system as described in the 2005-2009 strategic plan of the MOE. ICT is used for school information management systems and learning purposes (Ministry of Education and Culture, 2005). For example, ICT-based distance learning or online courses have been implemented by the Indonesian Open University and some private universities such as Petra Christian University of Surabaya (Yuhetty, 2004). In collaboration with the MOE, the Southeast Asian Ministers of Education Organization Regional Open Learning Centre (SEAMOLEC), the Indonesian Open University and 23

other state universities have conducted ICT-based in-service teacher training programmes, especially for Indonesian primary school teachers, to improve their qualifications to the Bachelor degree level (Pannen, Riyanti, & Pramuki, 2007). The programmes were conducted in a blended/hybrid learning mode, a blend of online and face-to-face delivery. The online dimension was conducted through email, video conferencing, and web-based learning. Indonesian universities also use ICT for joint research and learning resource sharing (Wardiana, 2002).

At high school level, teachers use the internet to develop learning materials and post them in their personal blogs. For example, a teacher of chemistry in Surabaya asked her students to visit her personal blog and learning interaction occurred on the blog (Rufiati, 2012). High school teachers also use ICT for teaching and learning processes in the classroom because high schools have internet facilities and the classrooms have been provided with LCD projectors. All Indonesian vocational high schools expected to meet international standards have been provided with internet access and LCD projectors in the classrooms. This development has the potential to support a blended learning course for teacher professional development.

2.9. Summary

This chapter describes the context for the research. The discussion of Indonesian education in general, the language policy, English language teaching, and the importance of English language skills in Indonesian vocational schools all provide a reason to improve the ability of teachers to communicate in the English language. The discussion of the English language training courses for teachers indicates that face-to-face training alone is inadequate to sustain the teachers' English language learning. A blended learning approach, a combination of face-to-face teaching and online learning, is suggested as an appropriate way to sustain the English language learning of Indonesian teachers. Additionally, the fact that Indonesian teachers are distributed in different islands makes face-to-face professional development problematic. The discussion of the internet and ICT in Indonesia made clear that many schools are now equipped with internet access and that for Indonesian teachers, access to the internet is readily available. The infrastructure and easy access to the internet provide support for the implementation of a blended learning course.

Chapter Three – Literature Review

3.1. Introduction

This chapter presents a review of literature relevant to the present research. It includes four main areas – the role of social media within a blended learning professional development course, the integration of content when teaching in a foreign language, motivation, and confidence. The first area describes how technology, including social networking, has been used to enhance language learning as part of teacher professional development. It also includes a discussion of the importance of considering contextual factors in teacher professional development design, presents a blended learning model, and discusses the development of pedagogical content knowledge (PCK). The second area discusses how content and the use of a foreign language can be integrated in classroom instruction. This challenge has been understood and implemented differently in different schools. The third area, motivation, includes motivational issues in a blended learning environment and motivation assessment. The fourth area is confidence in using English for communication. It includes factors that have the potential to increase confidence and discusses the way changes in confidence are assessed.

3.2. The role of social media within a blended learning professional development course

A great number of studies (Mondahl & Razmerita, 2014; Shih, 2011; Stevenson & Liu, 2010) report the use of Web 2.0 technologies, including social media sites for foreign language learning. The most researched areas include supportive and conducive learning environments, the improvement of communication skills such as writing, reading, and grammatical knowledge, attitudes and perceptions, learner autonomy, identity, and technology comparison (S. Wang & Vásquez, 2012). Mondahl and Razmerita (2014) argue that a social media-based learning environment supports social, collaborative knowledge construction, and the sharing and building of information. In a Web 2.0 technology-based learning environment, people not only read and retrieve information, but they also share experiences and build knowledge (Lomicka &

Lord, 2009). These studies indicate the effectiveness of social media in language learning across a range of subject areas.

Few studies (Bingham & Conner, 2015; Rutherford, 2013) report the use of Web 2.0 technologies for professional development. Work-related interaction in social media makes learning a valuable, ongoing process, and it enables people to work together more effectively with their peers, employers, and even with people in different departments (Bingham & Conner, 2015). Rutherford (2013) reports that the social media site (Facebook) has been explored for teacher professional development, but mostly has been used for resource and idea exchanges.

In terms of professional development of teachers who integrate computer-assisted language learning (CALL) into their teaching, Son (2014) reported that online tools are frequently used by CALL practitioners for professional development. Web search engines (for example Google, Yahoo! Search), communication tools (for example Gmail, Skype), social networking sites (for example Facebook), are reported as the most frequently used tools. From the list of frequently used online tools, I will focus on social networking (Facebook) in a CALL environment because of the blended learning course design for professional development adopted in the present research. Even though the focus of the literature might not be teacher professional development, a review of literature on the use of Facebook, which includes the challenges it presents and ways that social media can be appropriated for learning purposes, will frame this research.

3.2.1. The Use of Facebook for Learning Purposes

Beck and Schell (2011) examined and analysed recent trends in the use of Facebook for language learning and teaching and termed it “Faceteaching.” They suggest that the Faceteaching environment has potential for pedagogical practice. For example, a communicative approach to second language learning is enacted in a Faceteaching environment because it allows peer interaction and collaboration and the teacher’s role is that of guide and facilitator.

Informing the present research is the view that the communicative approach, through which teachers can communicate and collaborate to practise their English communication skills, can be implemented in a blended learning

course. Topics for communication can be selected to meet the teachers' needs and interests and grammatical issues can be structured around the topics. This approach is consistent with adult learning principles and needs to be considered in a blended learning course. The ESA (Engage, Study, Activate) approach – the sequence of a language learning process – is adopted.

A number of studies point to the advantages of using Facebook for student interaction and collaboration (Bosch, 2009; Fewkes & McCabe, 2012; Mazman & Usluel, 2010) and for material and resource sharing (Mazman & Usluel, 2010). At school level, Facebook is often used for learning purposes across the school curriculum and a number of studies report positive student responses. Fewkes and McCabe (2012), for example, reported in an online survey conducted with sixty-three students that 73% of them believed that Facebook facilitated interaction and collaboration with other students, enabling them to receive extra help either from their teacher or friends with doing their assignments.

Students also perceived that they improved their self-organization as they received Facebook reminders, such as the due date of submitting an assignment. However, except for discussion of homework, Fewkes and McCabe (2012) did not specify what other kinds of interaction and collaboration the students engaged in on Facebook, and whether or not the collaboration was purposefully designed by the teachers. Student interaction and collaboration across the school curriculum can happen when students have homework but in a foreign language class, interaction and collaboration in the target language needs to be planned as a strategy to practise the language.

At tertiary level, Facebook was used in an English writing class to provide assessment, including corrective feedback on peer writing (Shih, 2011). This indicated that interaction and collaboration among students was designed and planned. Pre-test and post-test results revealed that students made significant improvement in their writing, including organization, grammar and structure, content, vocabulary, and spelling.

In interviews, students reported that they were satisfied with the use of Facebook in the English writing class and that its use improved teamwork. They believed peer collaboration through Facebook was more convenient as it reduced stress. However, these were self-reports and further investigation is probably

needed to find out why the Facebook-integrated learning environment was perceived to be convenient, reducing stress.

For collaborative work, students were put into small groups based on their grades (high, medium, and low) and this grouping system might have contributed to the convenience. Otherwise, peer assessment also can cause tension and stress for some students. For example, in a class characterised by varying English proficiency levels, how can a student with a low proficiency level provide criticism and assessment of a peer with a high level of proficiency?

Facebook was also used in an EFL classroom to post videos and to discuss comprehension questions based on the videos (Gamble, 2014). Out of ninety-seven students who responded to an open-ended questionnaire, the majority of them reported that they were satisfied with the use of Facebook in their EFL classroom as it helped them practise and improve their English language skills. However, it was not explicitly reported whether participation in the discussion was mandatory and graded because grading may affect the participation rate, as in Shih's (2011) study. Students also realised that they had more time to practise their English with peers outside the classroom as well as to build interpersonal relationships.

Dogoriti, Pange, and Anderson (2014) reported that when Facebook was added to Moodle as an adjunct learning platform, thirty-nine out of fifty-one (76%) students in an ESP classroom agreed that the use of Facebook supported a sense of learning community and 69% of students stated that their learning processes were enhanced in the Facebook environment. Ninety percent of the students preferred to use Facebook rather than Moodle for class discussion even though the students did not consider Facebook to be appropriate as the primary learning platform. As Bosch (2009) states, if Facebook is chosen by a large number of students for learning, Facebook has the potential to be an educational tool. The students viewed the discussion forum in Moodle as a more traditional learning tool. As Blattner (2011) notes, traditional discussion forums lack the social element in learning.

The use of Facebook has also been explored for teacher professional development. Rutherford (2010), for example, investigated the use of a Facebook group (Ontario teachers – resource and idea sharing group) as a source for informal teacher professional development through exchanging ideas and

resources. Within one year (2007-2008), 384 Facebook users participated in the discussion. After the solo discussion posts were eliminated, analysis of the participation rate showed that on average, each discussion topic had ten comments, and the greatest number of comments on a discussion topic was 110.

This rate indicates active participation and it is important to know what caused so high a rate. Content analysis of the discussion posts revealed that pedagogical content knowledge (PCK), which included discussions of how to make a lesson more interesting, engaging, and fun, was the topic most frequently discussed. It appears that PCK is a topic of interest in teacher discussions and this contributed to the high rate of participation. Since PCK comprises particular knowledge to be implemented by delivering specific content, teachers always need to update their PCK (Garritz, 2013, 2014). More issues relating to PCK will be discussed later in this chapter.

Rutherford's study (2010) informs the present research and the view that when the topic of discussion is relevant to current issues and to the needs of teachers, discussion in a Facebook group can be very useful for teacher professional development. Additionally, easy access to Facebook through mobile devices and the notification feature that Facebook provides may have contributed to the high rate of participation.

Despite the advantages of using Facebook for learning purposes, some studies also point to the challenges it presents. For example, Q. Wang, Woo, Quek, Yang, and Liu (2012) reported that Facebook did not support certain formats such as PowerPoint (PPT) and PDFs and therefore they had to resort to Google Apps for sharing course resources. It is important to note, however, that Facebook groups now support PPT and PDF formats.

Discussion in Facebook can also be easily disrupted because it is not organized following a threaded structure (Beck & Schell, 2011; Q. Wang et al., 2012). Privacy is another concern in a Facebook-integrated learning environment, as the privacy of students might be compromised (Gamble, 2014; Q. Wang et al., 2012). However, learning participants in a Facebook-integrated learning environment do not have to be Facebook friends so that privacy can still be protected against people outside the friends' list.

Facebook has now made progress in protecting the privacy of users. A Facebook user has the option whether to set his or her individual posting open to

the public or restricted to a friends' list, to close friends and family, or to keep it locked for his/her own private use. This feature in Facebook can reduce the risk of compromising privacy.

Shih (2011) reported other challenges in the Facebook-integrated English writing class. Some students enjoyed their time on the internet so much that they forgot to do their assignments. Others relied so heavily on the online correction tools that they acquired bad habits in vocabulary and spelling. For these particular challenges, an automatic reminder can be set so that students do not forget their assignments. Students need to train themselves in correct spelling and vocabulary and not rely too heavily on online correction tools.

This section has informed the present research by describing how Facebook has been appropriated for professional development purposes, especially to enhance foreign language learning in different contexts, and the challenges that must be anticipated. It also informs the present research by describing how social media sites have been used for teacher professional development through resources and ideas sharing. What is lacking in the literature are focused studies on how social media can be integrated in a teacher professional development blended learning course, especially for teachers who need to maintain and improve their teaching skills in a foreign language-medium content teaching environment.

The following section will discuss a blended learning model, in which Facebook can also be used for online learning interaction for teacher professional development programmes. Two particular issues need to be considered in such programmes, including in a blended learning environment: (1) the contextual factors that must be considered in designing the teacher professional development programme; (2) teachers' pedagogical content knowledge (PCK) which it is essential to develop.

3.2.2. Blended Learning: A Model for Teacher Professional Development

Graham (2013) investigated how blended learning has been variously understood and put into practice, such as in schools in K-12, in higher education, and in corporate learning models. The most common practice in blended learning is "a combination of traditional face-to-face and online instruction" (p. 334) in which online interaction replaces some portion of traditional face-to-face

instruction. This section will discuss five quality principles in a blended learning environment, teachers' contextual factors, and teachers' pedagogical content knowledge (PCK), all of which need to be considered in designing a teacher professional development programme.

3.2.2.1. Five Quality Principles

The five quality principles of the Sloan Consortium (Lorenzo & Moore, 2002; Moore, 2005) are often used to measure the effectiveness of a blended learning course. These include learning effectiveness, learner satisfaction, teacher satisfaction, access and flexibility, and cost effectiveness (Graham, 2013; Graham & Dziuban, 2007; Naaj, Nachouki, & Ankit, 2012).

Learning Effectiveness

Learning effectiveness is related to how the blended learning environment potentially helps students learn (Graham, 2013). A number of studies show that online peer interaction and collaboration together with classroom instruction contribute to learning effectiveness in a blended learning environment. For example, at tertiary level, Shih (2011) reported that a blended learning approach, in which Facebook was used for the online interaction component, provided more time for student interaction and collaboration in an English writing class. Students' English writing skills and knowledge improved through in-class instruction and student online collaboration (peer assessment and feedback).

Discussing teacher professional development, Owston, Sinclair, and Wideman (2008) reported that a combination of face-to-face sessions and online interaction contributed to the learning effectiveness achieved in the programme. Teacher participants attended a one-day face-to-face session followed by participation in online discussion sessions over an eight-week period. This pattern of training was undertaken three times with an additional final face-to-face session. Teachers learned a particular theme in each pairing of face-to-face and online interaction. This combination was seen to be effective because it provided enough time for teachers to experiment with the new knowledge and skills in their classroom, share their experiences and problems, and receive feedback from peers and facilitators through online interaction.

Owston, Sinclair, and Wideman's study (2008) informs the position taken in the present research that face-to-face sessions in a blended learning course can be used to discuss particular pedagogical content knowledge with the aim of teaching specific subjects in English, followed by online interaction to share classroom experiences and receive feedback from peers and facilitators.

Boitshwarelo (2009) explored a blended learning solution for biology teacher professional development in Africa. It was reported that eighteen teachers of biology had attended a three-day face-to-face workshop in which they discussed theoretical knowledge, developed lesson plans, undertook micro-teaching, and developed action plans to be implemented at their schools. However, the teachers did not implement the skills they learned in their classrooms. Various reasons included a lack of enthusiasm, limited peer coaching and collaboration (only one or two teachers per school attended the training), geographical separation, and time and cost constraints.

An online course which used WebCT was offered for three months as an extension to the face-to-face workshop. The teachers discussed practical work in biology (content) and issues such as changing trends in curriculum and instructional practices (pedagogy), and developed draft worksheets to be shared with their peers at schools and implemented as pilot projects with their students. They were first trained how to use the WebCT for interaction so that they could share their experiences with peers and instructors and receive support when needed.

Even though, as expected, the online interaction did not function very well due to limited internet access and other technical problems, blended learning was still seen as an appropriate approach for that particular context, provided that ICT infrastructure support was improved.

Even though the context of Boitshwarelo's study (2009) is not an English language learning course, it shares a similar background with the present research since teachers who attended the face-to-face training course failed to implement their newly gained knowledge in the classroom. The fact that only one or two teachers per school attended the training made them feel isolated and the learning was not sustained. Thus, Boitshwarelo's study informs the position taken in the present research that online learning interaction can be added to face-to-face

training to connect teachers and to maintain learning interaction among teachers from different schools.

Learner Satisfaction

Learner satisfaction derives from students' sense of engagement with their experience in the learning environment, including interaction with peers and instructors, learning outcomes that meet their expectations (Moore, 2005; Naaj et al., 2012), course management, and technology (Naaj et al., 2012). Obtained from surveys, interviews, or reflective journals, a large number of studies point to learners' perceived satisfaction in a blended learning environment.

For example, students in the English writing class which integrated Facebook in a blended learning environment reported in a survey that their satisfaction levels varied from moderately to highly positive. They were satisfied with the use of Facebook as a learning tool in the blended learning course, with the course arrangement which combined Facebook and peer assessment, and with their interaction with peers and the teacher (Shih, 2011). As noted earlier, the well-organized instructional design of this English writing class, including the grouping and grading systems, may also have contributed to learner satisfaction.

Through surveys and interviews with teachers who participated in a blended learning teacher professional development course, teachers as learners reported that they were satisfied with the face-to-face sessions as these matched their expectations and they gained a higher level of confidence (Owston et al., 2008). Teachers' willingness to "experiment with new ideas, activities, and approaches in their classroom as a result of the programme" (p. 1044) indicated their satisfaction. Teacher participants realised that the face-to-face sessions provided opportunities for in-depth sharing and exchange of ideas and for learning from the expertise of peers and facilitators.

The authors did not explicitly mention teacher satisfaction with the online component in which teacher participants were required to post their assignments, comments on articles, and fortnightly reflective journals. The authors used the regular posting of journals as the best indicator of commitment to online participation. The teachers' low participation in fortnightly postings of reflective journals may indicate their satisfaction level. Teachers reported that they were not familiar with the others in the group and felt a lack of community in the online

component. Consequently, they felt uncomfortable sharing their reflective journals.

This feeling of isolation should have been anticipated at the beginning of the blended learning course and could have been compensated for by an online introduction session. Additionally, teachers' active participation in the online section should not be assessed through their posting of journals alone but also by the posting of assignments and comments on articles.

In interviews, teacher participants also reported that lack of support from their principals, such as by giving release time, was another problem that affected their participation in the blended learning course. Even though the teacher participants were given a half-day of release time per week to allow them to work on blended learning course-related activities, they did not use all the release time. They found that the school principal could not find qualified substitute teachers and they did not want their students to suffer academically so they taught their usual classes.

The study conducted by Owston et al. (2008) informs the view espoused in the present research that in a blended learning system for teacher professional development, support from school principals plays a crucial role. Since professional development in a blended learning course is not a solo activity, there must be teacher support (Vaughan, 2007). Principals should be persuaded to give strong support to teachers who participate in a professional development programme, such as by finding qualified substitute teachers.

Teacher Satisfaction

Factors that contribute to teacher satisfaction include “enhanced interaction with students, increased student engagement in learning, flexibility of the teaching and learning environment, and opportunities for continuous improvement” (Vaughan, 2007, p. 86). The self-reflection of the teacher in the English writing class of the Facebook-integrated blended learning course (Shih, 2011) reflected the four factors. The teacher spent a great deal of time and effort in the online section to respond to student comments, to intervene and provide corrective comment when students gave their peers incorrect assessments, and to encourage students to be more active.

This active engagement of the teacher indicates that teacher-student interaction was enhanced. Student engagement in the English writing class increased as they had more time to interact and provide corrective feedback to their peers through Facebook. That the students and teacher were able to provide feedback at anytime and anywhere through Facebook indicates the flexibility of the teaching and learning environment.

The teachers' reflections revealed that incorporating peer-assessment into the English writing class in the Facebook-integrated blended learning course was time consuming and imposed a large workload and time commitment. This indicates that such a blended learning course forces continuous improvement in the blended learning implementation. Even though Shih (2011) did not explicitly state whether or not the teacher was satisfied with the blended learning course, the fact that the four conditions were met implicitly confirms that the teacher was satisfied.

Aycock, Garnham, and Kaleta (2002) reported that teachers at The University of Wisconsin in Milwaukee, who taught in blended learning courses, had very positive experiences, planned to use the blended learning approach again and recommended it to their colleagues. The teachers reported that their interaction with students increased in the blended learning course and led to more connectedness and knowing their students better. The increased interaction occurred because the teachers were trying to develop new ways to encourage active student engagement both in online and face-to-face sessions. The increased student engagement in learning resulted in better academic performance. The flexibility in the blended learning environment provided more time and opportunity to implement new learning strategies that were difficult to implement in traditional courses. All these teachers' reports indicate their satisfaction with the blended learning course.

Access and Flexibility

"Accessibility" refers to learners' ability to easily access quality learning in a blended learning environment (Graham, 2013; Graham & Dziuban, 2007). Through the online section of the blended learning course, teachers increase the accessibility of information and provide flexible access to it for their students (Osguthorpe & Graham, 2003). It is important to emphasise that online learning

should at least be of the same quality as the face-to-face equivalent (Moore, 2005). There is no benefit in increasing access if quality is sacrificed (Shea, 2007).

A blended learning environment should also meet the needs of a specific group of students (Graham, 2013), such as those who live far from learning resources or who are busy with their jobs, because face-to-face tutorials do not suit such groups of students. All barriers to accessing online learning must be reduced such as by providing effective, easily-navigated websites (Lorenzo & Moore, 2002). As access is a concern in a blended learning environment, social networking sites such as Facebook were seen to be feasible and easily accessed by both teacher and students (Shih, 2011) and at the same time are internationally accessible. Facebook has gained popularity and has been appropriated for learning purposes as discussed earlier, including Shih's (2011) English writing class in a blended learning course. What makes Facebook an exciting potential learning tool is its popularity and student expertise with the programme (Hurt et al., 2012).

A difficulty with limited internet access in schools emerged in the study of teacher professional development using a blended learning approach in Botswana, Africa (Boitshwarelo, 2009). This limited access hindered teacher learning interaction on WebCT. Criticism was addressed to the school and the government policy which lacked commitment to ICT-supported learning. However, Boitshwarelo (2009) concluded that adding online learning interaction to face-to-face teacher professional development is still an appropriate approach for Botswana's context, provided that ICT infrastructure support was available. Online interaction was seen as having the potential to encourage teachers to implement newly learned skills in their classrooms because teachers could ask questions, share experiences, and receive feedback.

Cost Effectiveness

The question arises whether blended learning courses are cost effective, (Graham, 2013). Saving on costs is often one of the goals for implementing a blended learning approach (Graham, 2013; Osguthorpe & Graham, 2003). At institutions of higher education, the blended learning approach increases the efficient use of classroom space (Dziuban, Hartman, Cavanagh, & Moskal, 2011), and reduces transportation costs and teaching fees since the number of classroom

meetings is reduced. The use of Facebook is also seen to be cost-effective because it is a free social networking site and no maintenance fee is necessary as it is in a learning management system or using other websites.

This section has informed the present research about five quality principles that need to be considered in a blended learning environment. In the design of a blended learning course, contextual factors affecting teachers and pedagogical content knowledge are additional crucial issues that are discussed in the literature and in the following section.

3.2.2.2. Teachers' Contextual Factors in a Blended Learning Environment

To make a teacher professional development programme in a blended learning environment effective, considerable research suggests a bottom-up approach which takes into account teachers' contextual factors that may support or hinder the programme. These factors include the teachers' needs, problems, and perceptions, and the infrastructure of their schools such as internet access and available online learning tools. A bottom-up approach appears to be effective as it engages teachers in a discussion so that they can speak of their problems, perceptions, and needs and these can be addressed in the teacher training design.

For example, in a CALL training course for language teachers at the Nottingham Trent University (NTU), Leahy (2006) reported that teachers' perceptions of the computer and its function in learning as well as the teachers' learning needs and expectations were considered. Teachers' pedagogical beliefs and practices were discussed in order to understand their problems and needs. The findings of the study suggest that this approach is effective in making teachers' perceptions of computers in language learning more positive – less frightened of the computer tools and fostering a less negative attitude towards technology.

In a teacher professional development course, the “learning to teach with technology studio” (LTTS) programme, T. M. Duffy et al. (2006) reported that teachers' teaching problems were first considered and then sixty courses were provided to ensure that teachers could select materials relevant to their needs. Various learning activities applicable to their classroom contexts were designed, such as lesson plans and projects that were ready for use in the classroom. An evaluation of the course showed that out of 107 teacher participants, 87.8% of the responses checked the “agree” and “strongly agree” boxes, indicating that they

learned a lot from the course, including technology integration as a tool of inquiry, inquiry approaches to teaching, and authentic assessment.

The technological tool available at the Nottingham Trent University (NTU) was also incorporated in the CALL training course for language teachers. A virtual learning environment, called a virtual learning portal (VLP), was introduced and used during the training. Even though the VLP had been available earlier, many teachers had not used it. After the portal was introduced and teachers learned how to use it in the training course, they became more enthusiastic about it.

In addition to the introduction to the technology tool, the teachers also discussed CALL-related concepts which emphasize pedagogical rather than technological goals. This emphasis is consistent with the work of Ertmer and Ottenbreit-Leftwich (2013), who suggested a shift in focus from the technology itself to the pedagogy and stated that technology should enable and support the learning process. P. R. Albion, Tondeur, Forkosh-Baruch, and Peeraer (2015) affirmed that the use of ICT in education is an innovative pedagogical practice. This implies that the selection of ICT tools in professional development should consider the pedagogical benefits. Teachers must be able to use the selected tools in the classroom.

To the present research, this section adds that it is very important to consider teachers' contextual factors in developing a teacher professional development course, including a blended learning model. The following section discusses teachers' pedagogical content knowledge that need to develop in a teacher professional development programme.

3.2.2.3. Teachers' Pedagogical Content Knowledge (PCK)

Pedagogical content knowledge (PCK) is defined as a teacher's way of formulating and representing particular content knowledge so that it is more understandable to learners (Shulman, 1986, 1987). Based on Shulman's definition, a consensus definition of PCK was then developed at the 2012 PCK Summit in Colorado, USA, as "the knowledge of, reasoning behind, and planning for teaching a particular topic in a particular way for a particular purpose to particular students for enhanced student outcomes" (Gess-Newsome & Carlson, 2013). That the word "particular" appears four times in that definition indicates

that PCK is specific: a teacher has to reconstruct his/her knowledge each time he/she teaches a certain topic to achieve a set of specific learning objectives (Garritz, 2014).

Bausmith and Barry (2011) understood pedagogical content knowledge as knowledge of the content that teachers teach and of the way students learn that content. PCK also includes an understanding of the factors that support or hinder learning the content, and knowledge of students' conceptions in a particular subject (Garritz, 2013).

To better understand the importance of teachers' PCK, Garritz (2013) first emphasizes the importance of the teacher as a mediator and counsellor for his/her students. According to Garritz (2013), the teacher should plan and organize the learning content for his/her students and help them achieve their academic goals. The performance of a teacher in the classroom influences the academic achievement of his/her students. Therefore, teachers need to have pedagogical content knowledge to enable them to facilitate the students' learning process. Garritz (2013) suggests that Shulman and Sykes' (1986) question – "What analogies, metaphors, examples, laboratory demonstrations, simulations, are the most effective ways to communicate the appropriate understandings or attitudes of this topic to students with a particular background?" – can be used by a teacher as a guide while designing the learning content and approach. The question helps a teacher to formulate the learning content to make it more understandable to students and to provide opportunities for student learning.

Bausmith and Barry (2011) suggested that PCK should be an issue in teacher professional development programmes in general and in professional learning communities (PLCs) in particular. To develop pedagogical content knowledge, Bausmith and Barry (2011) recommend practical implementation in teacher professional learning communities. The recommendation is to compile a variety of classroom instruction videos, both videos that are externally developed, research-based, and conducted by expert teachers, and also videos that are posted by local schools. Since the latter may be incomplete or inadequate, Bausmith and Barry (2011) recommend packaging each lesson in the videos with a discussion of how students learn the content and how the learning goals are met in the classroom. In so doing, teachers build their pedagogical content knowledge. In the present research, this recommendation informs the view that teachers' discussions

and sharing can contribute to PCK development and these discussions can be undertaken in the online cohort-based component of a blended learning environment.

Van Driel and Berry (2012) commented on the recommendation that even an expert teacher should be flexible, able to adapt his/her teaching approach. They argued, for example, that an expert teacher does not use the same approach when presenting the same topic in the morning and afternoon sessions. This point is consistent with Garritz's (2014) statement that PCK is specific. Van Driel and Berry (2012) suggest that "PCK includes knowledge of enhancing student learning in a variety of ways" (p. 27).

Accordingly, teachers in the blended learning course should practise teaching with peers to get feedback so that they can develop a specific way to formulate and represent content which is understandable to their students in a class, using English as the medium of instruction. After teaching their classes, teachers should also share their experiences with their peers in the online, cohort-based discussion so that other teachers can learn from them. As suggested by Van Driel and Berry (2012), this sharing and discussion can be considered a collective reflective practice for a teacher's PCK development.

For teaching through the medium of English, especially in an EFL environment as in the present research, the English proficiency of teachers is an additional feature in teachers' PCK, as is discussed in the following section. Koopman, Skeet, and de Graaff (2014) suggest that knowledge of the role of language in the teaching and learning process is a part of PCK because it is related to knowledge of how students learn.

3.3. The Integration of Content and a Foreign Language

Considerable research has revealed different perceptions and implementations of content and language integration in classroom instruction and these differences contribute to the lack of a clear distinction between content-based English language instruction and teaching a subject through the medium of English. A review of both contexts is needed because the present research involves both: content-based English language instruction for the teachers in the blended learning course and English-medium content teaching for the teachers' practice in their classrooms as a result of the course.

3.3.1. Content-Based Language Instruction (CBLI)

Even though the literature indicates that content-based language instruction has been understood and put into practice in various ways, an underlying perception is the integration of particular content with the aim of learning a second or foreign language (Brinton, Snow, & Wesche, 2003). In contrast, Davies (2003) insisted that the emphasis in CBLI is not on learning about language but on learning about something else. In CBLI practice, teachers place varying degrees of emphasis on content and language, and the educational background of the teacher appears to influence the emphasis.

Language teachers put more emphasis on language learning whereas content teachers place it on the content. For example, Kong (2012) investigated four CBLI classes in China: two were taught by content teachers and the other two classes by language teachers. Even though the four had learned CBLI pedagogies, they put varying degrees of emphasis on different aspects in their CBLI classes. Of the two content teachers, one put greater emphasis on content and ignored the language learning while the other highlighted very few language forms.

Of the two language teachers, one highlighted more language forms while maintaining the content focus whereas the other failed to focus clearly on either the content or the language. At a middle school in south-western Pennsylvania, Pessoa, Hendry, Donato, Tucker, and Lee (2007) explored how two Spanish teachers (with Master's degrees in teaching Spanish as a foreign language) appropriated, understood, and conducted a CBLI class. The findings of the study revealed that both teachers put less emphasis on content and more on language. Both were reported to have used interpersonal communication over time to lead the students to the content and CBLI discourse and at the same time as a means to promote interaction in the target language.

Kong (2012) suggests that an effective CBLI class should provide students with opportunities to explore content and actualize their content knowledge in the target language. Thus it is a combination of both content focus and language focus that constitutes effective content and language pedagogies. Students should consistently use the target language in their interaction, while exploring the content. To help students improve their target language proficiency as they receive content-based instruction, Pessoa et al. (2007) suggest making the

language learning objectives explicit in the curriculum. The two suggestions implicitly reflect the similar view that language and content should be developed equally in CBLI classes. The following section discusses the perspectives of teachers who have used a foreign language in their subject teaching.

3.3.2. Content Teachers in an EFL Context

Content teachers teaching in English regard their roles differently. For example, content teachers in Sweden considered that student foreign language learning was not their responsibility so they focused on content (Airey, 2012). In the Netherlands, however, Koopman et al. (2014) reported that content teachers who used English for teaching were concerned with their students' English language learning. The teachers asked students to use English for classroom interaction and provided feedback on their language skills, including comment on grammatical forms. These teachers were able to focus on student English language learning because they had attended various courses that enabled them to focus on English in their English-medium content teaching. They had also taught their subject in English for at least three years.

In Finland, Nikula (2010) reported that a biology teacher in an English-medium classroom sought to involve students in class interaction to cope with his own lack of English proficiency. His students played active roles in asking questions and giving comments. When the teacher used his first language (Finnish) in the classroom, he would dominate the class discussion, using the lecture method. Even though active student participation helps to enhance student learning, the teacher might not be able to provide corrective feedback on the students' English use if the class goal is to focus on students' English language learning as well as content. The various teachers' views described inform the position taken in the present research that content teachers need to attend special courses to enable them to teach their subjects using a foreign language.

Zacharias (2013) investigated the practice of English-medium content teaching in secondary schools in a small town in Central Java, Indonesia. These classes taught in English were implemented in response to the Indonesian government's language policy, which provides the context for the present research. The teachers in Zacharias' (2013) study did not receive special training in the use of English to teach their subjects. Consequently, few teachers used

English all the time; some teachers switched into Indonesian when they felt it was necessary; and others would use Indonesian for oral explanations and English in written texts. Teachers summarized, paraphrased, and translated textbooks into PowerPoint slides.

This practice might reflect the pedagogical content knowledge the teachers drew on to help them cope with the need to teach in English despite their lack of English proficiency. The teachers were honest with their students, telling them that they were practising their own English with the students. The author regards this as a teacher's strategy to "remind students of their inadequacy in speaking English" (p. 103) but it can also be considered a strategy to motivate students to improve their English (Aritonang, 2014). Zacharias' (2013) study indicates that content teachers in Indonesian schools should receive special English language training to enhance their English-medium content teaching. This need is the concern of the present research: using a blended learning approach, to provide English language training courses to content teachers in Indonesian vocational high schools to enable them to use English for content teaching.

Goodman (2014) investigated the implementation of English as the medium of instruction in a Ukrainian university. Data were collected through observation of nine English-medium classrooms, informal conversations with teachers and students, and semi-structured interviews with twenty-two students and four teachers. Goodman (2014) found some challenges in the implementation of English-medium courses.

- The first challenge was to find teachers who were capable of delivering content in English. Since teachers who had stronger English proficiency than content knowledge were given the privilege of teaching their subject in English, those selected consisted of teachers with a background in EFL pedagogy and content teachers who "happened to be proficient in English" (p. 134). No explanation is given of what "happened to be proficient in English" means. The latter group were often anxious about their English language communication skills for teaching.
- The second challenge was the lack of learning resources written in English. Teachers wanted to provide students with texts written in English to support student learning but due to the limited availability of such

textbooks, teachers downloaded materials from the internet and printed and distributed them to students. Consequently, more financial resources were required for printing. Some teachers translated their learning materials from Russian to English, but this solution took a great deal of time and the translated materials were often not ready until several weeks after the course began. Some teachers offered printed materials written in Russian.

- The third challenge was the need for teachers to adjust their classroom management practices. When teachers wanted to express something related to discipline, humour, jokes, or general classroom discourse, for example, they felt that English was not as suitable as Russian. Teachers felt that they were performing in a language in an unnatural situation where code-switching from English to their native language should be acceptable.
- The fourth challenge was the speaking pace. Teachers needed to speak more slowly with frequent repetition to ensure that the message was understood by their students, especially with a class of first-year students.

Even though both teachers and students said that English-medium classes were difficult at the beginning, both groups agreed that they had made progress and eventually perceived it as an opportunity to develop English language speaking skills. Goodman's study (2014) informs the viewpoint adopted in the present research that Indonesian schools could face similar challenges and that through English-medium content teaching in Indonesian vocational schools, both teachers and students can develop their English language communication skills.

Teachers receive the opportunity to maintain and practise their English and students can be exposed to an English-speaking environment which facilitates English language acquisition. Goodman (2014) suggests that teachers need to be trained in methods of teaching their subjects in a foreign language when policymakers or institutions make it a policy to use English for content teaching. This suggestion accords with the conclusion reached in the present research that Indonesian teachers need training courses that focus on English-medium content teaching and PCK development in an EFL environment to help them in a CBLI class.

3.4. Motivation in Foreign Language Learning

Motivation is a complex multifaceted phenomenon. It “changes dynamically over time” (Dörnyei, 2001, p. 199), and there is no simple approach to understand its complexity (Dörnyei, 1998; Dörnyei & Ushioda, 2013). It is considered complex because motivation can be seen as a cause, an effect, or a process, depending on the stages of developmental process (Dörnyei & Ushioda, 2013). At the initial stage, motivation is a cause because it answers the question why someone decides to do something.

At a later stage, motivation has an effect on actions and experiences because it is not static but dynamic – it interacts with various internal and external influences, especially in a long-term engagement such as foreign language learning. Cognitive theories of learning view motivation as a process because it involves the “human mind to process information and shape behaviour” (Dörnyei & Ushioda, 2013, p. 7). The mental processes “lead to the initiation and maintenance of action” (Dörnyei, 1998, p. 118). This dynamic view of motivation reflects a sociocultural perspective on learning in foreign language research.

For example, C. H. Lin and Warschauer (2011) argue that motivation in foreign language learning is associated with the social milieu of the language learning environment, such as how learners view the importance of learning the language and its use, and the views are influenced by their social environment. Similarly, Kormos, Kiddle, and Csizér (2011) state that motivation is strongly influenced by social and contextual factors. The learning environment and instructional conditions are contexts that may influence learners’ motivation and second language development (Ushioda, 2015).

These considerations inform the view taken in the present research that the environment of blended learning course for teacher development can influence teachers’ motivation. Then it is important to know what factors in a blended learning environment can contribute to a change in motivation and how motivation can be assessed. The topic is discussed in the following sections.

3.4.1. Motivation in a Facebook-Integrated Learning Environment

A number of studies point to the increased motivation of students in a Facebook-integrated learning environment. For example, Shih (2011) reported that the use of the “like” button enhanced interpersonal relationships among

students and thus increased motivation to participate actively in online interaction and collaboration. In the high, medium, and low scoring groups in the English writing class, Shih (2011) reported that the medium scoring group made the lowest score and the least progress in English writing skills and that the low motivation in the medium group of students contributed to their low achievement.

However, Shih (2011) did not provide information about low motivation indicators and how they correlated with low scores and progress in the English writing class. Dogoriti et al. (2014) argue that active participation in online discussion was positively influenced by the learner's motivation in Facebook. As reported earlier, students preferred to interact with their peers on Facebook rather than on Moodle because they perceived Facebook as supporting the creation of a sense of learning community and saw Moodle as a more traditional learning tool.

Mazer, Murphy, and Simonds (2007) reported that high teacher self-disclosure on Facebook influenced students' motivation. "High self-disclosure" of a teacher on Facebook meant including his/her personal pictures, biographical information, posts on the "Wall," comments and messages from friends and family, and the teacher's opinions on certain topics. When students visited the teacher's Facebook page and noted similarities between themselves and that teacher, the more positive they found his influence on their motivation. Mazer et al. (2007) suggest that a higher level of motivation has the potential to promote positive learning outcomes because students feel more comfortable approaching and interacting with the teacher and raising course-related questions and concerns. The findings of this study reflect positive interpersonal relationships among students using Facebook. When students visit their peers' Facebook pages and find similarities, this may trigger interaction and increased motivation to learning interaction on Facebook.

Schober and Keller (2012) reported that incorporating Facebook in a blended learning course motivated students to actively participate in online peer interaction and collaboration. At the early stage of the blended learning course, only Moodle was used in the online section, but peer interaction did not occur as expected. The students perceived the communication features on the Moodle site to be unsuitable because they did not find their peers online in the synchronous chat forum and consensus was very hard to achieve in the asynchronous communication forum. This condition resulted in low frequency of peer

interaction. The students preferred to use Facebook for interaction. When Facebook was added to the learning environment, peer interaction took place. This finding informs the viewpoint of the present research that student preference of learning tools needs to be considered as it can influence their motivation and level of participation, especially in the online section of a blended learning course.

However, a question emerged from the students' perception: did the problem come from the Moodle or from the instructional design? Students did not find their peers online for synchronous interaction probably because there was no appointment or arrangement for an online meeting. As synchronous interaction supports immediate communication, the teacher or learning facilitator needs to arrange a time for all students to be online so that they can interact. Hines and Pearl (2004), for example, scheduled ten real time chats in their twelve-week summer course, and students were required to log in at least five times out of the designated times.

3.4.2. Motivation in a Blended Learning Environment

The literature below informs the present research and suggests that tasks in a blended learning course, particularly in the online section, are associated with changes in student motivation. The type of task can increase or decrease motivation. For example, Schober and Keller (2012) reported that a collaborative task contributed to student motivation in a blended learning environment. The task given to the students was a group task, "a comparative regional study on the quality of life (QOL) of youths in their respective region" (p. 37), which required students to work cooperatively both in face-to-face and online meetings.

One student mentioned in his/her journal that the task was interesting and that he would continue working on it. Schober and Keller (2012) also reported that the motivation of the students changed over time as they worked on the collaborative task. When student motivation was high, the authors claimed that it was intrinsic because there was no external reward, such as a score. When student motivation was low, the students mentioned in their journal that the school had imposed too high a workload, whereas the teachers noted that the students could not maintain their motivation over a long period of study. This finding is consistent with a consideration of the temporal dimension of motivation and the

view that “motivation is not a relatively constant state but a more dynamic entity that changes over time” (Dörnyei, 2001, p. 41).

In a study of the effects of blended learning contextual factors on student motivation in an English speaking class in Korea, J.-Y. Kim (2013) reported that online tasks did not make any contribution to increasing motivation. The online assignment comprised individual tasks such as listening to an explanation of a topic which had been uploaded on the learning management system, doing follow-up online quizzes, and completing short dialogues. One student reported in an interview session that the online tasks were boring and this indicates that the problem lay in the design of the online tasks.

To increase student motivation through online activities in a blended learning course, the instructor needs to think more creatively. Synchronous online peer interaction and collaboration for English speaking practice is probably helpful to increase motivation, even though it can be technically more difficult than in a face-to-face situation. What influenced student motivation in the English speaking class was the foreign instructor who was a native speaker of English. The students perceived that having a foreign instructor is very helpful in an English speaking class. This research finding informs the present research and suggests that tasks in a blended learning environment need to be carefully planned to increase the motivation of learning participants.

3.4.3. Motivation in Teacher Professional Development

Craig and Perraton (2003) discussed the motivation of teachers to participate in online learning for professional development and argue that “motivation is a critical factor in ensuring that opportunities for continuing professional development are in fact used” (p. 108). When an opportunity for professional development exists, motivation is the key factor in determining whether or not to take it. Craig and Perraton (2003) highlight the relevance of the learning material and motivation, especially in the context of teacher professional development, and suggest that what teachers learn in the blended learning course has to be relevant to their teaching job. This claim is also supported by the principle of adult learning.

Another idea to increase teacher motivation to participate in online learning is to provide incentives or rewards to teachers who do so (Craig &

Perraton, 2003). The secure, permanent status of teachers is another factor discussed in relation to teachers' motivation in professional development courses. In China, according to Craig and Perraton (2003), this tenured status of teachers, known as the "iron rice bowl," made teachers reluctant to participate in professional development. With their secure status as government employees, teachers stay safely in their comfort zone simply by doing their teaching jobs, and are somewhat reluctant to make use of professional development opportunities (Craig & Perraton, 2003).

Consequently, China has challenged that status by introducing teacher contracts (Paine & Fang, 2006). This means that teachers are regularly inspected and evaluated, and can be terminated if they are unable to meet government requirements. Participating in a professional development course certainly gives them additional tasks on top of their daily teaching jobs (Yamagata-Lynch & Haudenschild, 2006). Accordingly, both the rewards and the disincentives for teachers to undertake professional development are considered important.

Permanent secure employment also exists in the Indonesian teaching context, especially in public schools. Somewhat differently from China, which adopted teacher contracts in a reward and disincentives policy, the government of Indonesia applied a certification programme to encourage teachers to participate in professional development. One of the principles in teacher professionalism in the Indonesian context is that teachers are committed to improving the quality of education. According to Law 14/2005, certification is a formal recognition of teachers as professionals (President of Republic of Indonesia, 2005). To obtain certification, teachers must submit portfolios which contain certificates of attending training courses.

3.4.4. Motivation Assessment

Dörnyei (2001) argues that motivation can be assessed by observing an individual's overt behaviour or psychological responses but mostly by self-report. Dörnyei and Ushioda (2013) mention some challenges that a researcher needs to consider in assessing motivation. First, the abstract and unobservable construct of motivation makes the assessment subjective and this subjectivity should be minimized. Motivation assessment is considered subjective because it is often measured through the self-report of the respondent and or by observing a

respondent's overt behaviour or psychological responses. These measurements require interpretation.

Second, a simple measurement such as a few questionnaire items may not cover the multidimensional construct of motivation. To assess motivation, Dörnyei and Ushioda (2013) suggest narrowing the focus of assessment, which includes the aspects of motivation to be assessed, the method to employ, and the tools/instruments to be used. Third, to address the inconstant and dynamic nature of motivation, a one-off assessment is not sufficient, especially in a foreign language learning context which requires prolonged engagement.

The next concern is how the motivation of learning participants in a blended learning course should be assessed. From an analysis of doctoral dissertations and Masters' theses (collected from ProQuest Dissertation and Thesis Database) that studied blended learning, Drysdale, Graham, Spring, and Halverson (2013) found that little attention has been given to motivation and the most frequently addressed topic was learner outcomes.

The authors argue that an evaluation of learner outcomes should not be limited to grades and test scores but should include subtopics such as learners' motivation and engagement. Consequently, the authors suggest that future blended learning research needs to address areas such as the instructional design that "leads to greater student motivation and engagement" (p. 98). As the present research explores the motivation of teachers in a blended learning course, it can add to the literature, as suggested. The literature below, even though the contexts may not necessarily consist of a blended learning course for teacher professional development, informs the position adopted in the present research that motivation in foreign language learning can be assessed through self-report data and observing learners' overt behaviour.

In an English writing class using a blended learning approach, Shih (2011) reported that learner motivation to participate in online peer interaction on Facebook increased. The motivational change was measured by students' self-reports but there was no explicit information on how much the motivation increased. J.-Y. Kim (2013) also used self-report data through surveys and interviews to assess the students' motivational dynamic in an English speaking class using a blended learning approach.

Wati (2011) investigated the effect of a short-term (ten days) teacher training course on the motivation and confidence of fifty-five Indonesian EFL teachers. Data were collected at one time after the completion of the training course through a set of questionnaires and semi-structured interviews. Even though the teacher participants reported that the ToT was effective in increasing the motivation and confidence of the training participants as EFL teachers, this data collection method reflects a lack of validity and reliability because the data were all collected from self-reports and the assessment was undertaken only once. As Dörnyei (2001) suggests, due to the dynamic nature of motivation, assessment needs to be undertaken at various stages, including before, during, and after an intervention is made. Wati's (2011) study informs the present research and indicates that the method of recording motivation through self-reports does not suffice.

For data triangulation purposes, other strategies of data collection can be adopted, such as observing learners' overt behaviour. For example, Heidari-Shahreza (2014) investigated the effects of content-based language instruction on Iranian university students' "motivated behaviour." A content-based language class and a traditional language-based class were observed five times each during a semester. Modified versions of communicative orientation of language teaching (COLT) and motivation orientation of language teaching (MOLT) were used during the observation.

Four factors were selected as indicators of motivated behaviour: attention, engagement, eager volunteering, and verbal interaction. The first three indicators were measured by using a percentage of student actions. For example, students in the class were considered attentive when two thirds of them turned their face to anyone participating in the task. Similarly, engagement is also measured when at least two thirds of the students participate actively in class activities.

Eager volunteering is measured when at least one third of the students participate without being asked by the teacher. The author did not explain how the verbal interaction was measured. He reported that students in the content-based language class outperformed their peers in the traditional language-based class. They paid more attention, voluntarily engaged in learning tasks and activities, and contributed to verbal communication in the classroom.

3.5. Confidence in Foreign Language Learning

Confidence is seen as an element of emotion (Barbalet, 1998) and an element reflecting affective factors (Mahn & John-Steiner, 2002). It is confidence that supports individuals when they perform certain actions. Grouped together as indicators of low spirit are emotions that contrast with confidence, such as anxiety, grief, dejection, despair, shame, shyness, and modesty. Without confidence, action does not take place. Since confidence is affected by both internal and external variables such as the sociocultural context of interaction (Norton, 2000), it can change dynamically over time. Subtle changes can be observed because confidence is an integral part of practical action (Roth, 2007).

A number of studies have investigated changes in confidence in the field of foreign language learning. This review of literature on confidence informs the present research about factors that enhance confidence in foreign language learning and how changes in confidence are assessed.

3.5.1. Factors that Enhance Confidence in Using English as a Foreign Language

The literature has revealed various factors that can enhance confidence in the field of foreign language learning, including continued practice (Kabilan, Ahmad, & Abidin, 2010; Kessler & Plakans, 2008; Rueckert, 2013), positive and pleasant communication experience (Rueckert, 2013; W.-C. V. Wu et al., 2011), and the design of a course (McClure, 2007). Even though English language learning for teacher professional development does not provide the context of the literature reviewed, that literature informs the present research concerning some factors that need to be considered for increasing people's confidence in using English for communication.

3.5.1.1. Continued Practice

Using a survey of students at a university in Malaysia, Kabilan et al. (2010) investigated the effect of using Facebook on their confidence in using English. Out of 300 respondents, a number of students reported that they gained confidence in various aspects of using English, including writing (69.2% students), reading learning materials written in English (71%), and using English for communication (67.9%). The students explained that Facebook provided them

with opportunities to practise communicating in English with native speakers of the language, express their feelings to their friends, use English according to linguistic rules, and be exposed to an English language learning environment.

Kabilan et al. (2010) emphasised that the students' initial purpose for using Facebook was not to learn English but to socialise by sharing personal activities and pictures, playing games, and searching for friends. But since English was the language used on Facebook, the students could practise their English continually. The authors argue that through socialising on Facebook, students, particularly the shy and introverted ones, developed the confidence to use English, including for writing, reading, and communication purposes.

In the context of EFL teaching, Rueckert (2013) reported that through continued practice, eighteen MA (in TESOL) students, who were non-native English speakers, developed the confidence to teach English using English as a medium of instruction. These students were given opportunities to teach English to community members who also were non-native English speakers from different nationalities. The context provided the students with continued practice and challenges to teach English using English. The students reported that through continued practice, their confidence in using English in the classroom increased.

The idea behind this teaching practice was to develop a willingness to teach English using English instead of the students' first language. However, the reason for non-native English-speaking teachers to use their first language in teaching English is not simply their preference but various other reasons, including the desire to convey meaning and to explain grammatical rules. According to Cook (2001), the use of the first language can be helpful in creating authentic second language users.

3.5.1.2. Pleasant Interaction Experience

The literature revealed that a pleasant interaction experience in English for communication increased the confidence of learners. Interaction can be with peers, teachers, or native speakers of English, and can be face-to-face or online. For example, EFL learners at a Taiwanese technical university reported that their confidence to communicate in English increased after they had experienced five online interactions through videoconferencing with a native speaker of English (W.-C. V. Wu et al., 2011). The videoconferencing was a requirement in the EFL

class. The students and the native English speaker made presentations and discussed various topics related to culture. The students found the video-conferencing interaction a positive and pleasant experience and this resulted in increased confidence.

W.-C. V. Wu et al. (2011) argue that even though the ability to understand an interlocutor and to communicate ideas in English correctly was reported as having contributed to increased confidence, enjoyment in the learning process was perceived as the most fundamental factor to enhance confidence. The increased confidence of the students to use English was reflected through active interaction in English with teachers and peers both in and out of class.

When the MA (in TESOL) students saw that their English classroom instruction was understood by the students, they regarded the English classroom interaction as a pleasant and enjoyable experience and this led to increased confidence (Rueckert, 2013).

3.5.1.3. Course Design

McClure (2007) reported that a blended learning approach was effective for promoting the self-confidence of graduate teaching assistants (GTA) in their teaching practice in Singapore. Using a blended learning approach, the GTA preparation course was designed to prepare postgraduate students as graduate teaching assistants. To enhance the GTAs' learning, the course drew on technology, including online materials, video-recorded presentations showing models of active learning, group work, and self-study materials through an online Blackboard platform.

This proved to be effective because it “encouraged self-reflection and self-evaluation, supported collaborative learning and problem solving skills, and facilitated tasks requiring analysis and evaluation of real life teaching situations” (p. 660). A supportive relationship between the learning participants and course coordinator was provided and developed and this led to the increased self-confidence of the GTAs to teach. For international GTAs for whom English is not their first language, the design of the blended learning course and the supportive relationship contributed to an increase in their confidence to teach in English.

3.5.2. Assessing Changes in Confidence

In addition to factors that potentially increase confidence as described earlier, it is also important to know how changes in confidence are assessed. Since confidence is subjective, assessed differently by different people (Bowman, 2014), and is considered an emotion (Barbalet, 1998) which is experienced and felt differently by individuals, a self-report assessment appears to be appropriate. The literature revealed that self-assessment is the most common approach for measuring changes in confidence.

For example, Rueckert (2013), W.-C. V. Wu et al. (2011), and Kabilan et al. (2010) used questionnaires to assess changes of confidence. Thus, the increased confidence that is reported in the literature is determined from student self-reports. However, the literature also revealed that changes in confidence can be reflected in changes in action. Student willingness to communicate in English is hypothesised as a direct result of increased confidence in their English language use (Yashima, 2002; Yashima, Zenuk-Nishide, & Shimizu, 2004). Accordingly, student willingness to communicate in English can be observed to investigate changes in confidence. For example, W.-C. V. Wu et al. (2011) observed that student confidence gained from the video-conferencing practice led to more active interaction with their peers and teacher in English.

3.6. Summary

This chapter has reviewed the literature that is relevant to this study. Studies of the use of Facebook in a CALL environment as well as in a blended learning course explain how Facebook can be appropriated for learning purposes and can increase student motivation and confidence to participate in online learning interaction and collaboration. Social media sites such as Facebook have also been appropriated for teacher professional development through resources and ideas sharing. However, how social media can be integrated in a teacher professional development blended learning course in the Indonesian context, has not been investigated in the literature, and this represents a gap in what we know. This research investigates the use of social media for teacher professional development in a blended learning course in Indonesia, especially for vocational high school teachers who need to maintain and improve their teaching skills in a

foreign language-medium content teaching environment, in order to address that gap.

Studies about blended learning emphasized the importance of considering conditions that contribute to an effective teacher professional development course using a blended learning approach, including the five quality principles, the contextual factors, and teachers' PCK development. Even though teachers' views of CBLI classes vary, there is an underlying belief that a CBLI class provides opportunities for teachers and students to develop their foreign language abilities. Studies of motivation and confidence in the English as a foreign language learning context show that these are interrelated. They change over time and are influenced by social and contextual factors. Motivation and confidence in a blended learning course should be assessed repeatedly, before, during, and after participation in the blended learning course because motivation changes dynamically. Information concerning motivational dynamics should be obtained not only from self-report data but also by observing learners' overt behaviour.

Chapter Four – Conceptual Framework

4.1. Introduction

This chapter provides an overview of the theories and concepts that frame the research and has been organised into two main categories: (1) the theoretical foundation of learning that helps better understand what learning is, and (2) the concepts and theories underpinning the design of the blended learning programme. The first category includes sociocultural learning theories, constructivist learning theories, social constructivism, distributed cognition, and situated learning. A discussion of all these learning theories will lead to a better understanding that learning is participatory, meaning-making, sense-making, and meaning-constructing. Since knowledge is distributed across objects, individuals, and tools, interaction with those sources of knowledge is essential to make learning occur.

The second category includes the principles and concepts underpinning effective teacher professional development in a blended learning environment. It starts with a discussion of the teachers' pedagogical and content knowledge (PCK) that needs to be developed in a teacher professional development programme. Principles of adult learning are considered in the design of the blended learning course because teachers are adult learners. A discussion of a blended learning approach will then provide a better understanding of the instructional design in a blended learning environment. A discussion of motivation and confidence is also included to better understand their roles in this environment. This understanding in turn shapes the design of an effective blended learning environment for teacher professional development.

4.2. The Theoretical Foundation of Learning

In general, learning is a process of absorbing, processing, and retaining information. This absorbed, processed, and retained information is then transformed into knowledge (Rüschhoff & Ritter, 2001). Knowledge can be viewed from both ontological and epistemological perspectives. From an ontological perspective, knowledge is a cognitive structure that enables someone to reason and solve a problem. Knowledge and cognition are not limited to one object,

space or individual, but are “distributed across objects, individuals, artefacts, and tools in the environment” (Hutchins, 1995).

Based on this perspective on knowledge, interaction with all those objects, individuals, artefacts, and tools is required to make meaning and to co-construct knowledge. This epistemological perspective on learning asserts that meaning-making and knowledge co-construction occur through interaction. This perspective is consistent with a social constructivist approach which potentially can represent both a constructivist and socio-cultural view of learning. Social constructivism shapes the approach taken in the conceptual framework for this research and will be addressed in detail in this chapter.

How people learn has always been the fundamental issue in educational research. Many learning theorists such as behaviourists, cognitivists, socio-culturalists, and constructivists view learning and development in different ways. Understanding social constructivist learning theories informs and shapes the present research which views learning as meaning-making, sense-making, and meaning-constructing, as these are defined by Zittoun and Brinkmann (2012), and participatory (Lave & Wenger, 1991). Social constructivist theories of learning are adopted to understand the phenomena of learning in a blended learning environment.

Even though it could be argued that constructivist and sociocultural theories are incommensurate, the two theories are in fact reconcilable. To reconcile the two theories, it is necessary to review each of them. This section will first review the two theories – the sociocultural and activity theory and the constructivist theory. Discussion of how to reconcile the sociocultural and constructivist theories will follow. This discussion contributes to understanding how people learn and will help to better understand the phenomena of teacher participants’ learning in a blended learning programme.

4.2.1. Sociocultural and Activity Theory

Sociocultural theories and activity theory are viewed as a unified set of concepts (A. Edwards & Daniels, 2006). Both are rooted in Vygotsky’s (1978) analysis that viewed development as the transformation of socially shared activities into internalised processes (John-Steiner & Mahn, 1996).

Activity theory, also known as cultural-historical activity theory (CHAT), is used to better understand the relationship between individuals and their social environment (Yamagata-Lynch, 2010). It is a cross-disciplinary theory that views human development as embedded within sociocultural contexts, and it attempts to understand the developmental changes that individuals encounter in their environment through their engagement in shared activities (Stetsenko, 2005).

In activity theory, the activity systems that incorporate the subject, the object, and the tools into a unified whole system are the organizing units (Engeström, 1996). Engagement in shared activities is considered to be mediated action, which is the major entity to be analysed in activity theory (Cole & Engeström, 2007; Kuutti, 1996; Wertsch, Rio, & Alvarez, 1995). Both sociocultural and activity theory emphasize the dynamic interdependence between an individual and social processes in the construction of knowledge through the utilization of mediating tools (John-Steiner & Mahn, 1996; Palincsar, 2005; Wertsch, 1991). In summary, both theories share the same perspective about learning: learning occurs and develops through mediated interaction in social and cultural contexts.

Wertsch (1991) discussed three major themes in activity theory, showing the interdependence between individual social processes in the construction of knowledge: (1) historical developmental analysis, (2) social sources of development, and (3) semiotic mediation. Other principles in activity theory, including, the zone of proximal development (ZPD), and the notion of intentionality and collaboration are also reviewed. Reviewing these principles is important to better understand the activities of the teacher participants in a blended learning environment – how they interact, collaborate, and utilize tools. It will also provide an understanding of how contradiction in a blended learning activity system is perceived.

4.2.1.1. Historical Developmental Analysis

It is necessary to understand the origin and history of mental and behavioural development. To study the history means to study the process of change and the transitions that occurred during the development process through which higher forms of mental function are shaped (John-Steiner & Mahn, 1996). Thus, historical study of behaviour forms the very base of the study of behaviour

development. This perspective assumes that social, cultural, and historical contexts are constantly changing. Activities are viewed not as static but as changing and developing over time (Engeström, 1996), and thus provide opportunities for learning and development. This means that each activity has its own history. Historical analysis is helpful to better understand the problems and potentials that exist in the activity system.

This principle of historical development analysis has emphasized the importance of studying the English learning experience of the teacher participants in the research. The Research Context chapter has provided a picture of how Indonesian teachers in general learn English during their time at school. It was shown that the emphasis in learning was on grammatical rules in order to pass examinations, an approach that contributed to students' lack of English language communication skills. In the blended learning course, the contextual demand is not to pass examinations but to use the target language for content teaching. Accordingly, the emphasis is on the use of English for communication rather than on grammatical rules.

4.2.1.2. Social Sources of Development

Sociocultural theories of learning maintain that the mental development of an individual originates from participation in social life (Wertsch, 1991). According to Vygotsky's sociocultural theory, culture and society are not just external factors that influence people but are generative forces for individuals' cognitive development (Kaptelinin & Nardi, 2012).

Central to this theory is the view that the individual's cognitive development starts from interaction with society, and thus social interaction serves as the main source of development (Stetsenko, 1999). Sociocultural theories of learning emphasize social participation and relationships, such as between novice and expert, and the cultural and historical context of the activity (Packer & Goicoechea, 2000).

Learners acquire new strategies and knowledge of the world and culture when they actively participate in various joint activities (Lave & Wenger, 1991), and internalise the effects of working together at the individual level (Vygotsky, 1978). Social interaction is internalised on the individual level. This means that learning occurs on two levels, beginning on the social level then moving on to the

individual level. These two levels are also termed the interpsychological function and the intrapsychological function (Vygotsky, 1978) respectively. Social and individual processes are interdependent (John-Steiner & Mahn, 1996).

Consequently, to understand the development of an individual, it is necessary to understand first the social relations according to which the individual lives. Understanding this social source of the development principle contributed to the design of the blended learning course, especially the online dimension. Social interaction must be designed in the blended learning course in such a way that the teacher participants will exchange ideas, collaborate, and encourage their peers in joint activities. The challenge in the instructional design is how to make the social interaction meaningful for their learning. Both online and face-to-face social interactions are perceived to be social sources of learning and development for the teacher participants. Details about the design will be discussed in the concept and theory of blended learning in this chapter.

4.2.1.3. Semiotic Mediation

Semiotic mediation is central to socio-cultural research (Ohta, 2013; Wertsch, 1994, 2007) and is a key to knowledge co-construction (John-Steiner & Mahn, 1996). Considered a key concept in activity theory (Wertsch, 2007), semiotic mediation has been described as the mechanism that transforms external socio-cultural activities into internal mental functioning (Basharina, 2007) and as the process of shaping actions using the potential of cultural tools (Wertsch et al., 1995).

Semiotic mediation is also perceived to lead to higher mental processes such as “logical memory, selective attention, reasoning, analysis, and the metacognitive dimension of problem solving” (Donato & McCormick, 1994, p. 456). From the perspective of semiotic mediation, learners or individuals do not internalize knowledge directly but through the use of mediating tools. Tools that mediate learning can be conceptual, such as language and various systems of counting, or physical, such as books, computers and so on. Mediating means are called cultural tools because according to Cole and Engeström (2007), tools such as signs, rituals and language that mediate human activities (Everett, 2012) have cultural components. Even classrooms and schools are declared to be complex

cultural systems (Polman & Pea, 2001) that mediate learning (Donato & McCormick, 1994).

Learning is conceptualized as mediated activity (Barab, Evans, & Baek, 2004). In the field of second language learning, three forms of mediation can take place: social mediation, self-mediation, and artefact mediation (Lantolf, 2000; Nieto, 2007). In social mediation, three strands of mediation may occur: between experts and novices, between peers, and through the first language of the learners. An example of self-mediation is self-directed speech: a speech that is addressed to the self instead of to a listener. I presume that self-directed speech occurs due to self-reflective activities undertaken by the learner. Individual learners may undertake self-reflective activities by comparing their own learning experiences. Finally, portfolios, tasks, and technology are examples of artefact mediation.

This review of the principle of semiotic mediation yields an understanding that mediating tools in a blended learning course are not limited to technology. It is important to observe other aspects that have the potential to mediate learning. The conceptual tools in the blended learning course include the language policy, the curriculum, and social interaction. The physical tools include computer technology and the learning materials.

4.2.1.4. The Principle of Contradiction

Activity theory also recognizes the principle of contradiction. A considerable amount of research uses activity theory to identify contradictions in an activity system and defines these contradictions in various ways: as problems that exist within or between components of an activity system or between different activities (Kuutti, 1996), as tensions (Yamagata-Lynch & Haudenschild, 2006), as obstacles (Karasavvidis, 2009), and as misunderstanding (Basharina, 2007).

Engeström (2001) offered another perspective on contradictions, suggesting that they should not be seen simply as problems or conflicts but as sources, and indeed the driving force, that support change and development in activity systems. Contradictions have the potential to transform an activity system. An explanation of how contradiction may promote transformation is provided by Engeström (2001):

As the contradictions of an activity system are aggravated, some individual participants begin to question and deviate from its established norms. In some cases, this escalates into collaborative envisioning and a deliberate collective change effort. An expansive transformation is accomplished when the object and motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities than in the previous mode of activity. (p. 137)

As Engeström (2001) suggests, reconceptualization is a response to the contradiction and transformation does not occur until the contradictions are recognized and resolved.

4.2.1.5. Zone of Proximal Development (ZPD)

The concept of a zone of proximal development was introduced by Vygotsky (1978) who defined it as the distance between the level of independent functioning (actual development) and the level of dependent functioning (potential development). The ZPD is then understood as the main portal through which learning and development proceed (Stetsenko, 1999), the construction zone (Newman, Griffin, & Cole, 1989), and an interpersonal configuration that connects the individual's past learning and future development (Lantolf, 1994).

The zone of proximal development is dynamic and developing, such that one's zone of proximal development tomorrow can be different from today's because the latter can become an actual development the next day. This idea is consistent with the notion of historical change in cognition, according to sociocultural theorists. The size of the ZPD, especially in terms of language learning, can be extended because language learning and acquisition are not limited to the classroom (Hussin, 2011) but extend to social interaction outside the classroom as well as computer-mediated interaction.

"Scaffolding" in the form of assistance from more competent people or active participation in shared activities and social interaction contributes to the changes in the ZPD. Scaffolding through social interaction with the environment helps in the next stages of growth in the zone of proximal development (Greenfield, 1984; Griffin & Cole, 1984; Stetsenko, 1999; Wood, 1999).

The quality of the interaction process becomes an important issue here because it will determine the result of mental development. Strategies for the quality of interaction in the ZPD include guided discovery (Brown & Campione,

1994) and educational activity in the ZPD (Griffin & Cole, 1984). Strategies such as modelling, feedback, instructing, questioning, and cognitive structuring (Tharp & Gallimore, 1991) can be considered scaffolding. In addition to quality interaction, the proper quantity of new learning materials to be provided in the learning instruction should also be taken into account to allow for the learning and development possible and attainable (Hunt, 1961).

The ZPD in second language acquisition is conceptualized as “the difference between the L2 learner’s development level as determined by independent language use, and the higher level of potential development as determined by how language is used in collaboration with a more capable interlocutor” (Ohta, 1995, p. 96). According to second language learning and acquisition theory, frequent interaction with more competent language users (peers and or the teacher) and with comprehensible and authentic learning materials helps scaffold language development.

4.2.1.6. Other Principles in Activity Theory

Other key principles in activity theory are the notion of intentionality and collaboration (Nardi, 1996a). Activities are intentional because they are object-oriented (Yamagata-Lynch, 2010). To understand the activities of individuals, it is necessary to understand their intention in engaging in the activities. Collaboration and interaction among individuals in shared activities is considered important because activity theory incorporates the principle of the social source of the development of the sociocultural theory. Knowledge is co-constructed through interaction and collaboration among individuals. As I mentioned earlier, interaction and collaboration among the teacher participants must be incorporated in the blended learning design.

4.2.2. Constructivist Theories

Constructivist learning theories view learning as an active, constructive process in which learners build knowledge based on their interpretation of experience (Bednar, Cunningham, Duffy, & Perry, 1992). An individual learner is seen as an information constructor (Khalid & Azeem, 2012). Constructivists focus on issues of individual cognition (Davis, Sumara, & Luce-Kapler, 2000). Constructivism exists in different versions, such as trivial constructivism, radical

constructivism, and postmodern constructivism (Dougiamas, 1998; Palincsar, 2005).

The simplest approach in constructivism is found in trivial constructivism and views knowledge not as something passively received from the environment but actively constructed by an individual learner (Dougiamas, 1998; Glasersfeld, 1990). This view challenged traditional views of learning that perceived knowledge as transferred from one person to another.

Radical constructivism is another approach and views knowledge as something to be found in the heads of individuals. It sees knowledge as subjective rather than objective because individual learners construct their own knowledge differently (Brophy, 2002; Cobb, 1994; Steffe & Gale, 2012) based on their prior knowledge and experience (Glasersfeld, 1984). Even though radical constructivism focuses on individual cognition which it considers to be embodied (Davis et al., 2000), it acknowledges the important role of interaction with the world in constructing knowledge. As Packer and Goicoechea (2000) stated, knowledge construction is viewed as “a result of the learner’s action and interaction in the world” (p. 227).

Another version of constructivism is postmodern constructivism which rejects the previous view of knowledge as located in the individual and regards it instead as inherently social. Sociocultural activities and mediating tools are viewed as an integral part of development (Palincsar, 2005). Social constructivist theories of learning are examples of postmodern constructivism and will be discussed in the next section.

4.2.3. Social Constructivism

Social constructivism views cognition as collective and embedded in social phenomena (Davis et al., 2000), while still acknowledging individuals and their learning. Social constructivism is the incorporation of social and cultural roles (as discussed in sociocultural theory) into individual knowledge construction (as emphasised from a constructivist perspective) (Palincsar, 2005).

A social constructivist approach represents a reconciliation of constructivist learning theories and sociocultural theory. The most fundamental difference in the perspectives of the constructivist and sociocultural theories of learning resides in dualistic (the knower and the known) and non-dualistic

ontology. Constructivists distinguish the knower from the known – a subject and an independent world.

On the other hand, sociocultural theorists view them as interdependent (Packer & Goicoechea, 2000). This difference is not so significant that the two theories are not reconcilable. The two theories can be seen to have different emphases. The next section further describes the reconciliation perspectives of the constructivist and socio-cultural theories of learning, their ontological and epistemological perspectives, and the practices of social constructivism in the classroom.

4.2.3.1. Reconciling Perspectives

Cobb (1994) states, “Each of the two perspectives ... tells half of a good story, and each can be used to complement the other” (p. 17). They are reconcilable because both theories highlight the crucial role of activity in learning and development (Cobb, 1994, 2005) and both view the important role of social interaction for the development of cognitive development (Au, 1998; Brophy, 2002; B. Kim, 2001; Packer & Goicoechea, 2000; Palincsar, 2005; R. A. Young & Collin, 2004).

Another important connection between social constructivists and socio-cultural theories is that both recognise the way in which social interaction affects individual learning. Both claim a central role for interaction and that structuring and internalisation of new knowledge follows from interaction. For example, Hiebert et al. (1996) studied two levels of understanding in mathematics instruction: functional and structural. At the functional level, an individual has to participate in the activities of the classroom in order to understand. Thus, the focus is on the classroom activity. At the structural level, an individual learner represents and organizes knowledge internally by emphasizing the connection between pieces of information. Accordingly, the focus is on the result of interaction and participation in classroom activities. The two levels of understanding reflect a sociocultural view – transition from interpersonal to intrapersonal, and a constructivist view – the process of internalization in which language plays a role (Confrey, 2009).

4.2.3.2. Ontological and Epistemological Perspectives

In social constructivism, truth or reality is viewed as social and constructed by human activity (Kukla, 2000); it is, collective, social, and appropriated (Ortega, 2009). The idea of *social* includes a wide range of phenomena, such as historical, political, and cultural contexts as well as collaborative social interaction.

The context in which learning occurs and the socio-cultural context that learners bring to the learning environment are important and must be explicitly considered (B. Kim, 2001). Knowledge and understanding are socially co-constructed by individuals through discussion as well as through their interaction with their environment. In those discussions and interaction, the environment, including language, plays a role as a social artefact that mediates the interaction. Thus, learning is viewed as a social and intersubjective process that requires factors external to the individual as means, such as other individuals or artefacts.

Learning also requires the individual's engagement in social activities. Similar to the socio-cognitive claim that interaction between peers is more likely to lead to cognitive development (Bell, Grossen, & Perret-Clermont, 1985), social constructivists also believe that peer interaction is likely to contribute to knowledge construction, especially when the peers have diverse comprehension skills (Palincsar & Brown, 1984) and backgrounds (Au, 1998). It is possible for different learner communities to construct different understandings from the same experience because the participants will develop their understandings based on their historical experiences and cultural perspectives. The emphasis on social, cultural, and historical contexts, the ontological and epistemological views on reality, knowledge and learning, as well as the interactive and collaborative nature of learning all characterise social constructivism.

4.2.3.3. Social Constructivism in Classroom Practices

In the context of the classroom teaching and learning process, social constructivists view the teacher's role as designer of challenging problems to engage students' existing knowledge, beliefs, and skills in new knowledge building. The students' role is to express their understanding (both through stated agreement or disagreement) with supporting evidence (Nuthall, 2002). What is expected to occur in the social constructivist classroom, according to Nuthall

(2002), is the acquisition and modification of meaning and knowledge and the acquisition of new ways of thinking and problem solving. The acquisition processes involve appropriation (from a sociocultural perspective) or internalisation (from a constructivist perspective). Appropriation makes the connection of newly gained information (external) with existing (internal) knowledge to form a new understanding (learning) (Block, 2003).

When knowledge is claimed as socially constructed, it requires the active participation of the learners, such as through teacher-facilitated discussion (Larson, 1999; Nuthall, 2002). Discussion is seen as an appropriate strategy that makes knowledge co-construction possible. The conditions required to make discussion and knowledge co-construction likely to occur include the diversity of learners, the objectives of the lesson, the age and maturity of students, a sense of community in the classroom, and the students' level of interest (Larson, 1999). For example, Brophy (2002) is of the view that knowledge co-construction is very hard for young learners. Instead, knowledge transmission occurs more frequently for early elementary grade students. This implies that knowledge co-construction is more likely to occur with adult learners rather than young learners. Conditions such as these must then be considered during the instructional design process of a course.

Considerable research adopting a social constructivist approach has been carried out in computer-supported collaborative learning or CSCL (Elola & Oskoz, 2012; Stahl, Ludvigsen, Law, & Cress, 2014; Y.-C. Wang, 2014) as well as in the work environment (R. A. Young & Collin, 2004). CSCL instruction allows learners to interact and work collaboratively to solve problems through which they negotiate and make meaning within their own social and cultural contexts.

Consistent with a social constructivist perspective, CSCL views meaning as socially and intersubjectively constructed through joint activities (Stahl et al., 2014). Research on CSCL shares a common principle with social constructivism: learners co-construct knowledge through social interaction and collaboration (Elola & Oskoz, 2012; Y.-C. Wang, 2014). In a CSCL environment, learner activities must be designed carefully to ensure that interaction and collaboration will occur by using mediating artefacts (conceptual and physical tools), and the teacher acts as facilitator.

In a CSCL context, Elola and Oskoz (2012) emphasized the importance of the learning facilitator's role in "bringing together and guiding pedagogical choices that can build on learners' strengths" (p. 193). Additionally, a learning facilitator needs to regularly monitor how learners interact as well as the content of such interaction (Nuthall, 2002).

I have mentioned that both social constructivism and CSCL view meaning as socially constructed through joint activity, and that interaction and collaboration need to be purposefully designed to stimulate meaning negotiation in a CSCL environment. This means that knowledge is not situated in a particular space or individual, but is distributed across individuals, tools, and the environment, according to the distributed cognition perspective. This also means that learning environments are purposely designed to facilitate the negotiation of meaning and co-construction of knowledge, according to the situated learning perspective. Distributed cognition and situated learning appear to be closely related and supportive of social constructivism. What follows is a discussion of why distributed cognition and situated learning are necessary in order to better understand learning and cognition, and how they relate to and are supportive of social constructivism.

4.2.4. Distributed Cognition

As noted earlier, knowledge is distributed across objects, individuals, artefacts, and the environment in the framework of distributed cognition. Such a view focuses on how all these aspects interact and how tools as mediating means are used in problem-solving activities. The idea of socially-distributed cognition includes the notion of intersubjectivity. In a socially distributed cognition framework, intersubjectivity undergirds the assumption that individual members in a social group may possess different kinds of knowledge. Individual members may also share the same knowledge that enables them to work together collaboratively and engage in interaction. They draw on various resources and discuss and make meaning from them to accomplish their tasks. Intersubjectivity also underpins the distribution of access to information. Individual members share access and knowledge which provides the basis of coordinated action.

The notion of coordinated action and interaction in distributed cognition is consistent with social constructivist theories of learning. Both paradigms share the

same epistemological perspective that knowledge is constructed through social interaction among learners, and through interaction between learners and technological artefacts, other tools, and their environment. Collective cognition and action – the coordination of work among people and the use of material components (artefacts) – as well as interaction with various objects and artefacts, are included in distributed cognition (Giere, 2011).

Similar to social constructivist learning theory that is commonly applied in a CSCL environment, the concept of distributed cognition is also applied in the learning environment in which computer tools are utilized (Gillen, Ferguson, Peachey, & Twining, 2012; S. Lin & Chen, 2013; Rogers, 1997). The application of this concept is consistent with the view that knowledge is socially distributed over space and time and across people and tools (Sørensen, 2012), and is distributed between individuals and artefacts as well as across individuals (Zhang & Patel, 2006). Interaction among learners as well as between individual learners with computer tools and the environment is an integral part of cognition. When interaction among learners is designed and planned carefully, the learning process is “situated.” The next section describes situated learning and its relation to social constructivist theories of learning.

4.2.5. Situated Learning

Situated learning theory views learning as legitimate peripheral participation (Lave & Wenger, 1991). Learning is situated and embedded within activity, context, and culture, and knowledge is viewed as situated within the activities of communities of practice. Learning is viewed as a purposeful, situated action (Suchman, 1987) and involves meaningful engagement in an activity in which peers can play the role of mentors. Meaningful engagement in situated learning takes the form of social interaction, through which learners become members of a community. Active engagement in social interaction triggers the social co-construction of knowledge within the culture of the community. Such a perspective on learning is shared by situated learning, distributed cognition, and social constructivist theories.

Research on situated learning has been undertaken by Lave and Wenger (1991) through five studies of apprenticeship in different communities of practice. In the apprenticeship, newcomers as novice members got engaged in the ongoing

practice of the community members and became legitimate peripheral participants. The research reveals that the novice members learned more from the advanced members through their daily activities and that knowledge acquisition occurred gradually. This finding highlights the point that learning requires collaboration and social interaction, and that authentic learning occurs in an authentic context which is defined as “a physical or virtual environment that reflects the way the knowledge will be used” (Herrington, 2010, 0:28).

Situated learning as well as distributed cognition fall under the label of situativity theory, which views knowledge, thinking, and learning as situated within the larger physical, social, and cultural context of the environment. Thinking and learning occur socially and interactively in a particular environment (Durning & Artino, 2011). When learning is viewed as situated activity (Lave, 1991; Lave & Wenger, 1991) and as a social process (Bruner, 1990; Lave, 1988; Vygotsky, 1962), knowledge is viewed as situated in an experience within a context and as a tool that can help build learners’ understanding of both the world and the tool. According to Durning and Artino (2011), “the tool, the participants using the tool, the environment, the specific context, and the culture are all interdependent ... they are situated” (p. 189).

In a classroom context, situated learning has been applied in the computer-supported collaborative learning (CSCL) and computer-supported cooperative work (CSCW) environment. In the CSCL environment, learners interact with one another and with computers as artefacts. Learners use computers for collaboration (Stahl et al., 2014). Such a learning activity is consistent with distributed cognition and social constructivist learning theories. Social interaction and the social co-construction of knowledge in a CSCL environment occur inside and outside school as well as through online interaction. Therefore, the concept of CSCL is consistent with social constructivist theories of learning. CSCL is also applicable in a teacher professional development context and the focus of development needs to be clear, as discussed in the next section.

4.3. Concepts Framing the Blended Learning Programme

The discussion in the previous section suggested the importance of the instructional design to make learning occur in a blended learning environment. Both face-to-face and computer-based interaction need to be carefully planned

and integrated in order to support knowledge co-construction. This section begins with a discussion of the knowledge teachers need to develop in the blended learning course and continues with an outline of the principles and concepts underpinning effective adult learning in a blended learning environment.

4.3.1. Developing Teachers' PCK in a Professional Development Programme

Teacher professional development programmes generally focus on enhancing teachers' content knowledge (CK) and pedagogical content knowledge (PCK). The former refers to teachers' deep understanding of the subject they teach, including the whats, whys, and hows. The last mentioned refers to teachers' knowledge of how to represent and formulate the subject so that students can comprehend it (Shulman, 1986). According to Kleickmann et al. (2013), these two categories of knowledge are "key components of teacher competence that affect student progress" (p. 90).

In an EFL context, particularly in the English-medium content teaching environment, the English proficiency of teachers must be perceived as another important component of teacher competence and should be included in the PCK category. As discussed in the Literature Review chapter, many English-medium content teaching classrooms are run by content teachers for whom English is not their first language. Since English is a foreign language both for the teacher and the students, it is important to enhance the English proficiency of the teachers to enable them to formulate and represent the subject content in English in a way that is comprehensible for students. This particular need in PCK development has to be considered in the design of a teacher professional development programme and this is the concern in the blended learning course of the present research. The next concern is how teachers as adult learners can learn and develop their English language communication skills in a blended learning environment, as discussed in the next section.

4.3.2. Principles Undergirding Effective Adult Learning

In this section, I will review some key principles and concepts that framed the blended learning course. They include adult learning theories, the social and cultural contexts of adult learning, English language learning and acquisition, a blended learning approach, the role of technology in language learning, learning

communities for teachers, the principle of learner centredness, and the principles of feedback and assessment.

4.3.2.1. Adult Learning

Adults learn in order to help themselves adapt well in the changing world around them (Hansman & Mott, 2010). Andragogy, the science of helping adults learn, is a learning theory for adults (Knowles, 1973). It discusses how adults learn differently from pre-adult learners. Knowles proposes six assumptions about adult learning: (1) adults are more independent and self-directed; (2) they use personal experience as a resource for learning; 3) they are more prepared to learn when the subject is closely related to their social role; 4) adults are more problem-centred than content-centred in learning; 5) they are internally rather than externally motivated; and 6) adults are interested to know why they need to learn (Boucouvalas & Lawrence, 2010; Merriam, Caffarella, & Baumgartner, 2007).

However, this theory of adult learning has been criticized by many researchers. For example, Jarvis (1987) says that Knowles' theory of adult learning fails to pay attention to the context in which learning takes place and argues that learning should be viewed not only in terms of the product but also in terms of the process. From a social perspective, a learning process is intimately related to, and affected by, the context of the world in which learners live (Jarvis, 1987). Knowles' (1973) assumption about adult learners being more independent, autonomous, and self-directed is supported by Merriam et al. (2007) who claimed that being autonomous and self-directed does not necessarily mean context-free. There is a relationship between personal and contextual variables for a person to be self-directed. For example, although adults may want to undertake professional development courses for future benefit, they have to consider if their context allows it. The contextual variables include their multiple life roles such as spouse, parent, worker, friend (Ponton, Derrick, & Carr, 2005).

To foster effective adult learning, it is necessary to view adult learning from the perspective of sociocultural and social constructivist theories (Alfred, 2002a). Learning is viewed as meaning-making and knowledge co-construction through social interaction (Zittoun & Brinkmann, 2012). Having this perspective in mind, several learning strategies are recommended: reflection and dialogue (Merriam, 2008), the role of the teacher as a facilitator (Voller, 1997), authentic

learning, and a learning approach that allows adult learners to explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems relevant to their contexts (Doyle, 2011). When the learning materials and experiences are related to their social roles and really reflect their problems in the workplace, adult learners will show interest and be more prepared to learn.

4.3.2.2. Social and Cultural Contexts in Adult Learning

The social and cultural context cannot be separated from learning (Ajisuksmo & Vermunt, 1999; Charlesworth, 2008; Lattuca, 2002; Lave, 1991; Lave & Wenger, 1991; Rogoff, 1994; Wertsch et al., 1995). In adult learning, what adults need and want to learn is shaped by their social and cultural context (Alfred, 2002b). Accordingly, in the classroom the teacher should not only focus on the content to be learned but should also consider the situations (when and how) in which that content can be applied. Such considerations should be included in the instructional design.

Since the focus of adult learning has shifted from the individual learner's perspective to the learner in context (Merriam, 2008), "the historical, sociocultural context of adult learning is recognized as a key component in understanding the nature of adult learning" (p. 94). In a broader context, how people live, work, and make meaning in their lives is shaped by their social and cultural contexts (Fry, 1990).

It then becomes necessary to understand what is meant by social and cultural contexts. Social and cultural contexts are the immediate physical, social and cultural environments in which people live. Culture is defined as a collective phenomenon (beliefs, values, customs, and meanings) shared by people within the same social environment (Hofstede, 1997). Culture is manifested "in the patterns of language and thought, in the forms of activity and behaviours, and transmitted through symbols, artefacts, rituals, heroes, and values" (Merriam & Mohamad, 2000, p. 45).

In a blended learning environment, especially in the online learning context, collaboration among learners is essential. In such collaboration, individuals' social and cultural backgrounds influence how the collaboration is undertaken. For example, when the majority of learning participants do not

comment on their peers' postings in an online learning environment (Dzakiria, Mustafa, & Bakar, 2006; Kian-Sam & Lee, 2008), it is possible that the cultural and social contexts of the learners have contributed to the problem. This suggestion does not imply that the learners' contexts are the only cause.

Another possible factor is the relevance of task and content to the learning need. Learners have different cultures and these differences must be accommodated because cultural diversity is valued in collaborative learning (Palloff & Pratt, 2005). However, it is not always clear to what extent cultural and social contexts affect learning collaboration. Charlesworth (2008) claims that "the literature is rather non-committal when it comes to how culture might influence learning" (p. 116) because it does not explain in detail how to measure cultural variables. Cultural and social contexts are unique and differ from one another. They must not be generalized when relating their effect on learning collaboration. The next paragraph provides an example – in an Indonesian context – of how the social and cultural contexts influence how learners learn.

In Indonesia, the word "guru" (an Indonesian word for "teacher") is derived from the Javanese word "digugu lan ditiru" (to be listened to and followed). A guru is perceived to be a reliable person whom learners must listen to and obey, a person to teach norms and values, a goal keeper in education for the learners, and a parent at school (Dzakiron, 2009). A teacher is seen as someone who knows everything and is responsible for student learning. Students are considered to be individuals who do not know anything and therefore have to listen and do whatever the teacher tells them to do.

In this situation, students do not argue and do not think critically. Instead, they have to memorise the information they receive from their teachers. This tradition has the potential to make passive learners because the role of the learner is typically to accomplish tasks, to answer questions from teachers rather than to ask questions or criticize. The Indonesian classroom is still teacher-centred. Even though active learning (CBSA) or constructivist learning theory has been introduced to the Indonesian education system and many Indonesian teachers are aware of the importance of knowledge construction, in practice teachers often emphasize memorising information and adopt a rote learning approach (Ajisuksmo & Vermunt, 1999; Barton, 2010).

Collaboration and knowledge construction do not occur as a result of this rote learning approach. Instead, knowledge is transferred from the teacher to the students. Indonesian learners make less use of deep processing strategies (relating, structuring, and critical processing) and more use of stepwise processing strategies (memorizing, rehearsing, and analysing) (Ajisuksmo & Vermunt, 1999).

A study of Indonesian postgraduates' conception of learning (Meyer & Kiley, 1998) revealed a similar finding. It appeared that Indonesian learners perceive learning "in terms of recall, intuition, and integrating, and place a lesser emphasis on relating" (p. 297). One question emerges. Does this learning experience influence how Indonesian teachers learn in the current situation? This question will be addressed in the present research.

4.3.2.3. English Language Learning and Acquisition

To facilitate English language learning and acquisition, there are conditions to be considered in the instructional design. Input is considered to be one of the important conditions for language learning to occur (Loschky, 1994; Pica, Doughty, & Young, 1986). In an English language learning class, input includes, but is not limited to, the learning materials presented for language learners, the issues to be discussed, and the topics selected for learning interaction, the teachers' use of English, and the classroom discourse. Appropriately selected input will enhance English language learning and acquisition.

Types of input become an important issue during instructional design. Comprehensible input is said to have a great impact on second language learning and acquisition (Gass, Alison, & Pica, 1998; Loschky, 1994; Swain, 1985). Input is considered to be comprehensible when learners are able to understand the message, what is being said or presented to them (Gersten, Baker, & Marks, 1998). To make input comprehensible for language learners, the learning facilitator needs to "provide relevant background knowledge and content and ... instruction that draws on students' experiences" (Gersten et al., 1998, pp. 7-8).

To ensure that instruction is thoroughly understood, they also suggest that the learning process must be interactive. English language learners should be involved in interaction and be encouraged to express their ideas and understanding in English. In addition to comprehensibility, the learning materials,

which make up the input in the context of adult learning, need to be authentic and relevant to the needs of adult learners (Doyle, 2011).

Other conditions for second language development are interaction and negotiation (Long, 1985; Pica, 1994), feedback (A. D. Cohen, 1991; Mackey, Oliver, & Leeman, 2003; Schachter, 1991). Long (1981) suggests that interaction in second language learning requires modified input and modified interaction in order to maintain the interaction and to facilitate second language acquisition. Modified input refers to linguistic attributes of speech modification and simplification provided by a more competent English speaker to his/her less competent interlocutor. Modified or simplified interaction refers to functions such as expansion, repetition, and clarification. Modified, comprehensible input and interaction between language learners contribute to negotiation and thus to second language acquisition (Gass & Varonis, 1994; Long & Porter, 1985; Pica, Lincoln-Porter, Paninos, & Linnell, 1996).

4.3.3. Blended Learning Approach

As mentioned in the Introduction chapter, blended learning in this research is defined as a combination of face-to-face tutorials and an online learning environment. The time allotted for face-to-face interaction is reduced but not completely lost (Rovai & Jordan, 2004; Snart, 2010). Some blended learning programmes are identified as technology-enhanced courses without reducing the time for conventional face-to-face classroom interaction. Thus, they act as a complement to the conventional classroom (Caulfield, 2011; Condie & Livingston, 2007; Kian-Sam & Lee, 2008).

The five quality principles – learning effectiveness, learner satisfaction, teacher satisfaction, access and flexibility, and cost effectiveness – discussed in the Literature Review chapter are seen to be important factors to consider in the design of a blended learning course. When some of the face-to-face meetings are reduced or replaced by online interaction in a blended learning environment, this is seen to be time and cost effective (Driscoll, 2002; Graham, 2006) because learners can still access learning resources and interaction at their convenience without forgoing other personal activities and without incurring extra transport and/or accommodation costs.

According to Sharma (2010), the term “blended learning” was first used in the corporate world to refer to a course designed to allow workers to continue their study without leaving their job. In recent blended learning models, self-study manuals, videos, and websites are utilized for learning or training courses so that the learning participants do not have to take time out and leave their work to study. Some research found that a blended learning approach adopted in the workplace is effective because it applies work-based learning activities and thus supports authenticity in the learning environment (Collis, 2006; DeViney & Lewis, 2006; R. Oliver, Herington, & Reeves, 2006; Singh, 2006; Ziob & Mosher, 2006).

Authentic learning activities in this context refer to learning activities which are undertaken in the participants’ workplaces where they practise and focus on developing participants’ ability to solve problems in their everyday professional job roles (Merrill, 2002). In addition to the five quality principles, other common issues underpinning a blended learning approach are important changes in the learning process, such as from passive to active learning and the role of technology, as discussed in the following paragraph.

A blended learning approach offers individual and collaborative learning, provides interactive content, and enhances individualization and relevance (Upside Learning, 2010). Learner-facilitator interaction and peer interaction become central and play a very important role in the online section of the blended learning environment. There is no fixed formula how blended learning must take place (Graham, 2013). What is important is the right blend of benefits from each learning aspect, an effective combination of different learning strategies (Neumeier, 2005), and the learning content and strategy have to be designed to meet the learning goal. The role of technology in a blended learning approach is not “an end in itself” (Fleck, 2012, p. 404). The most important thing is how the technology is used to enhance the learning process. Technology provides an additional opportunity for learning interaction and collaboration. Thus, improved pedagogy, instead of the technology, and increased access and flexibility must be the priority in a blended learning approach. Illustrating improved pedagogy, authenticity is brought to the traditional classroom through the computer-mediated environment (R. Oliver et al., 2006) and formal classroom learning and informal workplace learning can be integrated (Collis, 2006).

Macdonald (2008) suggests several aspects to consider for maintaining learning quality in blended learning:

- Affective – confidence building;
- Dialogic – tailored to individual needs;
- Focusing – bringing study to the fore;
- Reflective – allowing time to think;
- Timely – arriving when relevant and useful;
- Reversionable – using support for individuals as well as groups;
- Accessible – available to a maximum number of students. (p. 22)

This section has discussed some principles that need to be considered in a blended learning environment. The next section discusses the use and pedagogical issues of social networking for educational purposes because the blended learning course in the present research adopts social networking sites as learning tools.

4.3.3.1. The Use of Social Networking Sites

As discussed in the Literature Review chapter, considerable research has gone into the use of social networking sites for foreign language learning. Facebook members with similar interests, for example, can create collaborative activities for learning purposes. Facebook provides features for both synchronous and asynchronous interaction, sharing pictures and video capabilities. Those features make Facebook the most popular platform for online social networking. The familiarity, popularity, and accessibility of Facebook to such a large number of people, including teachers, has made it widely used for educational purposes (Manca & Ranieri, 2013).

In addition, Facebook has become part of many people's daily routine for engaging in social interaction and thus has the potential as a learning tool to increase engagement and participation in online discussion (Hurt et al., 2012). For example, teaching through Facebook, language learners make progress through communication in the target language with teachers and peers (Beck & Schell, 2011). Learning through Facebook not only enhances the learning outcome but also social acceptance from others and adaptation to a learning culture (A. Y. Yu, Tian, Vogel, & Kwok, 2010). What makes learning through Facebook interesting

is the free access to the virtual classroom and the real-time interactive feedback via the status update and comments both by the facilitator and learners.

Even though Facebook has been reported to be effective for learning purposes across a number of research areas (Bosch, 2009; Din & Haron, 2012; P. Duffy, 2011; Greenhow, 2011; Kabilan et al., 2010; Manca & Ranieri, 2013; Siemens & Weller, 2011), there is controversy about the educational value of Facebook. For example, some students view Facebook as a distraction while more students in the same group view it as a learning tool (Fewkes & McCabe, 2012).

The qualities of social networking may conflict with the current pedagogical paradigm because the learning may become unstructured (Selwyn, 2009). Facebook is also blamed for potentially distracting young learners from their studies (Hurt et al., 2012) because they are still learning what it means to be responsible (Cassidy, 2006; Miah, Omar, & Allison-Golding, 2013).

In response, Hamid, Waycott, Kurnia, and Chang (2010) appropriated and recast the purpose of online social networking, of which Facebook is an example, for educational activities. They argued that educational activities such as content generating, sharing, interacting, and collaborative socializing, are enabled through online social networking. Through social interaction on networking sites like Facebook, learners share learning resources and discuss school-related tasks (Bosch, 2009; Greenhow, 2011; Mazman & Usluel, 2010), collaborate and discuss homework (Fewkes & McCabe, 2012), increase engagement and participation (Hurt et al., 2012), exchange feedback (Greenhow, 2011), advance technological fluency, practice literacy, and negotiate norms in online communities (Robelia, Greenhow, & Burton, 2011).

Another educational benefit of Facebook is that posting and giving comments can promote critical thinking and collaborative skills (P. Duffy, 2011). A research study by Siemens and Weller (2011) pointed out similar educational benefits of Facebook, which can:

“encourage peer-to-peer dialogue, promote the sharing of resources, facilitate collaboration, and develop communication skills.” (p. 164)

The educational usages of Facebook for learning can be apportioned among three main categories: communication, collaboration (Cheung, Chiu, & Lee, 2011; Mazman & Usluel, 2010) and resource/material sharing (Mazman &

Usluel, 2010). In line with these educational usages, five activity phases to engage online learners are suggested by Conrad and Donaldson (2012): connect, communicate, collaborate, co-facilitate, and continue (R.-M. Conrad & Donaldson, 2012). Different activities are conducted at each phase.

First, the teacher as social negotiator connects individual students, encourages them to become acquainted, and specifies class orientation and expectations. Secondly, by providing activities that require the sharing of opinions, reflection, and critical thinking, students are encouraged to communicate with their peers. These two phases are in the communication category.

Thirdly, in the collaboration category, students collaborate in groups of three to five to solve problems and to work on a group project. Fourthly, in the resource/material sharing area, each group presents their project, leads discussion, and shares their learning materials with other groups. Finally, the individual student is encouraged to engage in self-reflection and eventually realizes that they have been transformed into online learners. They continue increasing their engagement and taking turns to lead online discussion.

4.3.3.2. Pedagogy in the Online Learning Environment

In this section, I will discuss the pedagogical concepts in an online learning environment, which is one part of a blended learning course.

Synchronous and Asynchronous Interaction

The central issues in online learning, particularly in the asynchronous mode, are the interaction between learners and teacher(s) and, more importantly, the interaction among learners themselves (Blanchette, 2012). In a study about the online professional development of teachers, Russell, Kleiman, Carey, and Douglas (2009) suggest that a combination of all interaction – interaction among teachers and interaction between teachers and facilitators – has greater effect on teachers' knowledge and instructional practices.

Asynchronous online interaction reflects classroom interaction in a text-based form. Considerable research has shown some advantages of asynchronous online learning that utilizes email, discussion boards, and more recently social networking (Hrastinski, Keller, & Carlsson, 2010; Macdonald, 2008).

First, asynchronous online learning interaction, such as through social media networking, discussion boards, and email lists, can promote reflection (Macdonald, 2008) such as reflection on a student's own contribution (Arbaugh & Benbunan-Fich, 2007), and discussion of complex ideas. The latter could occur because asynchronous interaction allows more time for participants to explore arguments (Hrastinski et al., 2010). This kind of discussion could stimulate interaction among learners and contribute to the learning process.

Secondly, asynchronous interaction can switch the pedagogy from teacher-controlled interaction, as in a traditional classroom, to learner-directed interaction, which is viewed as an essential component of an effective online learning environment (Arbaugh & Benbunan-Fich, 2007; Blanchette, 2012; Soo & Bonk, 1998). The level of learner-directed interaction can also enhance their critical thinking skills (Blanchette, 2012; Macdonald, 2008).

Thirdly, asynchronous interaction can improve convenience and effectiveness for individualized and collaborative learning (J.-H. Wu et al., 2010) as it provides more flexible time for learners to participate. Finally, since learners are diverse in their cultural backgrounds, experiences, and needs, their varied perspectives can contribute to the creation of learning resources (Collis, 1998). Discussion from a variety of perspectives can be enhanced in an online asynchronous interaction. These arguments suggest some of the advantages of asynchronous online learning.

Asynchronous online learning also has some disadvantages (Blanchette, 2012). First, the longer period of time to receive feedback is seen as a disadvantage because it limits interactivity and efficient collaborative learning (Foreman, 2003) and is also categorised by "lack of immediate feedback" (Branon & Essex, 2001, p. 36). However, a longer interval allows students more time to reflect and think carefully (the positive effect) before they express their ideas. In my view, this positive effect outweighs the negative one.

Secondly, interaction threads, especially of the less structured kind found in social media, can be disruptive. The lack of focus in the threads could be addressed at the beginning of the course by providing sub-categories of topics for discussion and familiarizing the learners with the rules and procedures for posting to discussions.

Another disadvantage is that asynchronous online learning is not sufficient to address the feeling of isolation from other learners (Hrastinski et al., 2010). However, I believe that this feeling of isolation can be anticipated by engaging active participation. I will discuss this issue in the next section. Additionally, the face-to-face dimension of the blended learning approach and synchronous online interaction (if supported by a speedy internet connection) are capable of minimising the problem.

Synchronous interaction is a good alternative when there is a need for speedy, immediate communication to solve complex problems among learners (Foreman, 2003). However, various synchronous tools also have disadvantages that must be considered. One potential disadvantage in synchronous learning becomes apparent when learning participants are not familiar with the technology and do not feel comfortable using it. When this condition exists, learners are likely to be less productive. Accordingly, potential technical problems, the availability of a high speed internet connection, and the cost of synchronous interaction are other factors that should be considered in advance. Additional disadvantages include the fact that synchronous interaction does not provide much time for student reflection and results in difficulty in managing large-scale interaction (Branon & Essex, 2001).

The awareness of the advantages and disadvantages of both synchronous and asynchronous learning, knowledge of how to minimize the potential disadvantages, and understanding the conditions of the research sites are important issues to consider in implementing a blended learning course for Indonesian teachers in vocational high schools.

Facilitating Online Interaction

As suggested by P. Albion and Ertmer (2004), there are three steps to consider in facilitating meaningful online learning interaction: initiating, sustaining, and concluding online interaction.

At the initiating stage, it is important to foster “a sense of community through informal forums dedicated to social interaction (introductions, personal interests), humour, and/or technical support” (p. 4). In a formal forum, clear expectations should be established and model responses and personal examples need to be provided. Anticipating the disruptive nature of interaction, the content

focus should be limited. The success of online interaction in language learning is more likely to be supported by the content-focus of the interaction and how that interaction is implemented.

At the sustaining stage, it is important to keep the discussion focused and to move it forward. Several efforts to sustain online cohort-based learning for teachers include (1) knowing teachers' needs, (2) encouraging teachers to contribute to online discussions regularly, (3) posing engaging questions, and (4) helping teachers to make the connection between different ideas (Russell et al., 2009).

The facilitator should not provide answers to learning participants' questions too early as this will end the participants' interaction and collaboration. Instead, facilitators should invite other participants to give their opinions. Interaction among learning participants or cohort-based interaction should be optimized (Ross et al., 2011; Russell et al., 2009). Online, cohort-based interaction should be designed to promote collaboration among online learning participants. For example, teachers may raise issues, such as their experiences in implementing the use of English, on the online forum. They need to share best practices and the failures or constraints they face in teaching. This interaction could influence their teaching practice as they could anticipate potential problems by implementing what other teachers suggest in the online discussion.

To add to the experience in teaching, emotions could also be shared and communicated to the cohort (Derks, Fischer, & Bos, 2008) as this may strengthen the social tie among members. Through sharing, teachers can learn from and support one another and create a receptive atmosphere. In doing so, they may feel that they belong to a cohort instead of being isolated, the problem indicated by Hrastinski et al. (2010). This sort of practice is expected to occur in asynchronous interaction in the blended learning programme. It is also necessary to allow a reasonable amount of time for students to comment so that collaboration among online learning participants occurs.

At the concluding stage, P. Albion and Ertmer (2004) suggested that the facilitator needs to weave together the comments of participants by "looking for similarities and differences across the postings and synthesizing them in a way that leaves the door open for further exploration" (p. 4).

Online Learning Communities for Teachers

In the online learning environment, community building among the teachers needs to be purposefully developed and maintained. To create effective learning communities for teachers, interaction and collaborative activities among the teachers are essential and therefore need to be carefully planned. In this way, the teachers act as learners, learn from each other, and become part of a larger teaching community (Kante, 2002).

A blended learning approach supports the creation of a learning community by connecting its members through the online dimension. Learning communities have been identified as one important aspect in online learning design (Fleck, 2012; Hanson & Clem, 2006; Mouzakis, 2008; Rovai & Jordan, 2004; Woods & Ebersole, 2003). In a blended learning environment, rich communication in the online learning component contributes to sustain the learning community, especially when participants share a common interest. They share their knowledge and experiences, ask for and receive advice or opinions from their peers, and learn from each other (DuFour, 2004; DuFour, DuFour, Eaker, & Many, 2010; R. A. Ellis & Calvo, 2004).

However, even though participants in a blended learning environment share a common interest and goal, and though computer technology enabling interaction exists, rich interaction does not happen automatically. In such circumstances, an online learning community is not created, as noted in the studies of Dzakiria et al. (2006) and Westberry and Franken (2015), cited in the following paragraphs.

In an academic writing course using a blended learning approach in a Malaysian university context (Dzakiria et al., 2006), maximal interaction among learning participants did not occur because the learners expected feedback mainly from the lecturers who were very slow to respond to learners' questions. Learners did not provide feedback for their peers. Thus, a sense of learning community did not exist. Consequently, learners felt isolated and alienated.

I believe this problem arose from the design of the blended learning course. Two essential elements in planning a blended learning programme seem to be neglected in the blended learning programme designed by Dzakiria et al. (2006). First, the rules and regulations for online participation must be made clear. Online interaction takes place not only from learners to lecturers and vice versa

but also among learners themselves and with the content (Collis & Jung, 2003; Swan, 2003). Even though a blended learning approach often recognizes individual autonomy (Dzakiria et al., 2006; Sharpe, Benfield, Roberts, & Francis, 2006), it also requires a measure of collaboration (McClure, 2007; Mouzakis, 2008; Wagner, 2006), interaction among learners, and facilitation and support from instructors.

Secondly, the selection of ICT tools in blended learning plays an important role. Unfortunately, Dzakiria et al. (2006) did not specify which ICT tools were utilized in their study. Learners' preference of ICT tools is an important part of the design of a blended learning programme and technological tools must not demotivate learners due to their complexity. Selecting user-friendly ICT tools is a priority as long as the tools support interaction. Social media networking, for example, has been used for educational purposes because of its user-friendliness for many learners.

Westberry and Franken (2015) reported that online interaction among learners in a management course occurred because learners' online participation was graded – 10% of the overall grade for posting an assignment and 15% of the overall grade for commenting or providing feedback to peers. The learners' goal in providing feedback for their peers was to gain marks rather than to collaborate because “they viewed the online discussion as a place to display their own understanding rather than build understandings with peers” (p. 304). This kind of interaction is not considered rich because after learners posted feedback, they did not return to continue the online discussion. Thus, an online learning community was not created.

Teachers' and Learners' Roles and Learner-Centredness

When using a blended learning approach, one pedagogical issue to consider is the change in roles of teachers and learners. The role of teachers is to guide and collaborate with learners, provide feedback, challenge learners' thinking and design language learning tasks. Learners' roles are to participate actively and be responsible for their own learning (Bañados, 2006).

To make the roles function as expected, Wilson (1986) suggests five criteria for the tasks: (1) the relevance of the tasks to the learners' needs; (2) the appropriateness of the tasks, which means that the tasks can be accomplished

through peer collaboration and consultation with the teacher; (3) the learners learn by doing the tasks; (4) the performance of the tasks must require the active participation and involvement of learners; and (5) the tasks should raise the learners' intrinsic motivation by focusing on learners' immediate needs. In a foreign language learning context, tasks must emphasize communication and meaning because language learning occurs through active participation in communication (Patil, 2014).

Learner-centredness has become a fundamental emphasis in many blended learning activities (Ausburn, 2004; Bonk, Olson, Wisher, & Orvis, 2002; Caulfield, 2011). According to the learner-centredness principle, learners need to be actively engaged in knowledge co-construction. Through that engagement, learners will experience deep, meaningful learning (Schweisfurth, 2011). To get learners engaged, it is important to foster their interests and strengths and to address their learning needs. For that purpose, every teaching and learning activity (method, assignment, or assessment) is directed at optimising opportunities to learn (Doyle, 2011). Learners are provided with learning interaction opportunities and meaningful activities (APA Work Group of the Board of Educational Affairs, 1997).

These fundamental principles of learner-centredness apply to adult learners especially, because they need to understand why they must learn particular material. The learning content and strategy must meet the needs and characteristics of adult learners. Their interests, culture, and circumstances should be considered. Karge, Phillips, Jessee, and McCabe (2011) argue that “adults learn best by participation in relevant experiences and utilization of practical information” (p. 53).

Learner-centredness and online learning share and promote the principle of flexibility for learners. Flexibility in an online learning environment may bring positive and negative effects. For example, the greater flexibility and open-ended study offered in an online learning course enable people to continue their education without leaving their family and work commitments (A. Young & Norgard, 2006).

Haynie (2013), an online learning participant in a finance course, reported that the absence of immediate deadlines had given her more time to enjoy her personal and family life but also made it possible for her to procrastinate and thus

led to the extension of the duration of her study. Heinze and Procter (2004) reported that this flexibility was abused by learners who failed to do fully what was expected of them in the online part of the blended learning course. For example, students were expected to read materials in their own time but did not do so.

Therefore, Heinze and Procter (2004) suggest that all the activities in the blended learning approach must be tied to assessment. They believe that learners are not likely to participate fully in online learning unless their participation is assessed or marked. However, Macdonald (2003) argues that an assessment system may lead to the loss of flexibility principle in online learning. When the assessment is absent, the issue becomes how to encourage participation in online learning while maintaining flexibility, a point discussed in the following section.

Assessment

Assessment is the process of evaluating the proficiency levels of students. Assessment does not necessarily contain feedback, especially when it is seen as an activity to give appropriate scores for the performance or proficiency of students. In this view, the emphasis lies more on the adequacy than the interpretation of the scores (Hattie & Timperley, 2007). Assessment is seen as an effective way to encourage learners' active participation in learning interaction and collaboration, especially in an online learning environment (Heinze & Procter, 2004; Macdonald, 2003; Pena-Shaff & Nicholls, 2004; Schellens & Valcke, 2005).

For example, Schellens and Valcke (2005) reported that participation in group discussion was awarded 25% of the final score. Consequently, learners participated in online discussions because they were aware that their participation was rated with a score. In the study by Pena-Shaff and Nicholls (2004), students were required to post comments once a week and their participation was valued at 10% of the final score. This requirement resulted in quite low student participation, "a little over the one required message per week" (Pena-Shaff & Nicholls, 2004, p. 251). This low rate of participation indicates that students posted comments simply to get scores.

In contrast, Bonk et al. (2002) found in their study that learners need corrective feedback more than scores. Scores alone did not seem to satisfy learners, who needed further explanation or feedback on what they had done.

Brindley, Blaschke, and Walti (2009) reported that the participation rate of learners did not differ significantly depending on whether or not they received a grade or assessment. In their study, to encourage learner participation Brindley et al. (2009) used ten strategies, such as “transparency of expectations, clear instructions, appropriateness of task for group work, meaning-making/relevance, motivation for participation embedded in course design, readiness of learners for group work, timing of group formation, respect for the autonomy of learners, monitoring and feedback, and sufficient time for the task” (pp. 10-11). No scoring or assessment was implemented in the study. This strategy was successful, however, in increasing learner participation despite the absence of scoring or assessment.

These varied findings indicate that assessment does not always encourage learner participation. The various studies reveal that there is disagreement about the relation of assessment to learners’ online participation in a blended learning course. In an online learning environment, the absence of assessment provides flexibility for learners. To address the issue raised in the previous section about flexibility and assessment, learners can participate in an online discussion at a time convenient for them and this indicates flexibility. It is effective feedback that encourages participation. In the blended learning course design of the present research, assessment is absent. The study is then expected to provide a perspective on research into the absence of assessment required for participation in a blended learning course for Indonesian teachers.

4.3.4. Motivation and Confidence

Motivation to learn English and the confidence to use it in interaction are two interrelated factors. Motivation and confidence are aspects of emotion. There are inner relations between emotions and actions (Roth, 2007). Confidence, according to Barbalet (1998), is “an emotion of assured expectation,” “a feeling state of self-projection,” and “not only the basis but also a positive encouragement to action” (p. 86).

In the Literature Review chapter, I noted that learner motivation and confidence are dynamic and change over time since they can be influenced by the social and contextual factors shaping individual learners. W.-C. V. Wu et al. (2011) suggest that changes in motivation and confidence are also linked with

changes in the ability to use the English language. If learners make progress in their English language learning so that they are able to understand English speakers and express ideas in English correctly, their motivation and confidence increase.

To better understand motivation, the relevant research tries to understand the whys of human activity and analyse the characteristics of human action. Two characteristics of the motivated human individual pointed out by Heckhausen and Heckhausen (2008) are control striving and goal engagement and disengagement. Control striving is defined as the attempt of a human being to control the physical and social environment. Control striving is a human characteristic which is associated with motivational orientation. Exploration is one example of control-related behaviour that is regulated by motivation. When a human being engages in exploration, he has the goal of expanding his control over the external environment.

The other characteristic is “goal engagement and goal disengagement which are also seen as two motivational modes: go and stop” (p. 2). A person can undertake an action to achieve his goal and can stop the action when he thinks that the goal is unreachable and thus would be a waste of time and energy. Motivated action occurs when a person with needs, motives, and goals interacts with a situation in which opportunities and possible incentives exist.

When sociocultural contexts are viewed as the immediate physical, social, and cultural environment in which people live, motivation and confidence are also located within the environment. Motivation and confidence are social and cultural in nature because they interact with the environment. Motivation, for example, interacts with the context in which the individual lives, including other people, the rules, and the physical and cultural tools. Issues like multiculturalism and the effect of globalization on language that are characteristic of an individual's environment, construct the social dimension of L2 motivation (Dörnyei, 2003; Ushioda, 2011).

Thus, a pleasant and enjoyable English language learning environment should be created so that it can have a positive influence on motivation and confidence. For example, the integration of Facebook for English learning purposes in a blended learning environment is seen to contribute to a pleasant and enjoyable learning environment and fosters the motivation and confidence of

learners. In the context of teacher professional development, teachers need to feel that they are being supported (Collis & Jung, 2003; Kessler & Plakans, 2008; McClure, 2007).

To make a blended learning course for teacher professional development a pleasant, enjoyable learning environment, Craig and Perraton (2003) suggest considering the relevance of the learning material to the teachers' jobs. McClure (2007) argues that a blended learning approach can be effective in promoting the self-confidence of teachers, provided that the course is designed carefully and a supportive relationship between the course facilitator and the teacher participants is developed.

4.4. Summary

In this chapter, I have discussed social constructivist views of learning which underpin the blended learning course. Individual learners interact with each other as well as with the cultural tools in their environment and actively collaborate to co-construct knowledge. Active engagement and collaboration are possible in a teacher professional development programme because as adult learners, teachers come to the learning process with their prior learning, experience, and needs. Knowledge co-construction is more readily implemented with teachers as adult learners because they can relate their learning process to their work and use their prior knowledge and experiences to co-construct knowledge.

The focus of development in a teacher training course, especially in the context of English-medium content teaching, is the pedagogical content knowledge which includes the English proficiency of teachers. A blended learning approach is seen to be appropriate for this kind of teacher professional development because teachers can develop their PCK without having to leave their teaching jobs and families.

In a blended learning environment, the use of information and communication technology (ICT) tools for learning interaction enables teachers to engage in both activities, learning and working, within the same timeframe. The ICT tools must support and facilitate rather than hinder the learning interaction. Therefore, to encourage active engagement in the blended learning course, ICT

tools must be selected based on the learning goals, the affordability of the tools to be used, and the learners' familiarity with the selected tools.

The social networking site Facebook is considered user-friendly for many people, including teachers, and has been used for education purposes. Facebook can be integrated into the blended learning course and provides facilities to create an online, cohort-based community of teachers. The selection of appropriate tools, the design of the learning activities, providing timely constructive feedback and a supportive relationship in the blended learning course will all affect the motivation and confidence of teachers in learning and using English for content teaching.

Chapter Five – Methodology

5.1. Introduction

This chapter provides an overview and justification for the qualitative methodology used in the research design. The chapter also includes discussion of how access was obtained to the schools and teachers as participants, the conduct of the blended learning course, the data collection procedures, and data analysis. The issue of the trustworthiness of the research is also discussed.

5.2. Research Design

A summary of the research design is included in Figure 2. I start with the ontological and epistemological perspectives, and then continue with the selection of an interpretive, qualitative methodology, the choice of the case study approach, the data collection, and data analysis.

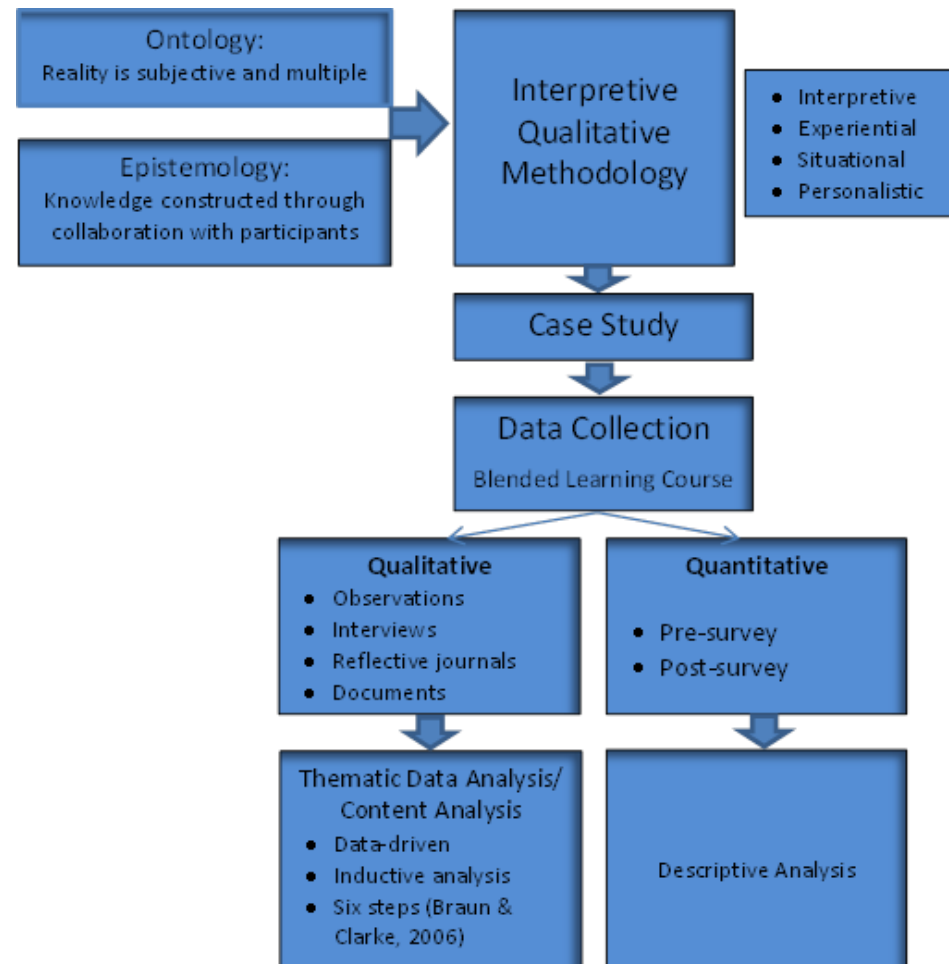


Figure 2. *The design of the research*

5.2.1. The Selection of Methodology

The present research is positioned within a framework of interpretive qualitative methodology, which is appropriate given the research aim. Qualitative research is interpretive, experiential, situational, and personal (Stake, 2010) and thus provides an appropriate framework for the present research.

From an ontological perspective, the research sought to discover the subjective and multiple realities (Creswell, 2007; Hitchcock & Hughes, 1995) perceived by Indonesian teachers. Part of this reality concerned how well the teachers responded to a blended learning approach, and included the language policy set by the Ministry of Education and Culture, and the schools, the curriculum, resources, places, people, testing, and the local community. Taking these factors into consideration, it sought to describe how motivated and confident Indonesian teachers were about using English in the classroom as required by the government and school policy; what factors influenced their motivation and confidence; and how these dimensions interacted.

The research sought to reveal this reality in a truthful, systematic, and unbiased manner by listening to teachers' voices, their worldviews, and their interpretation of phenomena related to their activities in a blended learning environment. An interpretive qualitative framework is best suited to describing such events and phenomena (Hitchcock & Hughes, 1995; Scott & Usher, 1999, 2011; Stake, 2010) because the meanings to be discovered are embedded in the teachers' actions and thoughts.

A qualitative methodology is capable of providing access and insight into teachers' life experiences, views, and understandings (Yin, 2011) and helps reveal the teachers' personal perspectives. Through a close engagement with participants, a detailed description of the phenomena can be obtained, understood, and interpreted, based on the participants' perspectives (Merriam, 1988).

A qualitative framework also allowed me to examine the culturally-based, pluralistic values shaping the schools, classrooms, and participants involved in the research (Gilgun & Abrams, 2002). Consistent with a culturally responsive methodology (Berryman, SooHoo, & Nevin, 2013), a respectful relationship between the participants and the researcher was established. Guided by this culturally responsive methodology, the research was not done *on* the teacher

participants, but as much as possible was done *with* the teachers. When research is done with participants, there is a greater likelihood that they will perceive the benefit of participation in the research.

From an epistemological perspective, knowledge is co-constructed through interaction and collaboration among the teacher participants in a social context of learning. This view is consistent with social constructivist learning theories (B. Kim, 2001; Packer & Goicoechea, 2000). The social context of this research included the historical learning and development that the teacher participants brought to the blended learning environment and the nature of their social interaction in that environment. The dynamic and active process of knowledge co-construction was consistent with the qualitative paradigm.

5.2.2. The Selection of the Case Study Method

Five qualitative approaches to inquiry are commonly used in educational research: narrative (Creswell, 2007; Lichtman, 2013), phenomenology, grounded theory, ethnography, and case studies (Ary, Jacobs, Sorensen, & Razavieh, 2010; Creswell, 2007; Johnson & Christensen, 2008; Lichtman, 2013). From these five approaches, the case study approach was selected for the present research. The reasons for adopting the case study approach are described below.

I chose the case study approach because it allowed me to unfold participants' individual interaction and experiences together with relevant factors in the blended learning environment. The case study approach is helpful to understand complex phenomena, especially when the research focuses on "how" and "why" questions (Öz, 2004). In an Indonesian context, this research sought to understand teachers' motivation and confidence in learning and using English as the medium of instruction in a blended learning environment. Due to the complexity of this process, a case study approach allowed me to work closely with participants to clarify their understanding. This approach also allowed me to focus on smaller groups or on individuals and permitted an exploration of their experiences over time.

The number of participants in this research was sixteen teachers from three different schools. With this small number of participants, the case study approach allowed me to develop ideas about the blended learning experience of the participants. Description of each school is provided in the Research Sites section

of this chapter to better understand each context. However, in the Findings chapter, I treated the sixteen 16 participants as one cohort because they participated as one group of learners in the online section of the blended learning course. The participants from the three different schools created one online learning community, which for the purposes of this research can be considered as a single case. The teacher participants' range of English language communication skills was relatively uniform.

Finally, a case study method was adopted because the research used evidence that was collected from multiple sources and included the contextual conditions in which the research was conducted (Yin, 2003, 2009, 2012). The data were then interpreted in a manner consistent with qualitative paradigm epistemology. As described in Figure 2, data for this research were collected from surveys, interviews, classroom observation, and observation of the online interaction. Interviews with students were also undertaken to complement the data from the students' perspectives.

5.3. Data Collection Procedures and Instruments

The selection of the interpretive qualitative methodology and the case study method determined and guided the procedure for data collection, data analysis, and data interpretation (Lincoln & Guba, 1985). Through the multiple methods of data collection described earlier, the research strove to be systematic, controlled, and critical (Johnson & Christensen, 2008).

As the methodology was designed to enable me to address the research questions, Table 3 below describes the data collection instruments, which were used.

Table 3. *Characteristics, Research Questions, and Methods*

	Characteristics	Research Questions	Methods Used to Answer the Research Questions
1	The use of social media within a blended learning professional development course to mediate the English language learning of Indonesian vocational high school teachers. [Aim 1]	How could social media within a blended learning professional development course mediate the English language learning of Indonesian vocational high school teachers?	Reflective journals Semi-structured interviews Scripts of online interaction
2	The use of adult learning and social constructivist theories in the design of a blended learning course. [Aim 2]	Is blended learning associated with changes in the confidence of Indonesian vocational high school teachers to use English for their teaching?	Reflective journals Semi-structured interviews Observation notes Pre- and post-course surveys Online interaction
3	The use of adult learning and social constructivist theories in the design of a blended learning course. [Aim 2]	Is blended learning associated with changes in the motivation of Indonesian vocational high school teachers to learn and use English in their teaching?	Reflective journals Semi-structured interviews Observation notes Pre- and post-course surveys Online interaction
4	The effect of online, cohort-based interaction on teachers' use of English as a medium of instruction. [Aim 3]	What is the effect of online cohort-based interaction on sustaining teachers' use of English as a medium of instruction?	Semi-structured interviews Observation notes Pre- and post-course surveys Online interaction

As seen in Table 3 above, there was no English language assessment or test applied to measure the progress of English language learning. The reason for not using an English language test was to avoid causing stress for the teacher

participants. Data about the teachers' English language learning maintenance and their confidence in using English were obtained from self-reports through surveys and interviews. Throughout the data collection process, I continued interpreting the data to enable me to make comments (Stake, 1995). I was aware that the natural context of the research was a rich source of data and thus I sought to discover distinctive, unique information through observation and conversation with the Indonesian teachers.

The next sections describe how the data collection was undertaken using multiple instruments.

5.3.1. Questionnaire Survey

I developed a questionnaire survey to complement other data collection methods. The purpose of giving the teacher participants survey questions was to determine if they thought the programme had made significant changes to their motivation and confidence to use English as a medium of instruction. To test the readability and comprehensibility of the survey questions, I sent them to a teacher who was not participating in the research. Revision of the questions was made until that teacher understood them all. Questionnaire surveys were then distributed to all teacher participants at the beginning and at the end of the programme.

The same questionnaire survey was used twice – before and after the programme. It consisted of fifteen statements to cover three main themes: confidence, motivation, and the use of English. Statements 1-4 dealt with confidence and each statement included six options: (1) highly unsure, (2) unsure, (3) a little bit unsure, (4) a little bit confident, (5) confident, and (6) highly confident. Statements 5-12 dealt with motivation and each statement included four options: (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree.

Statement 13 asked teacher participants to specify the language used to develop their learning materials and included five options (1) Indonesian only, (2) both Indonesian and English (but predominantly Indonesian), (3) both Indonesian and English (50-50), (4) both Indonesian and English (but predominantly English), and (5) English only. Statements 14 and 15 asked teacher participants about the percentage of English used for classroom instruction and for content teaching respectively. To answer the last two statements, teacher participants did

not follow a standard time measurement but only estimated. Appendix A contains the questionnaire survey form.

Teachers responded to the survey questions during the first meeting of a face-to-face tutorial and, at the same time, discussion of the items provided an opportunity to answer their questions. The discussion was mainly in English with some Indonesian because I thought this would ensure comprehension. It took about ten to fifteen minutes for the teachers to answer the fifteen questions in the survey.

For the post-programme survey, the same questions were asked again to find out if there were any changes in their answers after participating in the programme. Participants completed the questions in my absence because they wanted to answer them in their own offices. They submitted the post-programme survey during the final interview session upon completion of the programme.

5.3.2. Reflective Journals

Reflective journals are an appropriate data collection instrument in qualitative research. Reflective journals were selected to obtain the participants' perspectives on their learning process and their understanding of how they learned through their participation in the blended learning programme (Chirema, 2007). Additionally, the purpose of the reflective journal was to obtain qualitative data – the participants' points of view, including their learning experiences from time to time, their motivation and confidence in English language learning and using it for classroom instruction. A format for the reflective journal was provided as a guide (see Appendix B). Participants responded to the questions or statements written in the journal, but there was also space for them to write their comments if they had something specific to address.

5.3.3. Observation

As agreed earlier with the participants, I observed them teaching in their classrooms twice – at the end of the blended learning course and one month later. All data were collected using an observation form (Appendix C). The observations were audio-recorded and the recordings were fully transcribed for later analysis. I was in the classroom before teaching began. I placed my audio-recorder at the teachers' desk, sat at the back seat, and noted the condition of the

classroom and anything happening in the classroom. Using the classroom observation format that I prepared, I took notes on the teacher's instruction and how the students responded to that instruction. This observation arrangement was consistent with my research design. I did not plan to observe the teachers prior to the blended learning course because I assumed that none of them had used English extensively for teaching their subjects. This assumption was based on the fact that even though teachers were encouraged to use English for content teaching, it was not a must, and there was no penalty for teachers for not using English.

However, three teacher participants (P1, P5, and P6 from School 1) asked to be observed at the beginning of the blended learning course, saying they needed feedback on their use of English for content teaching. Accordingly, I went to their classrooms to observe them teaching in English and took notes. After the class was over, I met with the teachers and provided feedback. When I was analysing my data, I found that my observation notes on the three teachers were useful. I could use the data to see how much English they used after participating in the blended learning course. I learned from this that I should have observed all participants prior to the course. I consider it as a shortcoming of the research and prior observation of participants is recommended for future research.

From January 2013, I commenced class observation for all teachers at Schools 1 and 2 when the teacher participants were teaching in English. Class observation for teachers at School 3 commenced in February 2013 because they began the blended learning course one month late. The purpose of the observation was to see how their experience in the blended learning course had influenced their use of English for content instruction. The observation method undertaken for the research was qualitative, also known as unstructured observation, seeking to take into account all potentially relevant phenomena (L. Cohen, Manion, & Morrison, 2011). The duration of the class observation was approximately 45 minutes, equivalent to one class period.

The schedule for the class observation was determined by the participants in coordination with the vice principals. Considering the ethics of the situation, the observation undertaken in the research was overt rather than covert, which means that the teachers were aware they were being observed (L. Cohen, Manion, & Morrison, 2000; L. Cohen et al., 2011). Participants were informed in advance

about this classroom observation when they signed the consent form. As an observer, I strove to be unobtrusive so as not to affect what was being observed. Field notes were taken based on what I saw, heard, or sensed during the classroom observation (Yin, 2003).

5.3.4. Interviews

In this research, the purpose of the interview was to discover what the teacher as participant thought about the blended learning course and the use of English in the classroom for content teaching. Important questions described in the interview protocol (see Appendix D) were designed to provide appropriate and adequate data related to the research questions, such as their experiences in online interaction, their opinion about the blended learning approach, and their motivation and confidence in using English for content instruction. During the interview, I also sought examples and reasons so that participants would supply more detail. I understood that the richness of an interview depends greatly on these follow-up questions.

I selected a semi-structured interview format because this allowed me to prepare the topic and issues in advance, decide the sequence and wording of questions during the interview, and make the interview conversational and relaxed. During the interviews, I created a friendly atmosphere – greeting teachers with a smile and treating them as equals in the conversation in order not to create an interviewer-interviewee gap. To avoid being influenced by the opinions of other participants, the interview was conducted with each person individually. Such an interview is considered an in-depth interview to obtain meaningful information from the participants' perspectives (Hesse-Biber & Leavy, 2011; Mears, 2012).

Interviews were undertaken immediately after I observed the teachers in the classroom. The interview was recorded to help me obtain complete responses from the teacher participants. Each teacher was interviewed twice with an interval of one month between interviews. These were conducted in the teachers' room after the observation, and each interview took about twelve to seventeen minutes. The audio-recording was then transcribed. The observation and interviews were concluded in March 2013. As a qualitative interviewer, I strove not to dominate

the conversation, as (Silverman, 2011) recommended. Thus, the interview was not exclusively either subjective or objective, but intersubjective.

5.3.5. Student Focus Group Interview

One focus group interview was conducted with students of School 3. I was unable to schedule interviews with students of the other two schools because they had left for an industrial internship programme after the conclusion of the blended learning course. I did not anticipate this problem and learned from this case that student time and availability, in addition to the teachers', must be considered. Therefore, comments about teachers' use of English provided by the students refer to four teachers at School 3.

The purpose of interviewing the students was to elicit their perspectives on the teachers' use of English in the classroom. The interviews were open-ended, and students did not receive the questions in advance. Seven students participated in the focus-group interview, which took thirty minutes. The seven students were all the same age, fifteen years old and in grade 10. I asked them to choose whether to use English or Indonesian in the interview and all chose English. They were capable of responding in English, even though they made some errors of grammar and pronunciation. When one student could not find an English word, he used the Indonesian word and other students helped to translate into English. This interview was also recorded and transcribed. The data collected from the focus group interview were helpful at a later stage for data triangulation which I will discuss later in this chapter.

5.3.6. Documents

The types of documentary resources used in this research include the language policy as found in "Pedoman Penjaminan Mutu Sekolah/Madrasah Bertaraf Internasional Pada Jenjang Pendidikan Dasar dan Menengah" (A Guide for School/Madrasah Quality Assurance Projected to Meet International Standards at the Primary and Secondary Education Levels, in English (Ministry of Education and Culture, 2007a)), the vision and mission statements of the Directorate of Vocational High School Development, the school policy as documented in the vision and mission statements, and data concerning the teachers and their schools I obtained from the school vice principals.

I examined the language policy background and goals to discover what resources the government had provided, and the actions the schools would take to meet their goals. Examining school vision and mission statements, I considered how the schools responded to the language policy and what programmes they had established to meet the goals. Analysing the data from the teachers and their schools, I investigated the educational background and teaching experience of the teacher participants, how many teachers of mathematics, science, and vocational subjects were available, and the number of students. All the information I sought from these documents I considered secondary data (Johnson & Christensen, 2008; Robson, 2002). They helped me to better understand the context of the research sites, examine the preparedness of the teachers to use English for content teaching, and investigate whether a blended learning approach could be implemented in the schools.

5.4. Gaining Access to Schools

Purposive sampling, typically associated with qualitative research (Teddlie & Tashakkori, 2009), was adopted in this study. Schools and teachers participating in the research were selected for two reasons. First, teacher participants were those who taught mathematics, science, and vocational training courses in schools expected to meet international standards. The selection followed the requirements outlined by the Ministry of Education and Culture (Ministry of Education and Culture, 2007a; President of Republic of Indonesia, 1998).

Secondly, I took the factors of accessibility, willingness, and readiness into consideration (Stake, 2005). Accessibility refers to the geographic location of the school, accessible for me. The willingness and readiness factors refer to the availability of teachers and schools to participate in the research. The willingness factor reflects the ethical concern of the research project in which participation was fully voluntary. The readiness factor indicates the availability of supporting infrastructure in the schools, such as computer and internet access.

Three different vocational schools in Indonesia fit the criteria. Since these three schools were expected to achieve international standards, the Ministry of Education and Culture provided them with various kinds of support, including internet facilities. With internet access available at the three schools, English is

expected to be used as a medium of instruction, and the implementation of the blended learning approach became possible. Appendix E describes the condition of the three schools.

To obtain access to the three Indonesian vocational high schools, I approached the principals of the schools, first sending an email, then following up with a telephone conversation and face-to-face meetings to discuss my research project. These meetings with the three school principals were held separately at their own schools. I submitted and discussed my proposal to conduct an English language learning course using a blended learning approach for teachers.

In my discussion with the principals, I stated that the English language learning course using a blended learning approach supported the teachers' professional development without the need for them to leave their teaching jobs, that no fee would be required, and that teacher participation in the research was fully voluntary. The school principals agreed to my proposal and even said that the blended learning course was relevant to one of their school mission statements – to use English as the instructional language in the classroom. Additionally, the blended learning course was considered beneficial for the schools, enabling them to meet the government's policy. The school principals accepted the proposal and scheduled a date for me to meet with the teachers.

5.5. Research Sites

The research sites included vocational and high schools located in three different Indonesian cities and provinces: Singaraja, in the province of Bali (1,200 kilometers from Jakarta), Jakarta, the capital city, and Bogor, in the province of West Java, a one to two-hour drive from Jakarta. The three schools have been accredited as 'A' schools ('A' meaning very good) according to the standard applied by the National Accreditation Agency for Schools (Badan Akreditasi Nasional Sekolah/Madrasah, 2009). Teachers in these three schools participated in the English language learning programme using a blended learning approach. None of the teacher participants had attended an English language learning course in the teacher training course in Jakarta. The following section will discuss these three research sites, the school environment and facilities, the culture, and the local community in order to provide an interpretive context for the reader. In this

research, the school in Singaraja was labelled School 1, the school in Jakarta School 2, and the school in Bogor School 3.

5.5.1. School 1, Singaraja

Singaraja is the largest city in North Bali and the second largest city in Bali after Denpasar. It is the capital city of the Buleleng District, with a total population of 624,125 in the district according to the 2010 census (Badan Pusat Statistik Provinsi Bali, 2014). Even though the majority are Balinese Hindus, Singaraja is a noticeably multi-ethnic city. Singaraja has several institutions of higher education, one of which is the Universitas Pendidikan Ganesha (Undiksha). Undiksha is a state university and many teachers in Singaraja, including five out of eight teacher participants at School 1, graduated from this university.

School 1 is a state school, which had a total of 1,604 students and 201 teachers in the academic year 2012-2013. Eight teachers from the school participated in this research, some of them studying in the Master's degree programme at Undiksha. This school has a successful achievement record in vocational training in such areas as automotive, electrical, multimedia, and computer technology and has sent student representatives to national and international skills Olympics. Since most of the school's graduates find relevant jobs in industry, the local community, particularly those from lower and middle economic backgrounds, has chosen to give the school priority, because parents want their children to get good jobs after graduating. Families from higher socio-economic backgrounds normally prefer their children to attend general high schools and then tertiary education. Consequently, entry to this school is very competitive for junior high school graduates. It has been equipped with vocational and technical training facilities and bandwidth for internet access. Many students bring their own laptops for learning purposes.

5.5.2. School 2, Jakarta

Jakarta is the capital city of Indonesia with a total population of 9,604,329 according to the 2010 census (Badan Pusat Statistik Jakarta, 2010). As the economic and political capital of Indonesia, Jakarta is a cosmopolitan city with people from various places with diverse cultural backgrounds in Indonesia coming to live in the city for different purposes. The Betawi comprise Jakarta's main

ethnic group and the local language, Betawi, has been influenced by Dutch, Portuguese, Sundanese, Javanese, Chinese, and Arabic. The Chinese community (6% of the population) has been a significant presence in Jakarta for many centuries and has influenced Betawi culture. Jakarta has a number of universities, of which the Universitas Indonesia is the largest. Some major private universities are also located in Jakarta. For primary and secondary education, Jakarta has a variety of primary and secondary schools, categorised as public schools, private schools, and international schools.

School 2, a state school located in the southern section of Jakarta, is one of the best vocational schools in Indonesia and offers courses in hospitality and tourism. In the academic year 2012-2013, the roll totalled 640 students and 71 teachers. Four teachers from this school participated in the research. To support the vocational skills training programme in hospitality and tourism, the school operates a hotel and travel agency. The hotel has been in operation for years, accommodating conferences and seminars. The hotel and travel agency provide students with the opportunity to practise their vocational skills.

This school also sends its students for internship programmes to various countries such as Malaysia, Saudi Arabia, the United Kingdom, Singapore, and Thailand. Teachers in the hospitality and tourism department in this school have good English language communication skills. The school also has restaurant and food production facilities where students can receive practical training. Like School 1, this school is equipped with wi-fi and bandwidth for internet access for both teachers and students.

5.5.3. School 3, Bogor

Bogor is a small city about 20 kilometers square in the province of West Java, densely populated with almost one million people, according to the 2010 census (Badan Pusat Statistik Provinsi Jawa Barat, 2014). Bogor was the capital of the Sunda Kingdom before Dutch colonization when it was re-named Buitenzorg. The Dutch left a zoological museum and a large botanical garden that contains thousands of plants. Since the end of the Dutch colonial period, Bogor has been a centre for agricultural research, which has made it one of the major scientific and educational centres. Through the work of the Bogor Institute of

Agriculture (Institut Pertanian Bogor in Indonesian), agricultural science, biology, and veterinary science constitute Bogor's strongest areas of education.

Even though Bogor has its own Sundanese culture, the lifestyle of people in Bogor is very much influenced by Jakarta as it is only a 1-2 hour drive from the capital. Many people who live in Bogor commute to Jakarta every day for work purposes. The literacy rate in Bogor is very high (98.97%) compared to other cities in Indonesia (Sistem Informasi Manajemen Pelaporan & Statistik Bappeda Kota Bogor, 2010). For primary and secondary education, Bogor has very good schools, both state and private, and an international school in which English is used as the medium of instruction.

School 3 is a private school with 584 students and 46 teachers, 4 of whom participated in the research. The school is administered by the Bogor Islamic organization. Compared to the first two schools described above, this school is relatively newly established. It is one of the best private vocational high schools in Bogor. This school has been equipped with laboratories and wi-fi for internet access and maintains a portal as a repository for online learning activities. Because of the nature of its administration, has been categorized as "sekolah mandiri" (an independent school) – a school that has met the eight national standards of education as outlined in Permendiknas 19/2005. The eight national standards include standards of contents, process, competency of graduates, teachers and education personnel, facilities and infrastructure, management, budgeting/financing, educational assessment (Kementerian Pendidikan Nasional, 2005).

5.5.4. Literacy Leaders in Research Sites

When conducting the blended learning programme for the research, each school had a literacy leader who helped me arrange the schedules for face-to-face tutorials, micro-teaching practices, classroom observations, and interviews. The three literacy leaders in the three different schools were all vice principals and two of them, at Schools 2 and 3, participated in the research. The literacy leader in School 1 did not participate in the research because she was a teacher of English and the context of the research excluded English teachers. The literacy leaders acted as contact persons at each research site while I was away from the school.

5.6. The Intervention

This section describes the design of the blended learning course, its implementation, and the implications for future courses.

5.6.1. The blended learning course design

As described in Chapter 1 (Introduction), a blended learning course was designed and offered to the teacher participants. Its goal was to sustain the English language skills teachers had acquired in short training courses and enhance their motivation and confidence to use English as a medium of instruction in content-based teaching in vocational high schools. The blended learning course design used social media (Facebook), and included authentic learning and appropriate topics, technology-mediated social interaction, face-to-face micro-teaching, and peer collaboration in order to achieve affective outcomes and learning-related outcomes. The design is consistent with adult learning theories, which emphasise authentic learning (Doyle, 2011) and social constructivist perspectives, which emphasise the importance of social interaction. It has been argued that learning begins with and emerges from social interaction (Wertsch, 1991, 2008). Collaboration and interaction among peers was designed to allow the teacher participants to share ideas, experiences, and to provide constructive feedback to each other. Collaboration was done during the peer-based micro-teaching sessions, lesson planning and material development, and through online interactions. The design of the blended learning course is pictured in Figure 3.

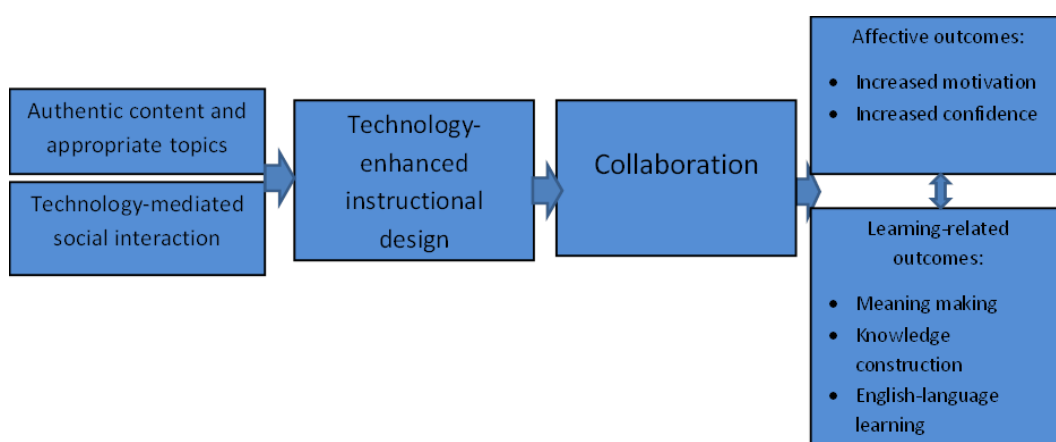


Figure 3: *The design of the blended learning course*

Teacher participants were involved in identifying their learning needs and how they were going to learn. To achieve the goal, the teacher participants were expected to become familiar with, and be able to use classroom terminology and expressions in English. For example, teacher participants should be able to use English for classroom management, such as asking questions, motivating, and encouraging student participation. Moreover, they should also be able to develop lesson plans and learning materials in English and to conduct professional communications orally and in writing with students and peers. The teachers' English proficiency, including the four skills (listening, speaking, reading, and writing) needed to be developed by focusing on learning for authentic communication in a classroom setting. The objectives of each skill are stated in Table 4.

Table 4. *Objectives of the Course*

Skills	Objectives
Listening	To understand English conversation and instruction in classroom settings.
Speaking	To communicate effectively in English with students and peers in classroom settings.
Reading	To understand various English texts, such as stories and instructions.
Writing	To write lesson plans and learning materials in English.

5.6.2. The blended learning course implementation

The following section describes the procedure of the intervention, which consisted of three phases: (1) the setting, (2) implementation of the blended learning course, and (3) the classroom teaching context in which English was used as a medium of instruction after the teachers had completed the course.

5.6.2.1. Phase One: The Setting of the Intervention

In this research, the participants' cultural values received full respect. The teachers were always involved in any decisions related to their participation, such as content-related issues, scheduling, duration of learning, and selecting tools for online interaction.

Recruitment of research participants

Following the schedules offered by the school principals, I met with potential research subjects (teachers) at their individual schools. At this early stage of the research, many teachers with varying subject backgrounds came to the meeting, even though I had told the school principals that the training course was offered to teachers of mathematics, science and vocational training courses only. I expected 5-10 teachers at each school, but 22 teachers at School 1 came to the first meetings, 10 at School 2, and 7 teachers at School 3.

Some came simply because they wanted to know about the programme. As an Indonesian naturally familiar with Indonesian culture and as a teacher trainer at a teacher training centre with experience working with different types of teachers in training courses, I understood that for various reasons not all would remain in the course to the end. I did not know who would stay and who would withdraw until the end of the programme, especially in view of the lengthy period of participation and because there was no financial gain in return for their sacrifice of time.

Accordingly, I offered this learning opportunity to all who came to the meeting to increase the probability of some participants staying until the end of the programme. Even though only 16 participants remained, the number was still within my expectations (15-30). I believed that sixteen teachers from three different schools and from various content backgrounds (math, science, and vocational training courses) would be sufficient to address my research questions. The demographic characteristics of the participants will be provided in the Research Participants section in this chapter.

Teachers were given consent forms to sign and an explanation of this consent was also provided to help them understand what they were signing. Initially, 39 teachers from three schools signed and submitted the consent form but in the end, only 16 remained. As anticipated earlier, the final number of participants in this research depended very much on the schools and teachers. They would have considered time, work load, and administrative support (L. Cohen et al., 2011).

Table 5 below supplies a list of the participants and their demographic characteristics. None of the teacher participants had any experience as students in English-medium content teaching.

Table 5 *Demographic Characteristics of Participants*

No	Name	Age	Sex	Teaching experience	Subject
1	NLPM	31	Female	8.5 years	Physics
2	NLMT	45	Female	25 years	Chemistry
3	HNR	29	Female	6 years	Electrical installation techniques
4	LEY	26	Female	1.7 years	Physics
5	KK	36	Male	9 years	Multimedia
6	IWAP	36	Male	9 years	Audio-video technology
7	CA	28	Female	9 years	Mathematics
8	AW	51	Female	26 years	Biology
9	UA	44	Male	17 years	Tourism and travel
10	WA	34	Female	9.8 years	Mathematics
11	SE	33	Female	9 years	Chemistry
12	SH	40	Female	17 years	Tourism and travel
13	SA	58	Female	32 years	Food and beverage
14	A	55	Male	20 years	Entrepreneurship
15	H	33	Male	9 years	IT
16	AS	30	Female	8 years	Mathematics

After some time had elapsed, I met a few of the teachers who had withdrawn from the research. They informed me that they could not manage to include it in their schedule because they were teaching at school and at the same time studying for their Master's degree courses. Other teachers said that they could not keep pace with the teachers who remained in the programme because their English proficiency for entry was too low. Appendices F, G, and H describe the number of teachers who participated in the programme from School 1, School 2, and School 3 respectively, and indicate how the number of participants decreased.

At the initial meeting with the teachers, a number of issues related to participation in the research were discussed. The purpose of this discussion was to ensure that potential participants clearly understood what would be expected during the research. When I explained that I expected them to write reflective

journals every 2 weeks using the template that I had prepared (see Appendix B), the teachers believed that this would increase their work load, I could appreciate. We negotiated and finally agreed that they would submit reflective journals twice during the programme, one in the middle and the other at the end of the programme. To gain more insight from the teacher participants, I approached them personally in an informal way before and after the face-to-face teaching sessions and asked questions.

A question and answer session took place during the meeting. The discussion was mainly in English, with some Indonesian. I purposely used English to make them more familiar with the language and to signal that the interaction in the blended learning course would be in English. The discussion time was mainly spent determining the schedule for the face-to-face tutorials. After a long discussion, an agreement for the schedule of learning in the blended learning mode was reached. Schools 1 and 3 decided that the face-to-face tutorial should be undertaken after school hours, while school 2 scheduled it during school hours. It was agreed that the face-to-face tutorial would be conducted twice a week for a duration of 60 minutes.

For the online asynchronous and synchronous learning interaction, we agreed to use Facebook and Skype respectively. However, in the middle of the programme, some participants asked to use Edmodo – a web-based learning platform – for asynchronous learning because one participant had learned to use it and informed other participants about its advantages. I managed to use Edmodo for learning interaction but Facebook was still used. Participants were free to select whether to post on Facebook or on Edmodo. Through their participation in this research, the teachers acted as learners (Kwo, 2010) and expected to enhance their teaching skills and confidence in an English-medium content teaching environment.

Facilitator

I was the only facilitator of the blended learning course. As this course was involved flexible schedule and financial support, it was not possible to find someone else to act as facilitator. Additionally, this course was made for my own research purpose. The course was optional and fully voluntary for the teacher participants. It means that there were no incentives or rewards provided to the

teacher participants and all expenses involved in the research were fully my own responsibility.

Since I acted as the learning facilitator in the training course, to some extent I became an insider (Creswell, 2007) in the blended learning environment. This was necessary in such a case study because it enabled me to discover the larger meaning and significance of the Indonesian teachers' real-life events, such as their learning processes in a blended learning programme, their teaching practices, and their organizational context (Yin, 2012).

Ethical Considerations

Ethical approval for this research was obtained from the Faculty of Education Research Ethics Committee at the University of Waikato (Appendix I). Three main issues related to research ethical guidelines were considered important for this research project: informed consent, confidentiality, and trust. For the purpose of maintaining confidentiality, pseudonyms are used for the participants throughout the thesis. As I have provided a detailed description of the research sites, I do not consider that confidentiality is guaranteed. The anonymity of participants is assured.

5.6.2.2. Phase Two: Implementation of the Blended Learning Course

As mentioned earlier, the blended learning course was composed of two modes of interaction: face-to-face and online learning interaction.

Face-to-Face Tutorials

As part of the blended learning course, face-to-face tutorials were provided at the three different research sites. Contact hours at each research site totalled 32 and were scheduled at the same general time for Schools 1 and 2 (September to December 2012) but between November 2012 and February 2013 at School 3. This split schedule resulted from the different conditions at each school. Table 6 shows the outline of the face-to-face interaction in each research site.

Table 6. *Outline of the Course (face-to-face)*

No	Content/Materials	Hours	Objectives
1	English for classroom management	4	To familiarize teachers with English expressions normally used in the classroom.
2	Stories/reading texts, games	6	To enhance reading comprehension skills, enrich English vocabulary and grammar, and practise speaking by having a discussion about the story.
3	Problem-based learning	4	To provide teachers with alternative ideas for teaching strategies, discuss and compare them with their regular teaching practices, and practise speaking.
4	Developing lesson plans	4	To help teachers with lesson plan development.
5	Developing learning materials	6	To help teachers to write learning materials in English.
6	Micro-teaching/peer-teaching	8	To provide teachers with opportunities to practise using English with their peers before actual teaching in the classroom, and get corrective feedback from facilitator and peers.

As a facilitator in the face-to-face interaction, my task was to provide learning materials such as topics for discussion, to organize pair works or group works, and to encourage teachers to actively participate in the discussion. I was aware that it was the teachers who needed more practices so I tried to minimise lectures. For example, when I provided a reading text such as a story, I developed questions for the teachers to discuss in pairs or in groups. Then, each pair or group reported to the class what they thought about the stories. I encouraged the teachers to discuss in English to practise and improve their English. However, they were allowed to use their first language due to limited English vocabulary or terminology. If that happened, I told the teachers the English words or phrases that they had to say.

To meet the individual needs of the teacher participants, I provided individual assistance. For example, each participant, in consultation with me, developed his/her own lesson plan in English. One needed particular English terminology and expressions, whereas others needed particular grammatical knowledge, practice in pronunciation, and so on. It is important to underline, however, that whatever the content of the discussion, the medium of interaction was English because the goal of the interaction was to communicate in English.

In the face-to-face tutorials, micro-teaching sessions, considered the core of the sessions, were provided. During these sessions, participants practised using English as a medium of classroom instruction. Each participant had two opportunities to present their learning materials for 20 minutes for each session while their peers acted as learners. After each presentation, the group provided feedback to the presenter. The interaction was in English, even though they made grammatical and pronunciation errors and at times would use Indonesian words. I viewed the interaction for providing and receiving feedback as part of collaborative learning. As the participants agreed at the beginning of the course, the English language was to be used as much as possible to enhance their English language communication skills. However, switching from English to Indonesian was acceptable when teachers had difficulties in English.

Online Learning Interaction

Together with the face-to-face tutorials, online learning interaction was undertaken as part of my blended learning course. Facebook group and Edmodo were utilized. The activities undertaken in the online interaction included to interact socially using English, to post assignments and comment on peers' postings, to share English learning experiences, to share teaching experiences using English as a medium of instruction, and to discuss topics or issues for English language communication practice.

The selection of interaction tools was based on agreement with the participants during the initial discussion. Consistent with the principle of self-determination in a blended learning approach (George-Walker & Keeffe, 2010), I allowed participants to select the online interaction tools. There were two modes of interaction in the online tutorial: synchronous and asynchronous. For asynchronous interaction, participants selected Facebook from three options

(Facebook, Google+, and Moodle) because they were familiar with it. After a few weeks of learning interaction, participants asked to adopt Edmodo because it had become popular in some Indonesian schools. Edmodo and Facebook are both social media based platforms but Edmodo provides features for quizzes which are effective for learning. More about Edmodo is described later in this chapter. Even though Edmodo was adopted, Facebook was also still used. For synchronous interaction, teachers selected Skype from the two options (Skype and BigBlueButton) because again they were familiar with Skype.

In the online tutorial dimension, the focus was on the participants and the pedagogy rather than on the tutor and technology (M. Oliver & Trigwell, 2005). Refocusing from facilitator to learning participants means ensuring that the interaction is led and dominated by the participants. My role as facilitator was to encourage teachers to actively participate in the English language interaction.

Focusing on pedagogy rather than technology means that attention was given more to the learning content than to the technology; the aim was not learning to use technology but learning through the use of technology. The value of technology was to support instruction and learning (Hughes, 2005). In the technology-supported pedagogy adopted in this research, I developed the objectives for the interaction, selected appropriate topics, raised issues for discussion, and selected technology features that support interaction. Anticipating that technology might be a barrier for some teacher participants, user-friendly technology tools were selected for the purpose of learning in this blended learning approach. The following sections discuss the use of the selected tools for online learning interaction.

Online Learning Interaction on Facebook

As agreed in the initial discussion with teachers, Facebook was utilized for online learning interaction. The purpose of using Facebook in the blended learning course was to enable teachers from the three different research sites: (1) to interact socially using English; (2) to share English learning experiences; (3) to share teaching experiences using English as a medium of instruction; (4) and to discuss topics or issues for English language communication practice.

All teachers participating in the blended learning course had their personal account on Facebook and had experience using Facebook for social interaction,

uploading and downloading files, and providing comments. I viewed the teachers' familiarity with Facebook as an advantage because it offered the potential of enhancing learning interaction, particularly in English (Esteves, 2012; Kabilan et al., 2010; Manca & Ranieri, 2013).

As shown in Figure 4 below, I created a Facebook group for online interaction during the research. The Facebook group was named "English for Classroom Instruction."

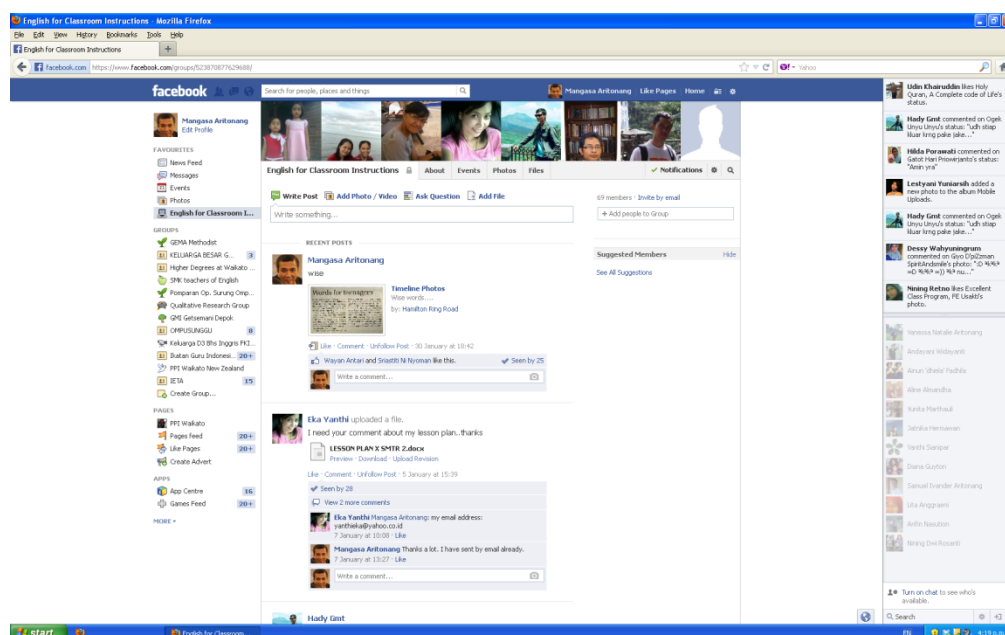


Figure 4. Facebook Group "English for Classroom Instruction"

Online Learning Interaction on Edmodo

Edmodo (<http://www.edmodo.com>) is a social platform that provides a learning space for the teacher and students to interact with one another and with the learning materials. Edmodo also gives the opportunity to students to contribute to their learning experience and provides a personal library for each member (Edmodo, 2012). Edmodo has been used worldwide for learning purposes (Dowling, 2011; Flanigan, 2012; Trust, 2012) and has also been in use recently by teachers in Indonesia, including some participating in this research. A group of Indonesian teachers attended a training course on how to set up an Edmodo account and how to use it with their students for educational purposes.

As mentioned earlier, half way through the research project, some participants asked to use Edmodo because it provided them with experience as

learners using the site. Initially it was a challenge for me because I was not familiar with Edmodo so I quickly learned about the site and created an Edmodo page as shown in the screenshot (Figure 5) below.

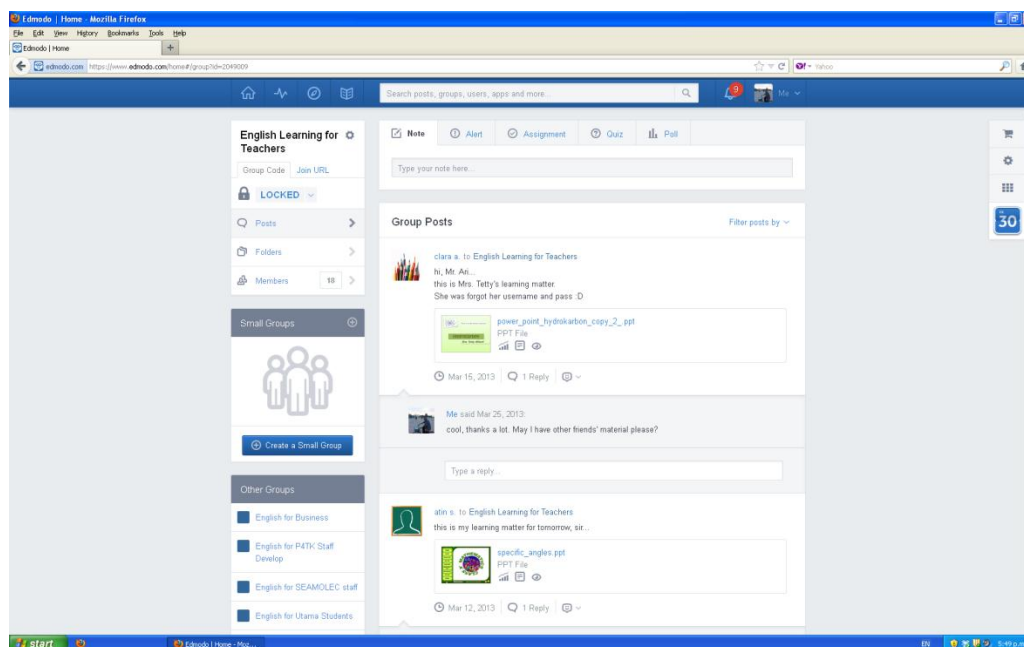


Figure 5. *Edmodo page "English learning for teachers"*

The Edmodo platform in the blended learning course for the present research was named “English learning for teachers.” Compared to Facebook, the advantages of using Edmodo were that it provided assignment and quiz features with a due date option, and automatically provided scores to learners. Consequently, besides posting learning materials, I made use of the assignment and quiz features with the teachers participating in the project. Teacher participants also shared their lesson plans and learning materials and asked for corrective feedback from their peers and the facilitator. Although both Edmodo and Facebook were used at the same time, social interaction occurred more on Facebook than on Edmodo, as described later in the Findings chapter. Since teachers used Edmodo mostly for self-assessment through quizzes and very little for interaction among participants, I focused on social interaction on Facebook to address my research questions.

Online Learning Interaction on Skype

In addition to the asynchronous interaction, participants were involved in synchronous interaction using Skype. The reason for using Skype for online interaction in the blended learning course was that most teachers already had it installed on their laptops and were familiar with it. The Skype interaction occurred only between individual participants and me as the facilitator; there were no Skype meetings between or amongst participants. During the individual Skype sessions, teachers asked me questions related to their lesson plans and learning materials, especially to check and confirm that their English was correct. Online interaction among participants was exclusively asynchronous on Facebook and Edmodo.

5.6.2.3. Phase Three: Classroom Implementation

Classroom implementation refers to the real teaching classroom in which teacher participants taught their students using English as a medium of instruction. It was the time when I attended and observed them teaching in the classroom. The time for implementing English instruction made no difference to the existing school schedules because teachers used their teaching time already allotted. The following section discusses how the data were analysed and interpreted, using thematic analysis.

5.7. Data Analysis

The main unit of analysis was the mediated interaction that occurred in the blended learning activity system. Focusing on interaction could not be separated from the context because in addition to the participants, there were other elements that influenced the interaction or learning activities, such as the larger community at the research sites, policies, rules, ICT tools, and culture.

Qualitative data analysis software (NVivo10) was utilized to organize and categorize the data, and during the data analysis, themes emerged (Braun & Clarke, 2006; Yin, 2003, 2009). I had learned about NVivo prior to beginning my data analysis stage and found it very helpful in organizing and categorizing data and in linking data from one source to another. The linked data in particular suggested potential themes.

The data from NVivo10 were then interpreted, using thematic analysis as suggested by Braun and Clarke's study (2006). Quantitative data from the surveys were analysed descriptively. Data and the interpretations drawn from the data analyses were open to critique from the research participants, my peers, and my supervisors at the University of Waikato. This will be discussed further in later sections of this chapter. Peer and research participant critique were expected to contribute to the trustworthiness of the research (Graneheim & Lundman, 2004; Yin, 2011). Greater knowledge can be gained from such constructive criticism (Pring, 2001; Wiersma, 1986; Wiersma & Jurs, 2009).

5.7.1. Thematic Data Analysis

I selected thematic data analysis because of its flexibility and applicability across a range of theoretical and epistemological approaches (Braun & Clarke, 2006). Such analysis was also more appropriate to the current research purposes and questions. In the data analysis, I was interested in what emerged from the data instead of applying pre-developed categories to the data. Thematic analysis supports data-driven rather than theory-driven analysis, but the data that emerged reflected a social constructivist perspective that will be described in the Discussion chapter.

The six steps of thematic analysis (Braun & Clarke, 2006, pp. 16-23) in this research aimed to identify and report patterns (themes) emerging from the data.

Step 1: Familiarizing myself with the data. At this stage, all verbal data obtained from interviews were transcribed. Checking the transcript against the audio recording was done for accuracy. Reading all the data repeatedly in an active way, searching for meanings and patterns and noting down initial ideas, was an important step at this stage to provide me with the basis for the rest of the analytical process.

Step 2: Generating initial codes. This stage involved the organization of the data into meaningful groups. Features of the data were coded in a systematic way across the whole dataset by using an inductive coding system. Consequently, full and equal attention was given to each data item in order to identify aspects which could potentially reveal repeated patterns or themes. At this stage, coded

data differed from themes but potentially became themes when subjected to interpretative analysis. Twenty-six nodes were generated from five data sources.

Step 3: Searching for themes. The purpose of the work at this stage was to organize and sort all 26 nodes into potential themes. Codes were brought together to find potential themes and relevant data were collected for each code. It was also important to investigate the possibility of combining different codes to form an overarching theme. I arranged the 26 nodes into a Table (See Appendix K) to help me categorize them into potential themes and subthemes. I also included remarks by the participants in a column next to relevant themes or subthemes. The result at this stage was a collection of 24 potential themes with their sub-themes and codes (See Appendix L).

Step 4: Reviewing themes. At this stage, I reviewed the collection of 24 potential themes obtained in step 3 by merging similar or related themes twice. First, I reviewed the coded data extracts to see whether or not they were mutually coherent and suitable for my research questions. When they were not, I had to consider if the extracts needed to be reorganized or whether to find a new theme for irrelevant extracts.

Second, when they were coherent, I reviewed the entire data set. The result of this analysis was the 20 potential themes (See Appendix M) which I classified into semantic/explicit level and latent/interpretive level, as suggested by Braun and Clarke (2006). At level two of this review, I determined if the themes really reflected meanings from their data set. Therefore, repeated scrutiny of all data was required. Recoding additional data from the data set was necessary as the coding was an ongoing process. Thirteen themes emerged from the data (See Appendix N). During this process, I discussed and debated my analysis and potential findings with my supervisors on a regular basis, and this thus added to the trustworthiness of the research findings.

Step 5: Defining and naming themes. The next task was to define and refine the themes. This stage required me to identify the essence of each theme and of the themes as a group, and to determine what aspects of the data were captured in each theme. I wrote a detailed analysis for each theme and identified the information each provided and how it formed part of the data's broader story. Accordingly, I had to check that themes did not overlap and how each theme correlated with the next. As part of the refining process, it was necessary to check

if a theme contained subthemes which were helpful in constructing the hierarchy of meaning within the data. The result at this stage was a clear description of themes and the labels for each.

Step 6: Producing the report. At this point, my task was to tell the story yielded by the data which could reveal their value and convince readers of the validity of the analysis. To write the report, I had to select convincing extract samples which reflected the fundamental nature of the theme. I reanalysed the samples, related them back to my research questions and relevant literature, then produced the analysis report in the form of a narrative. I understood that writing the report was not simply a matter of providing data but the analytic narrative should contain data extracts. The analytic narrative should go beyond mere description of the data and argument related to the research questions should be provided.

The task of data analysis as described above involved a complex process, moving back and forth across the data set to search for meanings, categorising and re-categorising data, jotting down notes, commenting, querying, describing, interpreting, discussing with peers and supervisors, and so on.

In the analysis process, data was analysed and interpreted, explained and not simply paraphrased or described. I strove to produce a coherent story about the data and topic, and to balance the analytic narrative and illustrative extracts.

5.7.2. Crosschecking Data Resources

In the coding process, one particular theme or pattern was checked in all data sets for cross-case data analysis. A strategic way of finding new meaning about cases is through the aggregation of instances which might be positioned across the data set (Stake, 1995). Meanings were found through patterns which revealed correspondence from one data item to another. Even though meanings can be found in a single instance, important meanings usually derive from their prevalence in different places.

As a novice researcher, I was aware that sometimes meanings are not articulated directly by the participants. This is known as tacit knowledge (Stake, 2010). Accordingly, it was necessary for me to take more time to examine the data over and over again, to reflect, triangulate, get help from reviewers (peer debriefing) and supervisors, and be sceptical about newly found simple meanings.

These processes had to be conducted in a cycle until I provided “naturalistic generalization” – conclusions made through recognizing the similarities of issues from various resources (Stake, 2010).

5.8. Trustworthiness

The term “trustworthiness” in qualitative research addresses the issues of validity and reliability as commonly used in quantitative research. Trustworthiness includes internal and external validity, reliability, and objectivity (Lincoln & Guba, 1985). One perspective to measure reliability was from ontological, epistemological, and methodological points of view (Healy & Perry, 2000). From an ontological perspective, the reality in the present research was constructed and consisted of multiple realities that Indonesian teachers had in their minds. From an epistemological perspective, the findings were subjective because they reflected the participants’ perspectives on their learning experiences. From the methodological perspective, the constructed reality was sought and made known through interaction with the research participants in the programme over four months and through observation and interviews.

I strove to enhance the trustworthiness of the present research by following different strategies, such as my engagement with participants to obtain their views, observation of their interaction with peers, data triangulation, member checks, peer debriefing (Creswell & Miller, 2000; Lincoln & Guba, 1985), and discussions with supervisors. All these strategies uncover the perspectives of the research participants, external parties, and my own as researcher.

5.8.1. Engagement

My engagement with the participants took place over four months, which I initiated by acting as a learning facilitator using a blended learning approach. In addition to the four-month blended learning programme, another two months were spent engaged in classroom observation and interviews. I was also engaged in social interaction with the participants to build trust and to understand their culture and values (Creswell, 2007; Lincoln & Guba, 1985; Merriam, 1988). The social interaction occurred after the face-to-face tutorial sessions when the participants and I sometimes went for social conversation while having lunch or dinner. In addition to building trust, this social interaction was aimed at helping

me to become an accepted member of the group of participants (Lincoln & Guba, 1985). Being an accepted member of the group enabled me to overcome potential distortion, such as by being told lies, misunderstanding questions, or from individuals not fully motivated to address my concerns.

5.8.2. Observation

My observation of the development of English language communication skills started from the very beginning of the blended learning course. I observed the teachers' participation and interaction during the face-to-face tutorials and their online interaction. I considered the changes they made during the study in such areas as pronunciation, word choice, and sentence structure. The other key observation for me was their confidence in using English for classroom instruction. Observation of the participants' teaching practices using English as a medium of instruction was started in a micro-teaching setting and was then followed by the real teaching session in their classroom.

5.8.3. Data Triangulation

Data triangulation can be considered a means to finding contrary evidence in an interpretive and constructive paradigm (Creswell & Miller, 2000). As mentioned earlier, data collection techniques included self-report measurements such as pre- and post-intervention surveys, interviews, and use of a reflective journal. I was aware that these self-reporting measures have some potential validity problems (Barker, Pistrang, & Elliott, 2002; Hoskin, 2012), such as honesty management, introspective ability, various interpretations of particular questions, different interpretation of scales, and response bias (Hoskin, 2012). Participants might have wanted to please me or might have hidden something to avoid embarrassment.

To mitigate the risk of compromising validity, I collected data through various techniques such as observation, which was useful for data triangulation. My engagement with teacher participants and my observations helped me to perceive how the teachers behaved in the classroom and how they undertook interaction with peers. Additionally, I collected data from the transcripts of participants' online interactions. Thus, the information I obtained from different sources was aimed at identifying repeated patterns (Braun & Clarke, 2006) as well

as any conflicting or negative evidence (Creswell & Miller, 2000; Miles & Huberman, 1994).

5.8.4. Member Check

By providing the research participants with a summary of their interview, the technique of carrying out a member check, also known as member validation, was adopted during data collection. The purpose of doing a member check was to ensure that the information I obtained was really what the participants intended. For this purpose, I conducted the check in the participants' first language, Indonesian, to avoid misunderstanding.

5.8.5. Peer Debriefing

Peer debriefing is one of the major techniques suggested by Lincoln and Guba (1985) to enhance the trustworthiness of qualitative research. It is a process in which the researcher and one of their peers conduct broad discussions about the findings and the progress of research (Spall, 1998). An individual not involved in the research was provided with the data and results and was asked to assess whether the results were dependable and consistent with the data collected (Merriam, 2001). For this peer debriefing, trust was the basis for selecting the peer debriefer and the debriefing interaction as suggested by Spall (1998).

I selected a PhD student who had finished her data analysis and whom I trusted and felt comfortable talking with. During the data analysis process, for example, I sent her the transcribed data, the data categories, and the potential themes and asked her opinion about the data categorization and themes. For some categories and themes, she did not agree with my analysis. We continued the discussion until we agreed on the best categories and potential themes for the data. Because of this person's time limitations, we discussed all the data for one round in three face-to-face meetings.

5.8.6. Potential Trustworthiness Problems

As stated earlier many data sources for this research were from the participants' self-reports and thus have potential validity problems (Barker et al., 2002; Hoskin, 2012). Considering honesty management, for example, participants might have said something to please me as a researcher or to avoid

embarrassment. Honesty is difficult to measure. Moreover, participants might hold differing interpretations of scales such as from 1 (highly unsure) to 6 (highly confident) and from 1 (strongly disagree) to 4 (strongly agree) as in the surveys, and from 1 (very unmotivated) to 4 (very motivated) and from 1 (very unconfident) to 4 (very confident) as in interviews.

Interpreting the scales places demands on the participants' introspective abilities, which will also vary from one participant to another. All of these factors present potential validity problems. However, as this research sought to determine the participants' understanding and perspectives, I thought these might best be attained by asking the teachers directly. Respondents' views about themselves and their worlds are not attainable in any other way but from self-report measures (Barker et al., 2002).

To minimize the risk of the potential validity problem, I also gathered data from my own observation of their teaching and online interaction. Thus, data were triangulated from the two main categories of sources to maintain validity. Consistency of information from the self-report sources was also checked for triangulation purposes.

Secondly, my role as the facilitator in the blended learning environment includes potential bias. Sometimes I positioned myself as an insider (the learning facilitator), and sometimes as an outsider (the researcher). There were several considerations for me in assuming the role of learning facilitator. The blended learning approach for teacher professional development is not commonly practised in Indonesia. Consequently, it was difficult to find anyone to be a facilitator in this learning environment. The participants in the research were located in three different cities, a situation that required mobility, time, and expenditure from the learning facilitator and added to the difficulty in finding a suitable person for the purpose of the research. Considering the difficulties, I decided to take the role of learning facilitator myself. However, to minimize insider bias, I attempted to position myself as an outsider during the data collection and analysis processes.

5.9. Summary

In this chapter, I have described the interpretive, qualitative methodology that was adopted in the research to address the research questions. One of the

reasons for selecting this methodology was that it was an appropriate means of interpreting participants' lived experiences. The case study method was adopted to allow me to obtain information from multiple sources and satisfy the contextual dimensions of the research. Even though mainly qualitative data were obtained, some quantitative data were also obtained, analysed, and used to enhance the descriptive power of the qualitative data. Six strategies to establish the trustworthiness of the research were undertaken. The findings of the research are described in the next chapter.

Chapter Six – Research Findings

6.1. Introduction

This chapter outlines the findings of the research, which are presented in five main categories. As all findings contributed to answering my research questions, I organized them according to the questions. The first category comprises technology-mediated learning activities in the blended learning course, including collaborative activities, reflective activities, and self-regulated learning. I also added teachers' perspectives on the blended learning course to help me better understand the insights of the participants. The second category is the confidence of the teacher participants in using English for content teaching. Teacher participants underwent changes in their confidence, and I identified factors that affected those changes. The third category is the motivation of the teacher participants to learn and use English as a medium of instruction. Participants also experienced changes in both integrative and instrumental motivation. Circumstances that affected motivational changes were also found. The fourth category consists of the effect of participation in the blended learning course on teaching practices, which include the use of English in the classroom and the teachers' teaching strategies. The fifth category includes students' perspectives on their teachers' use of English for content teaching.

6.2. Technology-mediated learning activities

The first research question was “How could social media within a blended learning professional development course mediate the English language learning of Indonesian vocational high school teachers?” Before discussing the technology-mediated learning activities, it is important to remember that learning in this research refers to meaning-making, sense-making and meaning-construction, in accordance with Zittoun and Brinkmann's (2012) definition. Meaning-making involves various activities, such as collaboration, reflection, and interpretation. The data collected from the research sites indicated that participants were actively engaged in peer interaction and collaboration, both face-to-face and online.

The data also showed that participants undertook reflection on their own learning processes. Key principles of adult learning, self-regulated learning,

meaning-making, and knowledge construction were evident in the blended learning activity system. The following sections describe the detailed activities undertaken by the participants that indicated meaning-making and knowledge construction. Participants' perspectives on the blended learning course are also described to complement the activities undertaken, as described below.

6.2.1. Peer Interaction and Collaboration

Peer interaction and collaboration occurred in the blended learning course and English was the language used. The peer interaction involved discussions of various topics, such as environmental education issues, the schooling system, and lesson plans, teaching practice, and other classroom-related issues. Since the teacher participants provided corrective feedback on their peers' English while talking about various topics, these topics mediated the teachers' English language learning and learning collaboration occurred.

Collaborative learning is described as a situation in which people undertake productive forms of interaction, and learning is triggered from those interactions (Dillenbourg, 1999). One factor that promoted teacher collaboration in the blended learning course was that they were all in the same situation: (1) they were all teachers working at Indonesian vocational high schools; (2) English was a foreign language for them; (3) they were required to use English as the medium of content instruction; and (4) they needed to learn English. Teacher participants negotiated meaning and constructed knowledge through their collaboration in the blended learning course. Teachers' knowledge co-construction was divided into three categories: English language communication, pedagogical knowledge, and understanding of social and cultural values in English-speaking countries. The relationship of the three categories is described in Figure 6 below.

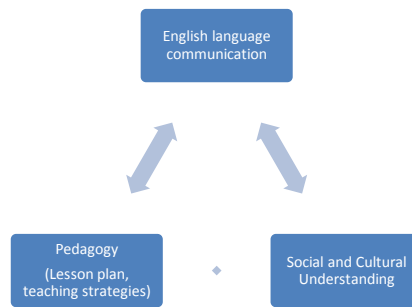


Figure 6. *The relationship between English, pedagogy, and social and cultural understanding*

English language learning was the object in the blended learning activity system. Teacher participants perceived that their English language communication skills improved and these skills enabled them to use English as the medium of content instruction. Pedagogical knowledge construction refers to improved skills in developing lesson plans and teaching strategies in which English was used. Social and cultural knowledge construction refers to a better understanding of the cultural behaviours in English-speaking countries, such as using the right words and expressions in appropriate contexts. Knowledge construction in the three areas interacted as shown in Figure 5 above.

6.2.1.1. Interaction between English Language Learning and Pedagogical Knowledge

English language learning was inseparable from pedagogical knowledge development because the purpose for learning English was to use it as the medium of instruction. Interaction between these two areas occurred as participants collaborated in the process of developing lesson plans, micro-teaching sessions, and the sharing of ideas and classroom teaching experiences.

Collaboration in Developing Lesson Plans

Collaboration in developing lesson plans occurred both face-to-face and online. Individual participants developed their own lesson plan, showed it to their peers, and asked for feedback. Face-to-face collaboration among participants occurred during and outside the class tutorial in the blended learning course. Participant 10 (P10) reported her face-to-face interaction in an online forum, as follows:

Today we discussed about lesson plan that we practice to teach tomorrow. I am so glad to have partner in using English, because their English is very good. (Online interaction: P10)

Collaboration in developing lesson plans also took place online. For the most part, participants posted their lesson plan as an attachment, and their peers provided feedback in an attached file as well. The online script below shows that participants attached a lesson plan file and asked for feedback.

I need your comment about my lesson plan. Thanks.
LESSON PLAN X SMTR 2.docx (Attached a file)

One example of developing a lesson plan with feedback, posted as an attachment in online discussion, is supplied in Appendix O. One participant posted his lesson plan on Facebook instead of attaching a file and asked his peers to comment on the plan. The script below is only part of the lesson plan he posted. The complete script is supplied in Appendix P. The participant who posted this did not seem convinced of the effectiveness of his lesson plan, especially the English in the learning indicators section and asked for feedback.

Pak ... I am not so confidence with my lesson plan can you help me to correct.

LEARNING IMPLEMENTATION PLAN (LIP)

Indicators:

- a. Classifying milling machine tools.
- b. Identifying of milling cutter.
- c. Explaining the milling method.
- d. Calculating the cutting speed for milling.
- e. Calculating the turn for the milling machine.
- f. Setting the rotation speed of milling machine.
- g. Installing cutter in accordance with standard operating procedures.
- h. Setting up work pieces in accordance to operating standard procedures.
- i. Making work piece in accordance with job sheet. (Feedback in online interaction)

However, in spite of the teacher's explicit request, peer feedback on the lesson plan draft focused on the English instead of the structure and teaching strategies included in the plan. Participants collaborated on the English language learning and used their lesson plan drafts as the media for collaboration. Feedback on the lesson plan was provided by another participant, as follows:

For indicator part b: you don't need "of" there. It should be Identifying milling cutter. Or else, you could say "Identification of milling cutter." (Feedback in online interaction)

In their interaction about lesson plan development, there was a sense of negotiation to reach clarity and mutual understanding. Participants did not impose their views on their peers but offered ideas. The final decisions belonged to each lesson plan developer. However, there was no further discussion from the lesson plan developer after receiving feedback from their peers.

The online interaction below indicates how participants discussed vocational terminology in English and used English to negotiate meaning. I noted that using the target language for learning interaction provided a good context for foreign language learning and acquisition. For example, one participant posted a question about the correct technical terminology in English for “membaca gambar teknik,” and several participants provided feedback.

Membaca gambar teknik is translated as “read technique picture” or “read engineering drawing”? What is difference read technique picture and read engineering drawing? (Online interaction)

...“to read engineering drawing” may be, you should find the appropriate term in your field! (Feedback in online interaction)

Reading technical pictures.... That would be better pak. (Feedback in online interaction)

Reading engineering pictures would also be appropriate. (Feedback in online interaction)

Ex me, in machine engineering field, usually we use the term Engineering drawing or Engineering Graphic. (Feedback in online interaction)

Collaboration in Micro-teaching Sessions

Collaboration among participants also occurred during the micro-teaching sessions during the face-to-face tutorials at each research site. Micro-teaching sessions were classes where participants learned and practised their presentation skills in English and received feedback from their peers. Since participants had discussed a problem-based learning approach during the face-to-face tutorial, they tried to practise this approach in the micro-teaching session.

I learn how to make a good presentation using English from the micro-teaching. A good presentation is if the audience understand our presentation and they give feedback or conclusions. (Reflective journal: P3)

I learned about vocabulary, pronunciation and conversation which was gotten by practice teaching, talking with my friends in our English class and discuss with my tutor. (Reflective journal: P16)

When asked during the interview about what was learned from the blended learning course, P1 provided an example, quoted below. From the micro-teaching session, she learned about how to give feedback to students and how problem-based learning should be conducted.

Yes, of course. I've learned lots of things in this study, in this blended learning course. In micro-teaching, I know more about how to give feedback to the students in English, and then I know about PBL (problem-based learning), and I am searching more specific information until now about PBL, and I'm trying to practice it in my class. (Interview: P1)

Collaboration through Sharing Ideas and Experiences

When I posted a reading passage and questions for discussion on Facebook, participants shared their ideas in English. Familiarity with the topics posted made it possible for the discussion to take place. For example, boarding schools (called “pesantren”) for general and Islamic religious education are common in Indonesia. When the reading passage included a story about boarding schools and one of the questions asked participants to express their opinions about sending children to boarding schools, the participants did so enthusiastically. There was a range of opinions, but one participant posted a balanced view, as below:

In my opinion, there are positive and negative sides for boarding school, let me start from the positive side, the boarding school gives the children opportunity to be more independent, to learn more things from many people from different regions, to be more discipline, and to learn to how to socialize like what [name] says above. Next, the negative side, the boarding school is good for children to be more independent, but somehow, they still have to get the parent's attention, their parents should also control their children anytime, and the parents will not know what their children do, and will they be fine in boarding school, the parents won't know about it exactly. (Online interaction)

In their daily interaction, participants from the same research sites also shared and compared their experiences using English in the classroom. I consider experience sharing as a form of collaboration because teachers learn from each other's experiences. When the teachers used English in their sharing, they were practising their target language. Information gained from one participant indicates that the teachers continued their discussion offline as part of their collaboration.

And I compared the situations, and it made us to have a discussion, not just online but also in our daily conversation. (Interview: P1)

The benefits of sharing experiences through online interaction were twofold: obtaining ideas from peer experiences and the language learning process. The online interaction script below indicates that one participant shared her experience and also asked for feedback concerning her use of English.

Please check my sentences.....

I try to teach by using more English today at X grade, and they gave me very good responses. Surprisingly, they can understand all of my instructions and they tried to answer me in English too. I gave them one exercise in English, and they can understand it with no translation. How happy I am. (Online interaction).

The posting above received a response from another participant who provided feedback for English language improvement, as below.

Good job, that's great. About your sentences above, just change word "try" and "can" into the past form to make your writing consistent. But so far, your English is very good.

In online interaction using Facebook, sharing newly-gained knowledge also occurred. For example, one participant shared whatever she had just learned from face-to-face tutorials, items such as English words and expressions, by posting them on the Facebook page. The posting was commented on and appreciated by other participants who were absent during the face-to-face tutorials.

We were listening to a micro-teaching presentation by [name]. It's about welding and its equipment: welding hood with filtered lens, welder's cap, safety goggles, welding jacket, welding gloves, leg cover, work boots. (Online interaction)

Thanks [name] for posting. (Online interaction)

Another example of online sharing by posting what was learned is given below. The feedback received was also about correcting the English.

Today I learn about assembling and soldering component, to making a digital trainer. It looks simple and easy. I try to finish my job with the best and I'm quaita satisfield with the result of my job. But it wasn't perfect enough for my instructor. He say to me that I must be more practise. But overall I had a good project....(please check my sentence, is there a mistake with my sentence..? and please give me the right one). (Online interaction)

Just change the sentences into the past form to make it consistent, and look up again for the spelling. There are some incorrect spellings in your writing; assembling> assembling, quaita> quite, satisfield> satisfied, practise > practice. (Feedback in Online interaction)

Collaboration in practising English language communication skills can also be seen through online social interaction. Participants wrote about ideas unrelated to the tasks or learning content and used English to do so. Greetings, congratulating, and reporting social activities were examples of social online interaction. Since social interaction was undertaken in English, it contributed to the participants' collaborative English learning process. The sentence "Let's make our school better..." in the transcription below indicates that online social interaction may also have contributed to their sense of community.

Hi guys, congratulation for 11 teachers who have graduated from post graduate (S2) in [name of university] including me too. haha. So the task force of the school is more solid now. Let's make our school better and don't forget to improve your English.

wow....congratulations Bu [name] and all graduates. Success be with you.

Congratulations Bu ...! Have a nice time! (Online interaction)

6.2.1.2. Interaction between English Language Communication and Social and Cultural Understanding

Social and cultural understanding in this research refers to pragmatic awareness – the ability to understand and use the right words and utterances in an appropriate social and cultural context. Knowledge construction in English language communication and social and cultural understanding occurred

concurrently during face-to-face discussion. One story reflecting social obligations in English speaking countries informed participants when to use modals such as *must*, *should*, *could* and at the same time contributed to the participants' cultural understanding. The reflective journal of P7 below reported that she learned the grammatical modal forms and the culture from a classroom discussion.

I learned about obligation and culture. I got it from the discussion with the teacher and my peers in the classroom, and online assignment. (Reflective journal: P7)

Moreover, through online social interaction, participants confirmed their peers' ideas by agreeing and adding supporting arguments, as in the script below:

I agree with [name]. Let the children choose where they want to study. Learning is not an enforcement, but learning is a will or willingness. (Online interaction)

Well, I agree with u Mrs. [name]. A deeper learning need a reflection! (Online interaction)

6.2.2. Online Interaction

The online script showed that participants interacted online with their peers from the same schools more often than with those from other schools. This is not surprising given that the teachers were located in three different schools and cities. However, I also noticed that when the topic of the interaction was a general one, such as environmental issues or boarding schools, intergroup interaction occurred.

Environmental issues:

Hi all, I wonder if you have a special subject in environmental issues in your school. If not, is it integrated into each lesson? How do you integrate it into your lesson? Issues such as waste management in vocational subjects must be important for your students to know. Looking forward to your comments. (P1 School 1)

Yes, I've played "Unconvenient Truth", a film by Al Gore in our class. I think it is important to develop our student awareness about the environmental issues. (P5 School 1).

In my class, I ever give overview to my students the reasons why Singapore most famous in tourism than Indonesia, in their

generation they should be able to promote environmental in Indonesia, beautiful, safe and polite but that good conditions can reach if young generation has awareness about it. (P9 School 2)

All subject material in my school have to integrate about environment into Lesson Plan and also in Learning process. Such as, before the lesson begin the students have to clean the class and put the garbage to the right place (the students have to separate an organic and organic garbage). We hope, their habit today will help them at the future. (P8 School 3)

In contrast, when one teacher participant posted a lesson plan and asked for feedback, only teachers from the same group responded. I did not ask the participants why this was so because I did not discover it until after the data analysis was completed and I was no longer in the research setting. I will elaborate more on this finding in the Discussion chapter.

6.2.3. Teaching Strategies Adopted by Participants

My observation notes showed two main strategies adopted by the teachers when using English for content teaching: problem solving that involved active student participation in discussion, questions and answers, and lecturing dominated by teachers. Ten out of sixteen participants employed the problem solving strategy whereas the other six tended to give lectures with very few questions and answers. As with the finding above, I had not anticipated this result and had already left the research setting. Consequently, I was not able to seek the teachers' perspectives but will investigate the matter in the Discussion chapter by looking at previous research with similar findings.

6.2.4. Active Engagement in the Absence of Marking

Since the participants in the blended learning course were adults and professional learners, marking their participation was not considered necessary. Instead of marking, I provided qualitative corrective feedback to improve teachers' English language communication skills and comments on their teaching practices using English in the classroom. When necessary, I also corrected the teachers' English in their lesson plans, learning materials, and their online learning interaction. I believe that teacher participants valued the written comments more than marking and they also expected corrective feedback from

their peers concerning their language. As adult and professional learners, the teacher participants understood that this form of feedback was useful in their jobs.

Active engagement in face-to-face tutorials was registered mainly through participant attendance (more than 80 percent) and their engagement in discussion and teaching practice. In face-to-face tutorials, all were categorized as active participants. In online interaction, active engagement was measured through the frequency of posts or providing feedback. In online learning interaction, eleven out of sixteen participants (almost 70 percent) actively engaged in posting ideas, sharing experiences, asking questions, providing feedback, and engaging in social interaction. The other 5 visited the online interaction, provided a little feedback, such as to thank their peers for sharing experiences, but without adding further comment; they created no new topics for discussion.

6.2.5. Reflection

Reflection is “the intentional consideration of an experience in light of particular learning objectives” (Hatcher & Bringle, 1997, p. 153). Reflection activities can include telling or explaining, writing journals (Bringle & Hatcher, 1999), reconsidering what has been done (and how), discussing, and comparing.

Reflective journals, the script of online learning interaction, and the transcribed oral interviews indicated that participants undertook reflective activities. For example, the reflective journal below indicated that P10 was reconsidering her teaching practice and the feedback she received.

I practise my teaching using English in microteaching today. I feel so happy to get correction and feedback when I finished my microteaching from some people. (Reflective journal: P10)

Even though participants wrote reflective journals, not a great deal of information was obtained from them. For the teacher participants, writing such journals was not a familiar practice outside this research activity. They wrote reflective journals only because I required them to do so and had provided a template for them (Appendix B). I expected them to write more than just simple, short answers because I had discussed the matter at the beginning of the blended learning course. In fact, participants only responded briefly to the questions provided in the template.

When I saw that they provided only brief comments, I asked them if they would like to add more but they declined my request, saying that they found it hard to think of what more to write. Participants wrote two reflective journals during the blended learning course, one in the middle (after about two months) and the other at the end (after four months). However, information from other data sources indicated that reflective activities, such as those described by P2, did occur.

My students more focus when I use English. They more focus in learning. Compare before when I use Indonesian, not focus, but when I use English, my students more focus. (Interview: P2)

P2 undertook reflective activity by comparing and discussing her own teaching situation whereas P1 compared her own teaching practices with that of her peers, as indicated in the transcribed oral interview below.

I compare what I have experience in my class and I see what they have experienced in their class. And I compare the situations, and it make us to have a discussion, not just online but also in our daily conversation. (Interview: P1)

In addition to comparing and discussing, P1 reviewed what happened in her classroom as part of her reflective activity and explained it to her peers in the online forum. In her reflective activity, P1 not only reflected but also discovered what she should have done in her classroom. I saw this as good, meaningful reflective practice.

I got an interesting experience on Edmodo today. I made the assignment in English, and one of the questions is "What is the acceleration of the object?" and some of my students answer this question by explaining the definition of acceleration instead of calculating it. I feel like "Gubraaaakkkkk!!!! (an Indonesian way to scream)" May be I should use "calculate" or "determine" next time. (Online interaction, with additional explanation)

6.2.6. Self-Regulated Learning

For self-regulated learning to occur, an individual needs to exercise autonomy and control to monitor, direct, and regulate actions toward the goals of information acquisition, expanding expertise, and self-improvement (Paris &

Paris, 2001). In addition, a learner's will or desire to learn becomes primary for self-regulated learning to happen (McCombs & Marzano, 1990).

Based on the definition above, I observed that the blended learning course did seem to promote self-regulated learning. For example, in addition to topics I had provided for online discussion, participants were free to raise topics or issues to discuss. They did so, bringing their own problems and experiences for discussion.

Hi all. Today I prepared the slide for teach tomorrow but I am not so confident with my sentences. Can you help me to check the sentences below?

BASIC COMPETENCIES:

After following this study, student must be able to operate the milling machine. One of the knowledge to operate the milling machine is the milling machine equipment. Before the students operate the milling machine, they must have knowledge about the milling machine equipment. (Online interaction)

Self-regulated learning also occurred when participants decided what online interaction platform to use. This took place during the initial discussion or negotiation with potential participants prior to the blended learning course. Based on participants' preference, Facebook and Edmodo were selected as platforms for online interaction.

In the learning process, participants decided autonomously when and with whom they would collaborate to practise their English language communication skills. For example, instead of communicating with other participants, one person chose to practise English conversation with college students who were doing teaching practice at the school. Her role as mentor to these students made their English conversation practice possible. This participant reported her English practice with the students she was supervising in the online forum, as below:

Sorry, I haven't practised English in classroom yet, because I still have 3 college students in practice. But I always use English in my discussion with them. English must be practised. Now, I feel more confident than before. (Online interaction)

6.2.7. Participants' Perspectives on the Blended Learning Course

Participants were asked about their perspectives on the blended learning course. They also discussed any significant, interesting ideas they gained from

participating in the course. In addition, participants' suggestions on how to improve the course in the future were helpful for me as the researcher.

Participants responded positively to the blended learning course. They mentioned that this approach made efficient use of time, was motivating, challenging, exciting, inspiring, useful, and was a new learning experience for them. For example, P11 thought the combination of face-to-face and online learning was effective. The online learning interaction was especially helpful when she was not able to attend the face-to-face class.

We know that it is very necessary for us. If we combine with long distance learning, I think it will help us when we have no time for class. So it is very useful for us. (Interview: P11)

P7 said that the blended learning course provided her with a new learning experience and increased motivation.

I think blended learning course is very good methods to increase the students' motivation in learning process. In blended learning course, we get a new learning experience and new learning atmosphere. (Interview: P7)

P1 thought that both face-to-face and online learning interactions were useful, and that online interaction was challenging.

I think it's interesting. I got a lot of new things from our meeting from the discussion, from the interaction among the participants. And when we go online, I got new experiences in doing exercises, the assignments, receiving responses. I think it is very challenging. (Interview: P1)

In their reflective journals, participants mentioned the significant, interesting experiences they had had during the blended learning course. These included collaboration and learning opportunities, confidence gained regardless of incorrect pronunciation, positive responses from students, receiving feedback from their peers, and a sense of having improved their knowledge of English language usage in the classroom. In their reflective journals, participants reported that they enjoyed the opportunity to study together with their peers.

I can study with friend and teacher. That made me happy to study. (Reflective journal: P16)

My students were more focused when I explained my lesson in English. (Reflective journal: P2)

I feel so happy to get correction and feedback when I finished my microteaching from some people. (Reflective journal: P10)

I learned how to manage my class and motivate my students to speak English. (Reflective journals: P5)

Even though the pronunciation is not too good, but the class speaks English confidently. (Reflective journal: P3)

In addition to the positive responses that the participants provided, they made some suggestions for improvement. For example, participants felt that more time was needed for the face-to-face tutorials, especially for the micro-teaching sessions. Participants also suggested that more materials on English for Specific Purposes could be beneficial, including more technical terminology appropriate for teaching in a vocational school. Other suggestions included more samples or references to teaching practices in English in CD-ROM packages and the recommendation that the blended learning course be compulsory for all teachers. They argued that if all teachers participated, they would have more opportunities to practise their English.

I think, we need more face-to-face classroom with teaching practice, how to make easier to deliver the lesson to students, and daily conversation with students. (Interview: P11)

May be you can give us an interactive CD which contains the sample of the conversation in teaching, so we all can practice at home. (Reflective journal: P10)

It is expected that all people around me especially at school speak English, so I will have more time to practise my English. (Interview: P15)

6.2.8. Themes for Further Discussion

Two themes need to be discussed from the collaboration. First, the collaboration undertaken by participants reflected mediated learning interaction, including social mediation, self-mediation, and artefact mediation. Secondly, appropriate learning topics appeared to be a key factor to encourage active

engagement and collaboration. These two themes are considered in the Discussion chapter.

6.3. Confidence in Using English for Content Instruction

The second research question asks whether blended learning is accompanied by changes in the confidence of the Indonesian vocational high school teachers to use English as the medium of instruction in the classroom. The data that addressed this question were obtained through interviews and surveys. Both data sources indicate that there was likely a change in confidence among participants.

6.3.1. Changes in Confidence

The data that indicated possible changes of confidence in using English as a medium of content instruction came from the transcribed oral interviews, the online interaction script, and my observation notes. During the interview sessions, the participants were asked about their level of confidence in using English in the classroom before and after their participation in the blended learning course.

Their confidence was categorized on one of four levels on a scale from (1) very unconfident, (2) unconfident, (3) confident, and (4) very confident. The confidence of all participants increased, but not uniformly. Eight of the sixteen participants stated that their confidence level had changed from (2) unconfident, to (3) confident; three participants from (1) very unconfident, to (3) confident; three participants from (2) unconfident, to (4) very confident, and two participants from (3) confident, to (4) very confident. There was no participant who moved from (1) very unconfident, to (4) very confident.

As with the interview data, surveys also showed some changes in participants' confidence. As described in the Methodology chapter, at the beginning and the end of the blended learning course, I provided four survey statements about participants' perceived confidence using English for communication (statement numbers 1 to 4 in Appendix C). The four statements included confidence in using English in daily conversation with friends (S1), in daily informal conversation with students (S2), for classroom management only (such as greetings, managing questions and answers, providing feedback, and closing) (S3), and for course content delivery (S4). The purpose for asking the

participants to respond to the same statements at the beginning and at the end of the blended learning course was to ascertain whether self-perceived changes in confidence had occurred. Each of the four statements included six options that ranged from 1 to 6 with 1 being highly unsure and 6 highly confident.

The data obtained from the surveys (statements 1 to 4) were analysed using Microsoft Excel. The total scores that were provided by participants in pre-intervention and post-intervention surveys were 55 and 78 respectively for statement 1, 61 and 85 for statement 2, 60 and 90 for statement 3, and 46 and 81 for statement 4. Each score was divided by sixteen (the number of participants) and the results were 3.43 (pre-intervention, S 1) and 4.87 (post-intervention, S 1); 3.81 (pre-intervention, S 2) and 5.31 (post-intervention, S 2); 3.75 (pre-intervention, S 3) and 5.62 (post-intervention, S 3); and 2.87 (pre-intervention, S 4) and 5.06 (post-intervention, S 4). Figure 7 below shows the aggregated data for the participants' perceived change in confidence based on surveys.

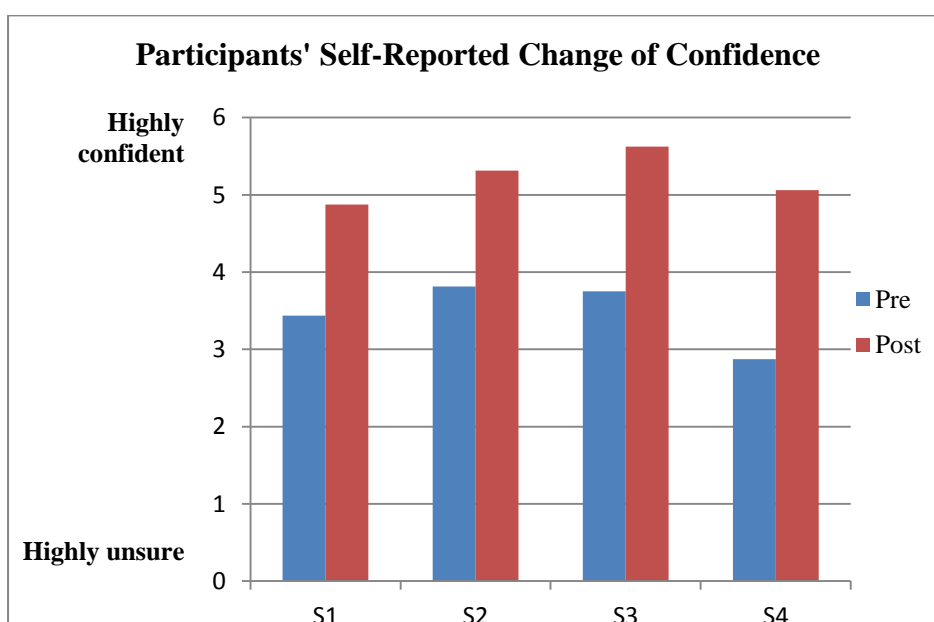


Figure 7. *Participants' self-reported change of confidence*

6.3.2. Circumstances Affecting Confidence

Based on the participants' responses, increased confidence was reported to have come from four different sources: students, peers, the participants' perspectives, and participants' learning experiences.

6.3.2.1. Positive Student Responses

Four participants stated during the interview sessions that positive responses from students contributed to their increased confidence. The online interaction scripts generated by other participants as well as my observation notes were consistent with this statement. When teachers used English instead of Indonesian for classroom instruction, they reported that students were more focused on listening and trying to understand. The evidence also indicated that when students responded positively to the English instruction in the classroom, the more confident the teachers became.

I feel more confident because I also got feedback from my students if I ask them with English they also try to answer in English. It made me very confident to using English in the classroom. (Interview: P4)

I try to teach by using more English today at X grade, and they gave me very good responses. Surprisingly, they can understand all of my instructions and they tried to answer me in English too. I gave them one exercise in English, and they can understand it with no translation. How happy I am. (Online interaction)

Increasing student familiarity with their teacher's English instruction supported their ability to respond to it in English. Presumably, when classroom instruction was repeatedly conducted in English, students became more familiar with English instruction.

6.3.2.2. Peer Feedback

Five participants mentioned in the interview sessions that peer feedback contributed to their perceived increased confidence in using English in the classroom. This statement was mirrored in the online interaction script generated by other participants as well as in my observation notes. As described earlier, peer feedback was obtained during participants' online development of a lesson plan, in the micro-teaching sessions, and when they posted a problem online. The transcribed interview below indicates that P1 did not receive any peer feedback in her previous learning experience and this made her feel a lack of confidence. In the blended learning course, P1 expressed her thanks to her peers for their feedback during her presentation in the micro-teaching session. The peer feedback led to her increased confidence.

Before this study, we had a programme using English in the class. At that time I had good confidence. But after that, there was no feedback. I became unconfident again. And then, after following this study, I got lots of experiences, I got lots of interaction, discussions, a lot of feedback, and I see my students' response, now I am very confident. (Interview: P1)

I presented my material about multimeter in micro-teaching class today (it is a challenge for me), but I try my best to make a good presentation, and thanks to all my friends who become my audience today. From now on I'm more confident to speak in English. (Online interaction).

There is value in the process of giving and receiving peer feedback. Participants tended to accept feedback from their peers, especially when the feedback was received from colleagues whose English was assumed to be better.

6.3.2.3. *Participants' Perspectives and Learning Experiences*

The change in the participants' own perspectives and learning experiences in the blended learning course seemed to be the most influential factor contributing to increased confidence. All participants mentioned that their participation in the course had left them with a more positive perspective on using English as the medium of instruction and had thus increased their confidence to use it in the classroom. For example, one participant realised that using English in the classroom benefited the students and their learning in addition to her own English language learning and practice.

I think English is very important, not only for me but also for my students. I try using English step by step like eee... for greetings, give motivation for my students, and then I try using English for explaining my materials together with my students. I know that eee..my students in the future need to using English for ee...for working in the office, and...for social life, so English in the classroom is important. (Interview: P4)

P8 reported during the interview session that initially it was the school's policy that made her learn and use English in the classroom. But her participation in the blended learning course, especially through her learning experiences during the micro-teaching sessions and her teaching practice in the classroom in which she tried to use English, had influenced her *perspective* on using English. She felt

that she needed to support her students and their English language learning by creating an English speaking atmosphere in the classroom.

I think that it was my school programme that students have to learn English, more English but now ... I feel that English is important to them to...to...to learn. I need English more, so I can participating to create English speaking atmosphere in my classroom. (Interview: P8)

P8 viewed her students' English language learning as the communal responsibility of all the teachers at the school rather than the individual responsibility of teachers of English. This view is consistent with the research finding by Ross et al. (2011) that cohort-based interaction has an effect on changes in teachers' perspectives, a "shift toward viewing student learning as a communal responsibility" (Ross et al., 2011, p. 1219).

Furthermore, all participants mentioned that their learning experiences contributed to the improvement of their English competence and thus increased their confidence in using English for content teaching. These learning experiences included collaboration with peers, the micro-teaching sessions, experience in using English for content teaching in the classroom, the more relaxed and encouraging learning atmosphere, and the additional vocabulary they acquired. All these conditions made them feel better prepared and more confident to use English. For example, P1 appreciated the encouraging learning atmosphere when she received encouragement from online interaction with her peers, as she reported during the interview.

Related to this confidence, once when we had discussion online, there's a comment that it's OK if we make some mistakes in grammar because we are still learning English as a foreign language. So, it doesn't matter if we make some mistakes as long as we can understand each other. (Interview: P1)

Moreover, P9 reported that progress from his participation in the blended learning course led to an increase in confidence to use English.

I think because we joint the programme, so our vocabulary improved, our practice improved, our English improved, our experience improved, ...our knowledge of English improved, so our confidence is very high now. (Interview: P9)

I observed that the change in participants' confidence levels took time as teachers increasingly used English as the medium of instruction. Participants took six months to gain confidence: four months participating in the blended learning course and another two months for the implementation of using English in the classroom. From my observation notes, I noted the difference in their confidence level between the first and second observations. For the second classroom teaching practice, participants were less nervous than for the first one, as indicated by a less shaky voice, gestures such as eye contact with students, and greater fluency in instruction. Additionally, teachers had learned from their first experience, came to class better prepared and more confident for the second observation, and were less nervous.

I am getting more confident because I have prepared it more than the last one. In the first observation, I thought I had confidence but for today the second observation is more confident. (Interview: P8)

...and I feel more confident in this presentation because I am getting used to using English in the classroom. (Interview: P7)

Initially, I wondered about what made them nervous. Was it my presence in the classroom, the requirement to use English as the medium of instruction, or both? The data generated by participants in the online interaction and from the interview indicated that teachers' and students' lack of English communication skills was the main reason for the nervousness.

Pak ... I am not so confidence with my lesson plan can you help me to correct. LEARNING IMPLEMENTATION PLAN (LIP)
(Online interaction)

I was very nervous because students were just be quiet, they just hear, and no speak. (Interview: P13)

When I asked the participants what made them more confident, one mentioned that the micro-teaching sessions had helped.

Interviewer: What made the change (in your confidence)?

P12: The micro-teaching, and then eer ...using English everyday with friends. (Interview: P12)

As described in the Methodology chapter, each participant practised twice in the micro-teaching sessions, with 20 minutes for each session. Participants used

English as the medium of instruction and received feedback from the instructor and their peers. I noticed that participants also were aware that they had made progress, as the following online interaction indicates.

Good afternoon friends, Please check my sentences: Today I presented about measuring resistance using LCR meter, I made the worksheet bilingually, the students quite interested, they tried to answer the questions in English, some of them still didn't have a courage to speak in English, but I'm sure they understand it. Well, it was a small progress, but we're moving forward. (Online interaction)

Discouraging factors from internal and external sources that hindered their growth in confidence were also identified. Internal circumstances included a lack of English proficiency, mispronunciation, and shyness. Evidence of these discouraging factors was culled from the interview data, participants' reflective journals, and my observation notes. For example, in an interview, P10 mentioned shyness as one factor. In the interview script below, *I* refers to the interviewer.

P10: I have difficulty in speaking English. Can you give me tips for that?
I ...well, just keep practising...don't be afraid to make mistakes when you speak ...
P10: I feel ashamed
I Shy? You mean you are shy?
P10: May be with ee....one or two students...I.. I...feel confident to speak English (Interview: P10)

P10 mentioned feeling "ashamed" but I believe that she meant "shy" because she said she would be more confident speaking English with one or two students than with many. These two emotions ("ashamed" and "shy") in English are expressed by a single word ("*malu*") in Indonesian.

In a reflective journal, P15 mentioned mispronunciation as another factor.

Less confident because too often pronounce word incorrectly.
(Reflective journal: P15)

My observation notes indicated that a lack of English proficiency made teachers unconfident.

T tells steps of peripheral repair and shows it on a slide, already written in English. T explains in English and Bahasa Indonesia. T only reads the English text from the slide, then explains further details in Bahasa Indonesia. T gives time for Q/A but no student

asks questions. Then T continues the explanation on tools and the function of each tool for peripheral repair. It seems that this T is not ready to use English, and students notice this unpreparedness by smiling. (Observation notes)

External factors included infrastructure difficulties that occurred during the teaching practice in the classroom, such as electricity problems. At School 1, the electricity was cut off for two teachers during their teaching practice. As they needed electricity to show their PowerPoint slides, the failure undermined the teachers' confidence to continue the lesson.

6.3.3. Theme for Further Discussion

The survey results showing participants' increased level of confidence using English for content teaching aligned with evidence from the interviews and the participants' online postings. My observation notes also confirmed that participants were more confident using English in the classroom during my second observation compared to the first. Since supporting circumstances boosting their confidence were noted, the confidence that emerged from positive online peer interaction was identified as a theme derived from the findings. This theme is further discussed in the Discussion chapter.

6.4. Motivation to Learn and to Use English

The third research question asked if blended learning was associated with changes in the motivation of Indonesian vocational high school teachers. The data generated by participants during the interview sessions and from the surveys indicated that their motivation to learn and use English as the medium of instruction increased. Circumstances that appeared to influence this increase in motivation were sought and are described in the following sections.

6.4.1. Changes in Motivation

As their confidence in using English increased, so the motivation of participants to learn and use English as a medium of instruction in the classroom also increased. To help teachers express their levels of motivation during the interview, I categorized motivation on four levels: (1) very unmotivated, (2) unmotivated, (3) motivated, and (4) very motivated. In interview sessions, participants were asked about their motivation level before and after their

participation in the blended learning course. Each participant was interviewed twice for 15 minutes on average for each session. Each interview included information about motivation and confidence.

Analysis of the transcribed oral interview data indicated that the level of motivation of all participants changed. Changes in the motivation level were arranged in four categories, as shown in Table 7 below.

Table 7. *Self-reported Changes in Motivation*

Motivation Changes	No. of Participants
From 2 to 4 (unmotivated to very motivated)	6
From 2 to 3 (unmotivated to motivated)	5
From 3 to 4 (motivated to very motivated)	4
From 1 to 3 (very unmotivated to motivated)	1
Total participants	16

As indicated in Table 7, six out of the sixteen participants said that their level of motivation had changed from (2) unmotivated, to (4) very motivated; five participants changed from (2) unmotivated, to (3) motivated; four participants changed from (3) motivated, to (4) very motivated; and one participant changed from (1) very unmotivated, to (3) motivated. No participant exhibited a large movement from (1) very unmotivated, to (4) very motivated.

However, there were indications of fluctuating levels of motivation during participation in the blended learning. The quote below suggests that the participant was discouraged by the absence of a response from the school management but was encouraged by positive response from her students. In this case, her motivation fluctuated over time for various reasons.

Using English in a class is a part of school programme but there is no feedback from the school management. For me sometimes I am motivated because the students give me good responses. (Interview: P1)

I..may be unmotivated sometimes. Because ... sometimes the students is not too interested ...if I am speaking English, and then...they don't understand what I am saying. ... I think we have to practice...practise English eee...frequently, so the students will also get eee...motivated, too. Hehehe (laughing). (Interview: P3)

Data from the surveys suggest that there were positive changes in participants' motivation. Eight statements (statement numbers 5-12) related to motivation to learn and use English were provided to participants before and after the surveys. These statements sought information about the participants' reasons for learning English, including external and internal motivation. Each statement included four options: (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree.

Two statements (statements 5 and 9) were categorized as reflecting internal motivation because they sought motives arising within the individual participants. Statements 5 and 9 were "I learn English because I find English learning is interesting" and "I learn English because it will help me better understand English speaking people and their way of life," respectively. Five statements (statements 6, 7, 8, 10, and 11) were categorized as reflecting external motivation because they sought motives that were external to the participants. The five external motivation statements were as follows:

- I learn English because it will make me a more knowledgeable person (S6);
- I learn English to improve my chances for a better career (e.g. to be a principal) (S7);
- I learn English to improve my chances to go overseas (e.g. field trip, attending seminar, short training course or further study) (S8);
- I learn English because it is an important part of the school programme, (S10); and
- I learn English to meet the requirements of the school / government (S11).

One statement (Statement 12) was categorized as neutral and indicated amotivation or lack of motivation (Deci & Ryan, 1985; Vallerand, 1997), meaning that the participant showed a lack of interest in learning English. The following sections describe in more detail the changes in the internal/integrative and external/instrumental motivational statements as well as the amotivation statement.

6.4.1.1. Changes in Integrative Motivation

To better understand the meaning of the changes that occurred in integrative/internal motivation (statements 5 and 9), the meaning of options 1 to 4 (strongly disagree to strongly agree) is described in Table 8 below.

Table 8. *Conversion of options to describe the levels of motivation*

	Options	Level of Motivation	Meaning
1	Strongly disagree	Very weak	Very unmotivated
2	Disagree	Weak	Unmotivated
3	Agree	Strong	Motivated
4	Strongly agree	Very strong	Very motivated

Responses to the two internal motivation statements indicated that at the end of the blended learning course, all participants reported very strong (4) and strong (3) motivation. For statement 5, seven participants remained very strong (4), and two remained strong (3). Five participants reported the change from 3 (strong) to 4 (very strong), and two from 1 (very weak) to 3 (strong). For statement 9, six participants remained very strong (4), five remained strong (3), four changed from strong (3) to very strong (4), and one from very weak (1) to strong (3). These findings are summarized in Table 9 below.

Table 9. *Summary of the changes in integrative motivation*

Statements	Remained very strong (4)	Remained strong (3)	Changes from strong (3) to very strong (4)	Changes from very weak (1) to strong (3)	Total participants
S 5	7	2	5	2	16
S 9	6	5	4	1	16

Thus, after the blended learning course, all participants perceived that they had strong and very strong integrative motivation even though some of them started with self-reported weak and very weak motivation.

The data obtained from the survey (statements 5 and 9) were calculated using Microsoft Excel. For statement 5, the total scores obtained from participants in pre-intervention and post-intervention surveys were 51 and 60 respectively. The mean scores were 3.18 and 3.75 respectively. For statement 9, the total scores in the pre-intervention and post-intervention surveys were 56 and 59 respectively. The mean scores were 3.50 and 3.68 respectively. Figure 8 below shows the aggregated data for participants' perceived change in integrative motivation.

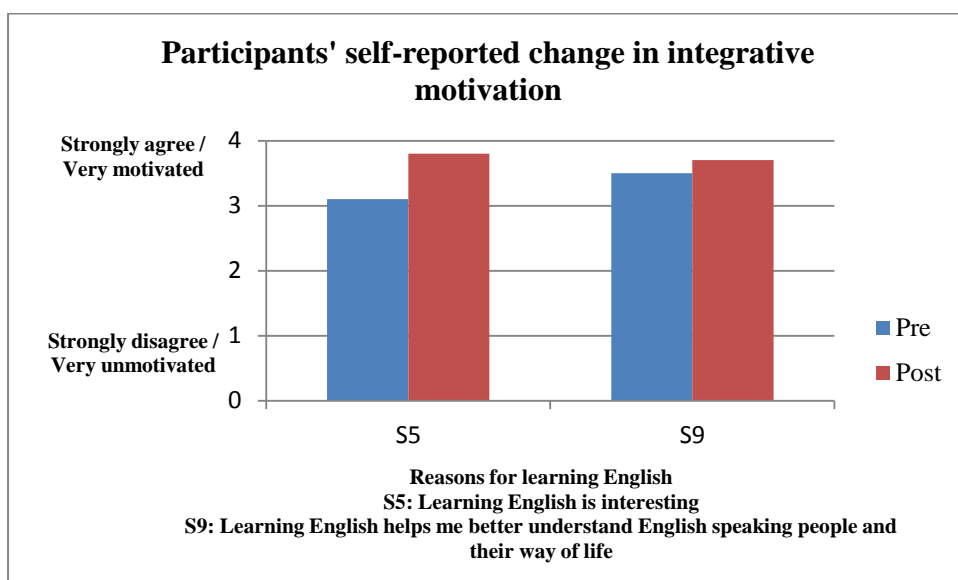


Figure 8. *Participants' self-reported change in integrative motivation*

6.4.1.2. *Changes in Instrumental Motivation*

Changes also occurred in external/instrumental motivation as shown for statements 6, 7, 8, 10, and 11 from the surveys. The total scores obtained from participants at pre-intervention and post-intervention surveys were 52 and 59 respectively (for statement 6), 46 and 49 (for statement 7), 51 and 55 (for statement 8), 53 and 56 (for statement 10), and 49 and 50 (for statement 11). Each score was divided by 16 (the number of participants) and the results were 3.25 (pre-intervention S 6) and 3.68 (post-intervention S 6); 2.8 (pre-intervention S 7) and 3.07 (post-intervention S 7); 3.18 (pre-intervention S 8) and 3.43 (post-

intervention S 8); 3.31 (pre-intervention S 10) and 3.50 (post-intervention S 10); and 3.06 (pre-intervention S 11) and 3.12 (post-intervention S 11). Figure 9 below shows the aggregated data for the participants' perceived change in instrumental motivation.

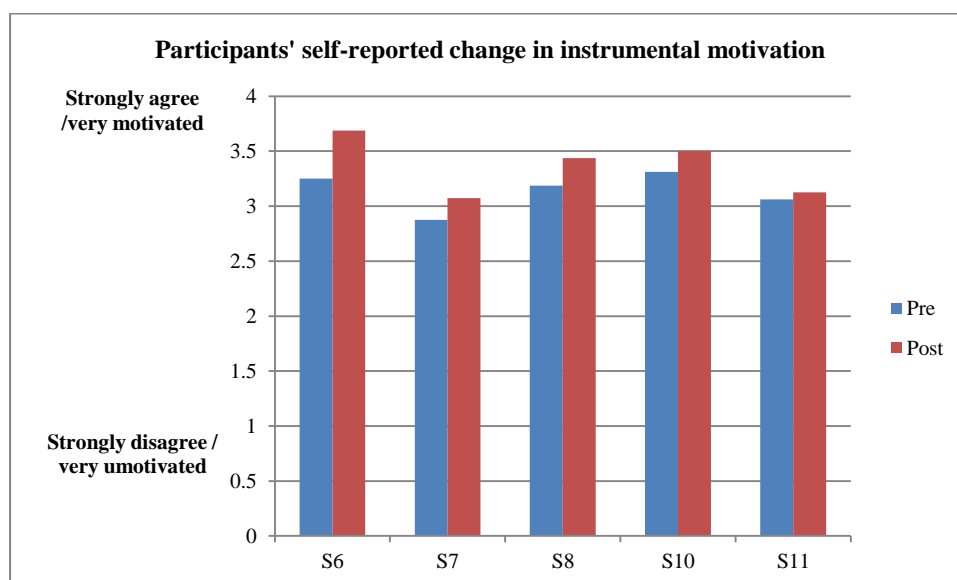


Figure 9. *Participants' self-reported change in instrumental motivation*

The aggregated data as in Figure 9 above show very little change in instrumental motivation because the sixteen participants reported different categories of responses to the five statements. Some participants remained very strong (4) and strong (3), some remained weak. Some changed to stronger levels of motivation, while others changed toward lower levels of motivation, such as from very strong (4) to strong (3) and from strong (3) to weak (2).

For example, question 7, “I learn English to improve my chances for a better career (e.g. to be a principal),” indicated that two participants changed to a lower level of motivation; one from strong (3) to weak (2), and 1 from very strong (4) to strong (3). Statements 10 and 11 were related to the reasons for learning English – simply to follow the programme and meet school requirements. Three participants reported that their external motivation, especially for statements 10 and 11, weakened or declined, from very strong (4) to strong (3) and from strong (3) to weak (2). The details of the different responses of the participants are given in Table 10 below.

Table 10. *Pre- and post-survey of perceived changes in instrumental motivation*

	S6		S7		S8		S10		S11	
Name	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
P1	4	4	3	3	3	3	3	4	3	3
P2	3	4	2	3	3	3	4	3	4	3
P3	3	3	2	3	4	4	3	3	2	2
P4	3	4	3	4	3	3	3	4	3	2
P5	1	4	2	3	1	3	3	3	2	3
P6	3	4	3	3	3	4	3	4	3	4
P7	4	4	3	4	3	3	4	4	3	4
P8	3	4	3	2	3	4	3	4	3	3
P9	4	4	4	3	4	4	4	4	4	4
P10	3	3	2	2	3	2	3	3	3	3
P11	4	4	3	3	3	3	3	4	4	4
P12	3	3	4	4	4	4	3	4	2	3
P13	4	4	4	4	4	4	4	3	4	3
P14	3	3	2	2	3	4	3	3	3	3
P15	3	3	3	3	4	3	4	3	3	3
P16	4	4	3	3	3	4	3	3	3	3

The self-reported changes in integrative and instrumental motivation need to be investigated more deeply. As reported earlier, the integrative or internal motivation of all participants had increased to “strong” and “very strong” after the blended learning course. For some participants, the level of instrumental orientation or external motivation was simultaneously lowered and weakened. An explanation for this change is discussed further in the discussion chapter.

6.4.1.3. Changes in Amotivation (from Unmotivated to Motivated)

One statement in the survey (S 12, “There may be good reasons to learn English but personally I don’t see any”) was categorized as indicating

amotivation, which means a neutral position for the purpose of this research. It was neither integrative nor instrumental. Like other statements about motivation, this one provided four optional responses: (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. I interpreted the responses provided by the teacher participants as indications of the absence or lack of motivation to learn English. If a participant disagrees or strongly disagrees (1) with the statement, he/she is motivated to learn English. In contrast, if a participant agrees or strongly agrees with the statement, he/she lacks or has no motivation to learn English. Table 11 below shows the survey results.

Table 11. *Responses to amotivation statement*

Statement 12 (amotivation) There may be good reasons to learn English, but personally I don't see any.	No. of participants
Strongly disagree (no change in position) (1)	9
Disagree (no change in position) (2)	2
*From agree (3) to strongly disagree (1)	3
*From disagree (2) to strongly disagree (1)	2
Total	16

* Changes from amotivated to strongly motivated

Three participants initially agreed with the statement, which means they had little or no interest in learning English prior to the blended learning course. At the end of the course, however, they changed to “strongly disagree,” which means that they became motivated. This indicates that there was a change from amotivated to motivated, as highlighted in Table 11. Two participants initially disagreed with the statement, which means they had little or no motivation to learn English prior to the blended learning course but changed to strongly disagree and became motivated. The other eleven participants who remained in 1 and 2 indicated that they disagreed and strongly disagreed with the statement and thus had an interest in learning English before and after the blended learning course. Their position did not change.

Having described the changes that occurred in the motivation of teacher participants, it is also necessary to investigate the circumstances that caused the changes in motivation, as described in the following section.

6.4.2. Factors Affecting Motivation

The online interaction scripts as well as the transcribed oral interview data generated by participants showed supporting factors that increased their motivation levels. The factors were both external and internal to the individual participants. Supporting factors external to the participants derived from students, peers, the blended learning process, and the school policy. Positive student responses to teachers' use of English affected teachers' motivation. One participant mentioned that to motivate students, the teacher must be highly motivated also. Another was of the view that using English in the classroom encouraged students to improve their English.

I feel very motivated to use English in the classroom because my students become more active to use English too. They are also trying to give greeting and answer my classroom by using English. (Interview: P4)

After the programme, I think, I can rate it three, motivated, because if we speak English frequently, and we want to motivate the students, we must be highly motivated to speak English. If I learn English, my students will be motivated too. (Interview: P3)

My motivation is improved because teaching in English can create a new fun learning atmosphere, so my students enjoy the learning process. (Interview: P7)

Motivation was also derived from peers. For example, listening to others speaking in English influenced the motivation of one participant. The opportunity to learn together with friends in the blended learning course was also seen as a supporting factor that increased motivation.

I can see my friends using their good English, and I hope I can motivate myself. .. so I can learn from my friends and comment in the group Facebook. (Interview: P15)

I like English. I am always motivated using English in the classroom. And then, by this programme, my motivation is more increased because we can share and discuss together with the group. (Interview: P1)

Participants mentioned that the blended learning atmosphere, the teaching practice opportunities, and their experiences in using English for content teaching helped to increase their motivation.

Joining this programme made me to practise using English in the classroom and I feel my motivation increased. (Interview: P6)

Ya, more motivation because of my first experience teaching in English in the classroom. I can give the students something in the classroom. (Interview: P16)

I think I got more knowledge by speaking English and by attending this course, which is blending... combining classical and online. It opened my mind. Ohh..I can do that too. (Interview: P3)

The policies established by the three schools to implement the use of English as a medium of instruction in the classroom influenced the motivation of participants. This was an external motivation. School policy was to use English to teach several subjects, such as mathematics, sciences and vocational training courses. The consequence of this policy was that teachers of those subjects had to improve their English language communication skills.

...because I think I need English more because of my school programme and that students have to learn English more, that English is important to them. (Interview: P8)

I was motivated by the institution and also my peer to improve my English. (Interview: P5)

Some supporting factors also emerged from the data obtained from participants. The quotes below indicate that the motivation to learn and use English as the medium of instruction in the classroom emerged from the participants' views on learning English. They saw that English was important for both teacher participants and their students and that the former had a responsibility to help students in their English language learning.

But I keep making them feel that using English in the classroom is not just about the policy, it's more like how we practise our English. When we learn something, it is never useless. (Interview: P1)

...because I realize that English is very important for us. We can get more knowledge from English. (Interview: P6)

It is good to start using English in the classroom. It is the responsibility of all teachers to create English speaking environment in the classroom. (Online interaction)

I think it is not wrong if we speak English, even only me who is speaking English, only me and my students, I just try to speak English to improve my skill in speaking English. (Interview: P3)

All participants perceived that their English language communication skills were improving in areas such as vocabulary enrichment, grammatical knowledge, and fluency. Even though the degree of English language improvement differed from one participant to another, this perception brought the motivation of the participants to a higher level.

[Interviewer]: “What made your motivation better?”

P3: Because I think my English now is better than before. (Interview: P3)

... because in the programme, there is so many experience, knowledge, you gave me how to learn English, you gave me how to teach in the class by delivering English, because my English is now improved so... of course I am very motivated. (Interview: P9)

6.4.3. Themes for Further Discussion

The self-report data indicated that there were changes to participants' motivation after the blended learning course. Sources of motivation were both external and internal to the participants. The external sources of motivation, such as the language policy at schools and support from the environment and peers, were reported to be strong. However, participation in the blended learning course appeared to change participants' perspectives on the use of English as the medium of instruction from a requirement to a personal desire and the willingness to improve their own English and help students learn it as well. Transformation from external to internal motivation will be discussed in the next chapter.

6.5. The Impact of the Blended Learning Course on Teaching Practice

The fourth research question asked about the effect of online, cohort-based interaction on teachers' use of English as the medium of instruction. This question

was addressed through analysis of the reported and observed effect of participation in the blended learning course on the teaching practices of the participants.

Data from the interviews, surveys, and the online interaction scripts indicated two major effects on classroom practice. First, participants used English as the medium of instruction most of the time in their classes, even though most of them still switched to Indonesian from time to time. Second, inspired by their learning experience in the blended learning course, participants used social media networking for online learning interaction with their students. I will discuss these two results in the following sections.

6.5.1. The Use of English

I sought to discover if teachers' participation in the blended learning course would affect the teachers' use of English in their teaching practice. I collected data from two different sources: self-report data from participants via surveys and my observation of their teaching. Three statements before and after the survey were related to the amount of English use in the classroom. This included using English in developing learning materials (S13), in classroom management (S14), and in content delivery (S15).

6.5.1.1. Use of English in Developing Learning Materials (S13)

To respond to statement 13, teacher participants reported a change in their use of English in developing their learning materials. Before their participation in the blended learning course, the majority of participants said they used both English and Indonesian, but predominantly Indonesian, in developing learning materials, as shown in Figure 10. After their participation in the blended learning course, however, most participants said they used an equal amount of English and Indonesian in developing learning materials, as shown in Figure 11.

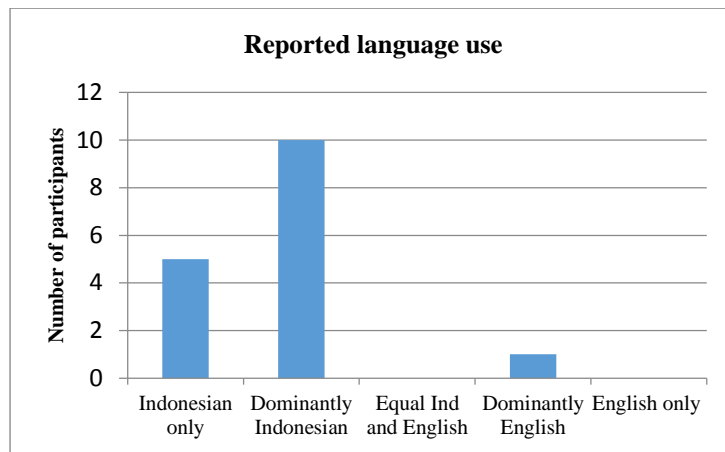


Figure 10. *The self-reported use of English in developing learning materials before the blended learning course*

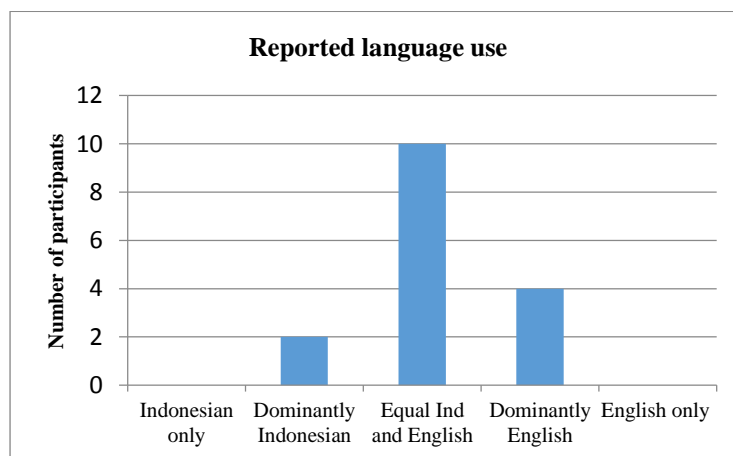


Figure 11. *The self-reported use of English in developing learning materials after the blended learning course*

6.5.1.2. *Use of English for Classroom Management (S14)*

Statement 14 dealt with the percentage of time teacher participants spent using English for classroom management. Classroom management language included greetings, checking attendance, managing question and answer sessions, giving praise and encouragement, closing the class session, and other social communication forms, such as asking about weekends and holidays.

According to participants, approximately 20% of class time was allocated to classroom management and the rest (80%) to content delivery. In response to statement 14, the aggregation of teacher participants' self-report data shows that before the blended learning course, they used English for classroom management for approximately 5.5% of class time. This increased to 15.18%, however, after

attending the blended learning course. The amount of time reported by teachers was based on their estimation, and no actual observation data were collected. This increase is shown in Figure 12 below.

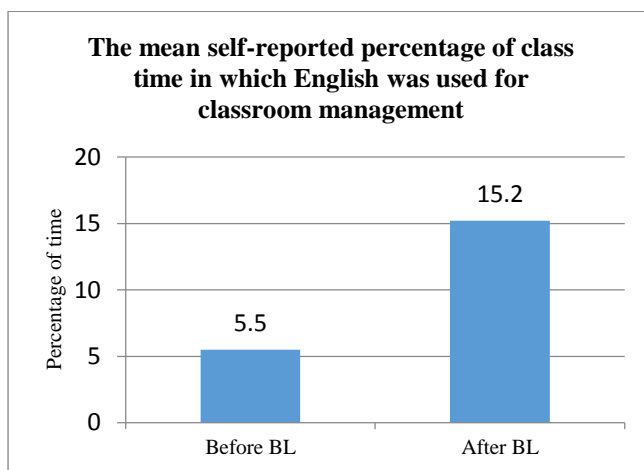


Figure 12. *The mean self-reported percentage of class time for English classroom management*

6.5.1.3. Use of English for Content Delivery (S15)

Content delivery includes reviewing previous lessons, lecturing/presentation, and answering content-related questions. In response to statement 15 (“Each day, I have been using English orally for content teaching (explaining the content in English) about ...% of the time”), teacher participants reported how much English they used for content delivery before and after their participation in the blended learning course. The aggregation of teacher participants’ self-report data shows that before the blended learning course, they used English for content delivery 11.5% of the time. This increased to 50.2%, however, after attending the blended learning course. For the rest of the time, they used Indonesian. As with the response to statement 14, the quantity of time reported by teachers in statement 15 was based on their estimation. The increase is shown in Figure 13 below.

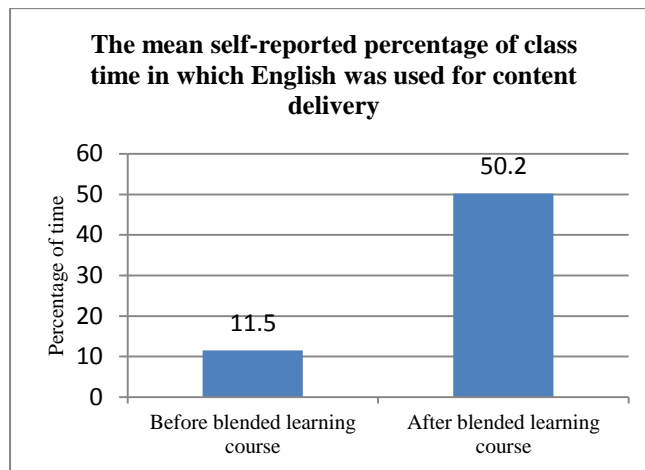


Figure 13. *The mean self-reported percentage of time for English use in content teaching*

6.5.1.4. Use of English Based on Classroom Observation

The self-reported increase of English use, as described above, is consistent with my observation notes, particularly in the use of English for content delivery. As mentioned earlier in the Methodology chapter, I observed the teacher participants teaching in their classrooms twice – two weeks after the completion of the four-month blended learning course and 1 month later. Data about the use of English in the classroom before the teachers participated in the blended learning course were collected only from surveys, as described in the previous section. I consider this a disadvantage of my research methodology because I could not triangulate the data from the surveys with observations. However, I observed three participants at School 1 at the beginning of the blended learning course on their request. My observation notes on these three teachers could potentially reflect similarities with the participants who were not observed.

My field notes during the first observation indicated that all participants switched between English and Indonesian in their classroom teaching practice. In my second observation, I found that the participants would still switch from English to Indonesian, but there was an increase in the amount of English used. To measure this, I tracked the number of minutes they spoke in English. The aggregated data from my observation notes, indicated in Figures 14 and 15 below, show the percentage of time spent by teacher participants using English for classroom management and content delivery as well as their use of Indonesian.

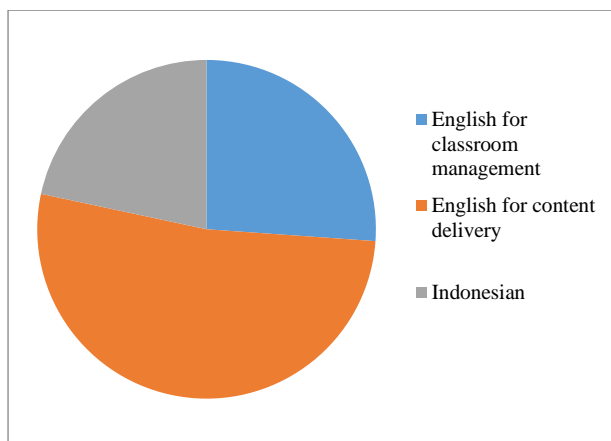


Figure 14. *Percentage of English and Indonesian used for classroom management and content delivery during the first observation*

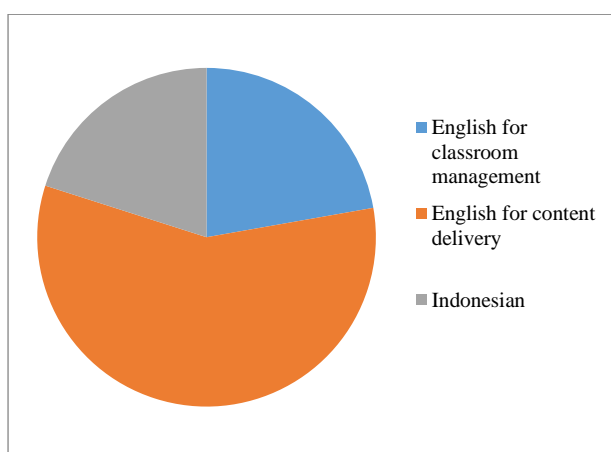


Figure 15. *Percentage of English and Indonesian used for classroom management and content delivery during the second observation*

Appendix Q contains an example from my first and second observation notes, showing how much time was spent by one participant using English for classroom content-related instruction and how much using Indonesian.

6.5.1.5. English and Indonesian Code-switching

After the classroom teaching observations, I interviewed the participants and asked them why they code-switched between English and Indonesian. Eleven out of the sixteen participants reported that the English proficiency of the students was insufficient to understand instructions in English. They suspected that the students did not understand when they explained the content in English. To ensure

that students understood what had been said, the teachers mixed English and Indonesian instructions to explain the content.

I still use Bahasa (Indonesian language) because sometimes my students get..got confused about the matter that I explain in English, so I blend it in English and Bahasa. (Interview: P7)

Participants also realized that their English language communication skills were limited, especially in vocational and technical terminology. When teacher participants could not say or remember particular words in English, they used Indonesian terminology.

I still mix language in explain my lesson by English and Indonesian, because sometimes I forget the words or the sentence in English. And the second is sometimes, students look confused. (Interview: P2)

Another reason given by three participants for mixing English and Indonesian instructions was that the national examination is still in Indonesian. These teachers were teaching students in their final (3rd) year of school. Teachers felt that it was necessary to switch to Indonesian to prepare students for the national final examination.

...because it is chemistry. And...we know that material that is tested in national exam is in Indonesian, so I have to give special term *istilah-istilah khusus* (*special terminology*) in Indonesian, not in English. (Interview: P11, with additional explanation)

P11 also added that the level of difficulty of the learning materials was another consideration for mixing Indonesian and English.

Oh...I think, not all the material I will give in English. I will combine it with Indonesian, or bilingual..may be bilingual, with bilingual, especially for difficult material. (Interview: P11)

The teacher participants' interview data were consistent with my observations, in which I noted that their use of English in the classroom varied. The teachers used more English in a class where students were able to respond in English, but less in a class where students could not. This implies that the teachers considered the English proficiency of their students in deciding when deciding how much English to use. Additionally, I noticed that the teacher participants switched to Indonesian when they suspected that their students did not understand

their instructions in English, or when they received no student response to their English questions and prompts.

T asked questions to review previous lesson. No response from students. She asked the same questions in Bahasa Indonesia. (Observation note on P4: 26 Feb 2013)

T asks ss what they know about “aperture”, but ss keep silent. T points the question to one female student, but the student could not answer. Then he asked the same question to another student, and still, the student could not answer. Then T explains it in Bahasa Indonesia and showed the next slide which is writtten in English. (Observation note on P5: 27 Feb 2013)

T shows her slides and starts explaining “Trigonometric ratios in quadrant 1” with all the mathematics formula, continued with “Trigonometric ratios in quadrant 2”. The discussion is in English. But when T talks about something/a word, ss did not seem to understand. Ss asked one another and T noticed this. Then T says it in Bahasa Indonesia. (Observation note on P7: 14 Mar 2013)

In addition to these reasons, I also sought to understand other strategies that participants employed in using English in the classroom. My observation notes indicate that fourteen out of sixteen participants used PowerPoint slides. Two of the fourteen participants who used PowerPoint wrote their slides in English and Indonesian whereas the other 12 wrote in English only.

In addition to PowerPoint, all participants used the whiteboard. They wrote the words they considered important for their students on the whiteboard while talking or explaining content. I considered this an effective strategy, especially when teachers did not pronounce the words correctly. It meant that the message they wanted to communicate had greater potential to be accessible to their students. I noted the use of PowerPoint slides by teacher participants in which English was used as scaffolding in their English learning process. The English written on the slides, particularly new English terminology and phrases, helped the class discussions in which English was used.

Another strategy that all participants employed was actively engaging students in the learning process. Students participated in question and answer sessions, discussions, games, and group work. I noticed that in classes like biology, tourism, food and beverage, mathematics, chemistry, and physics, some students responded to teachers’ instructions in English, even though they made

some grammatical and pronunciation errors. This strategy created lively classroom interaction in which English was used. But in two other classes I observed, students did not respond to the teacher when English was used. Students only responded when teachers used Indonesian. This observation seemed to reflect some of the participants' statements that the English proficiency level of their students was too low for English instruction.

6.5.2. The Use of Social Media for Online Learning Interaction

Even though the present research did not require the teacher participants to apply online learning to their teaching practice, their experiences in the blended learning course appear to have inspired them to integrate Facebook and Edmodo in their teaching. Some teachers posted a screenshot of their Edmodo page to the Facebook group to show their peers that they were using Edmodo with their students. They thought that adopting Facebook or Edmodo was appropriate to their school context, as indicated in the interview data.

Joining this programme is inspiring me to using the same programme to our students. I mean the blended learning, I think it is suitable for my students in the eleventh grade. This semester, the eleventh grade are doing on the job training in industry. They full time in industry. So they have no time to face-to-face with the teacher. I made a group on Facebook. The name of the group is same as the name of lesson. So, I upload the syllabus, and then I upload the module, OK, after that I ask the students to ...to answer some questions, like homework, and they have to submit their work by upload again in the group. I think it is running well. (Interview: P6)

I send some assignment to my students. For example, now our students are in the industry for industrial experience. So I send them the assignment and also some learning material using Edmodo and also in Facebook. (Interview: P5)

In Indonesian vocational schools, students are required to undertake an industrial internship programme. The policy for selecting students and the duration of the internship for these programmes vary from one school to another. Some Indonesian vocational schools send their second year students for industrial experience, while others send their third year students. The duration of the industrial experience also ranges from three to six months. Participants believed

that their learning experience in the blended learning course could be adapted for their students in the industrial internship programme.

Other participants felt that their learning experience in the course could be used with all students – even those who were not in an industrial internship programme. Eight out of sixteen participants used Facebook or Edmodo for their online learning interaction with their students. The other eight participants did not use social media in their teaching. Three of them reported that they were not skilled enough to do so but expected to attend a special training course, such as one on the integration of ICT in classroom teaching.

Until now, actually I don't use this blended learning, just face-to-face. Maybe, if there is a workshop about this one, this programme, I will try to do it. (Interview: P10)

6.5.3. Other aspects of the blended learning course

In addition to the findings described earlier, it is necessary to report what worked well, what worked with difficulty, and what did not work at all during the implementation of the blended learning course. These findings are based on teachers' self-reports through interviews and my observations and professional judgement. These findings should be considered when designing future blended learning courses for teacher development.

The face-to-face and online interactions worked well. Support from the school principals and the teacher participants appears to have been the key factor in the success of this aspect of the course. Additionally, the appropriate topics for discussion and the authentic learning materials appeared to maintain the interest of the teachers, as indicated in the interview data. The sixteen teachers who completed the course said they thought the activities were interesting and helpful for their teaching skills in an English-medium content teaching environment.

I think ...the blended learning course is very interesting coz we get comment and feedback and help me to use English well at classroom. (Interview: P4)

With this blended learning course, we can discuss and share our problem...I feel my English is improved and it helps me in my teaching practice. (Interview: P2)

However, there were other aspects of the blended learning course, which worked only with difficulty, and required extra effort to achieve some success. These aspects included three things. First, since the face-to-face tutorials with teachers at school 2 were conducted during school hours, it was very difficult to get all of them together at the same time. Consequently, extra hours were spent for tutoring and preparing the teachers who could not attend the scheduled classes. Second, online interactions tended to be among teachers from the same school, rather than with teachers from other schools. I had to encourage the teacher participants individually to comment on the postings of teachers from other schools. Third, the various entry levels of teachers' English proficiency made group discussion particularly difficult, as their ability to communicate was at quite different levels. Individual assistance was provided to help teachers with low level English proficiency, and required extra effort on my part.

One aspect of the blended learning course, which I considered not working at all was the reflective journal writing. Teachers only wrote two reflective journal entries, and they did not reflect or write as deeply as I had expected. Even though I had provided explanation and a question and answer session regarding reflective journal writing, teachers only briefly answered the questions in the template, and did not provide additional insights to their thinking.

6.5.4. Themes for Further Discussion

Two key results from participation in the blended learning course for the teaching practices of teacher participants have been described: the increased use of English (based on both self-report and observation data) in the classroom and the integration of online learning interaction in the teaching practice of the participants. While the use of English for content teaching increased, teachers applied different strategies to make the learning materials understandable for their students. I consider this to be part of the teachers' pedagogical content knowledge (PCK) development in an English-medium teaching environment.

It is also important to know what factors contributed to the increased use of English. Did the online learning interaction sustain and extend the English learning of participants and lead to their increased use of English? Thus, two themes that emerged from the findings are teachers' PCK development and how

to sustain English language learning through online interaction. These two themes will be examined in more detail in the Discussion chapter.

6.6. Students' Perspectives on Teachers' Use of English

Since the seven students participating in the focus-group interview were from School 3, all the perspectives on the teachers' English discussed in this section refer to the four teachers from that school whose classes the students attended. I asked the students if they preferred the interview to be conducted in English or in Bahasa Indonesia, and they said they preferred in English. I sought to obtain students' perspectives about the four teachers' use of English as the medium of instruction. As the students were able to respond to my questions and provided relevant answers, I came to understand that these seven students had good English language communication skills and pronunciation. This assessment was supported by the fact that the students noticed the teachers' mispronunciation.

All students mentioned the positive and negative aspects of the teachers' use of English in the classroom. They all agreed that the idea of using English in the classroom was good because they believed they learned English and subject content at the same time. The students perceived that when the teachers taught content in English, they not only learned content material, but they also learned English.

I like because it is more fun. We can share about pronunciation and words when teacher ask question, and we can study English more.
(Student 4)

Some teachers who teach in English, some of them are good, but there are also a few mistakes that I see, from their intonations, and some of the language, too. I think and it needs repairment, I think. But I understand what they say. (Student 2)

The negative aspect they mentioned was the teachers' English pronunciation. Four students stated that the English pronunciation of the four teachers in their school was not clear and therefore they found it difficult to understand. When I asked for clarification, the other three students agreed.

But sometimes the teacher, when teach us, it's really ..umm we can't understand it because their accent is weird, may be because we....no..not really, may ..their accent we not understand. (Student 5)

...the pronunciation is false. (Student 2)

The pronunciation of the teachers sometimes is very complicated to hear. (Student 6)

It (*the pronunciation*) is not correctly pronounced. (Student 4)

Student 1 perceived that the teachers' English accent was not good, but he viewed the teachers' efforts to learn and practise English positively.

I think they teach well in English, yes, may be like [name] says, they sometimes speak Indonesian accent, that seems sometimes awkward, but they're still trying, that's good, that's great. (Student 1)

Student 1 also mentioned that special English terminology in mathematics was difficult to understand.

But sometimes we...maybe in mathematics, we found hard language, like mathematical language that we couldn't understand. So, that's quite difficult too, but it's OK. (Student 1)

This statement is consistent with one of my observation notes. When I observed a mathematics teacher in her classroom, I noted that there was a problem with mathematics terminology.

14.34 T showed her slides and starts explaining "Trigonometric ratios in quadrant 1" with all the mathematics formulae, continued with "Trigonometric ratios in quadrant 2." The discussion was in English. But when T talked about something/a word, Ss did not seem to understand. They asked one another and T noticed this. Then T said it in Bahasa Indonesia. After explaining, T gave a task for students to do, and asked one student to do it on the whiteboard. Instruction was in English. The student could do the exercise correctly and other students clapped hands. It was good to see the responses from the students. When they did not understand, they showed it even though they did not ask questions, and that the T was sensitive enough to the body language shown by students. That's why T used Indonesian language for that particular unclear part. (Observation notes on P7)

When students were asked to state whether they preferred their teachers to use English only, Indonesian only, or both, three out of seven students preferred both English and Indonesian to be used; one student preferred English only; one student preferred Indonesian only; and the other two did not state a preference.

There were three things that students mentioned, based on their observations. First, students noticed some mistakes their teachers made when the teachers were speaking in English. However, the students could tolerate the mistakes and helped correct the teacher's English pronunciation. Secondly, students noticed that some teachers were nervous when teaching in the classroom using the English language for classroom instruction. Thirdly, students also noticed that teachers made progress in their English instruction as they attended classes in which English was regularly used for classroom instruction.

Yes, they make progress. There is a time we see they make progress. Really great. (Student 2)

It makes us more understand what they say to us. (Student 4)

The statements from the students were consistent with the findings that I mentioned earlier. First, student observations as well as my own revealed that teachers were initially nervous when they had to use English for content teaching. The issue of nervousness is addressed in my research question (number 2) that asked if the blended learning course could be linked with changes in confidence.

Secondly, both the students' observations and my own revealed that the teachers' use of English for classroom instruction and for content teaching at School 3 had increased. This is addressed by my research question (number 4) that asked about the effect of online cohort-based interaction on teachers' use of English for content teaching. The relationship of these two issues with the research questions will be further elaborated in the Discussion chapter.

Based on their observations, the students made two suggestions. When one student suggested that teachers should check the students' comprehension when they used English as a medium of instruction, all students agreed. The second suggestion was that the teachers still needed to continue their own English learning.

Teachers just need to make sure that the students understand completely all what they say. (Student 1)

And, it just needs, ah...more ...study English, I think, the teacher. (Student 2)

6.7. Summary

Peer interaction and collaboration were the learning activities undertaken by the participants. Reflection and self-regulated learning together with the learning activities included in the blended learning course design had a positive effect on sustaining English language use in the classroom. The self-reported confidence and motivation of teacher participants to use English as the medium of instruction improved. Teachers' self-reports, my observations, and student observations were consistent in concluding that the use of English in the classroom had increased, even though the use of Indonesian was still required.

In addition to these results, participation in the blended learning system inspired teacher participants to adopt a blended learning approach in their own teaching by using social media for their students' online learning interaction. Gradual improvement in English language proficiency, motivation, and confidence acted as a new tool that mediated new collaborative activities in the blended learning environment. Thematic analysis of the data revealed a number of issues that were used as evidence to address the research questions. Potential themes for discussion were identified and will be addressed in the next chapter.

Chapter Seven – Discussion

7.1. Introduction

From the findings, seven themes, which address the aims of the research, were identified and are discussed in this chapter. In addition, there are key implications for the overall sustainability of a blended learning approach more widely within the Indonesian educational context. These will also be discussed. The seven themes include mediated interaction, collaboration, increased confidence, motivational transformation, teachers' PCK development, sustained learning, and socio-cultural perspectives on the blended learning course. Mediated interaction in the blended learning activity system occurred through social mediation, self-mediation, and artefact mediation. Collaboration in the blended learning course was facilitated because of the contexts of the teacher participants and the design of the course. Factors that contributed to increased confidence and the transformation of external motivation to internal motivation are discussed. The manner in which teacher participants developed their PCK in the English-medium content teaching environment is explained. Change of behaviour and social presence are perceived as important elements for sustaining teachers' English language learning in the online section of the blended learning course. Finally, I discuss the course from the socio-cultural perspective and illustrate how the teachers' development (improved English language, increased motivation and confidence) stemmed largely from social source.

7.2. Theme 1: Mediated Interaction in the Blended Learning Course

As discussed in the Conceptual Framework chapter, Lantolf (2000) suggested that three forms of mediation can occur in a second language: social mediation, self-mediation, and artefact mediation. Mirroring these three domains of mediation, this chapter discusses the mediated interactions that occurred in the blended learning activity system.

7.2.1. Social Mediation

In social mediation, Lantolf (2000) claims that three strands of mediated interaction exist: between experts and novices, peer mediation, and mediation

through the use of the first language (L1). In the context of the blended learning course, I assumed the role of learning facilitator and considered myself the expert whereas the teacher participants were the novices. However, in the following section, the terms *learning facilitator* and *teacher participants* are used instead of *expert* and *novices*.

7.2.1.1. Mediated Interaction between Facilitator and Participants

Interaction between the learning facilitator and the teacher participants occurred in the blended learning course. Interaction was mediated by computer technology and the topics for discussion, including English expressions frequently used in the classroom context, lesson plans, and the development of learning material in English. The issues discussed were situated in the participants' zone of proximal development (ZPD) because with the assistance from the facilitator, the participants were able to enhance their knowledge and skills in using English for content teaching. English was being used because the goal of the learning interaction was to communicate in English. However, there was some code-switching from English to Indonesian, for example when teacher participants were not able to express their ideas in English.

In the blended learning course, the facilitator provided assistance to the teacher participants in the form of corrective feedback. For example, when teacher participants sent or posted a draft of their lesson plan in the online forum and asked for corrective feedback, or when they practised during the micro-teaching sessions, corrective feedback was provided by the facilitator. I consider this type of assistance and interaction as mediating the teachers' English language learning. When the mediation is provided in a timely manner, it is consistent with the principle that "mediation must be contingent" (Lantolf, 2000, p. 81).

With the assistance of the learning facilitator, teacher participants noticed the gaps in their English language knowledge. They worked on these to improve their English proficiency and to enable them to use English better for content teaching. As they were working in their ZPD, this effort contributed to their learning (Aljaafreh & Lantolf, 1994; Lantolf, 2000; Lantolf & Appel, 1994). I would assert that teachers' mediated interaction with the facilitator increased their motivation and confidence of the teacher participants to a higher level.

7.2.1.2. Peer Mediation

Peer mediation refers to mediated learning interaction among teacher participants. Peer interaction in the blended learning course was focused on the shared learning goal, which was to enable the participants to use English for content teaching. To reach the goal, teacher participants interacted and collaborated in such ways as developing lesson plans and learning materials in English. Thus matters connected with lesson plan and learning material development mediated the peer interaction.

The shared learning goal prompted collaboration that led to knowledge co-construction in English language communication. However, as reported in the Findings chapter, providing feedback on their peers' lesson plans only occurred among teachers from the same school, not with those from other schools. According to Sato (2013), feeling comfortable and not worrying about making mistakes underpin peer interaction. The teacher participants might have felt more comfortable providing feedback to peers from the same school because they knew each other better than they knew colleagues from other schools.

Peer interaction also occurred during micro-teaching sessions. For example, teacher participants discussed strategies to engage students in class discussion and ways to make learning materials understandable to their students. In the discussion, teacher participants recalled their prior knowledge, shared experiences, and contributed to the discussion. Such peer interaction and collaboration is called collective scaffolding, and it can promote and mediate knowledge co-construction (Donato, 1994).

7.2.1.3. Mediation through the First Language (Indonesian)

Even though teacher participants were encouraged to use English for communication, the use of Indonesian was inevitable, especially for participants with weaker English communication skills. As reported in the Findings chapter, the switch from English to Indonesian was made by the teachers for various reasons. For example, during the micro-teaching sessions, participants switched from English to Indonesian to provide feedback when they found it difficult to express ideas in English. During classroom teaching sessions, teachers reported that they switched to Indonesian when they suspected that their students did not

understand their instruction in English. In addition, students sometimes requested that teachers speak in Indonesian.

When teacher participants used Indonesian during micro-teaching sessions, dialogic exchanges occurred in collaborative tasks. Participants provided each other with help and constructed a shared perspective on their teaching task. For example, together they constructed sentences and instructions in English that were the equivalent of the Indonesian versions. Thus, collaboration in their first language contributed to their English language learning. Likewise, when teacher participants used their first language with students in the classroom, they provided help such as comprehension checks, clarification, and confirmation of language meaning. At the same time, teacher participants reflected on their own English language use and thought of how they might provide various strategies to make content more comprehensible for their students.

According to Antón and DiCamilla (1998), the first language serves as a mediating tool in second language learning, both in the interpsychological and intrapsychological domains. In the interpsychological domain, learners can use their first language to negotiate meaning and manage their tasks. The use of the first language provides scaffolding in their learning of the target language. In the intrapsychological domain, the first language serves as a cognitive tool in the form of private speech (Antón & DiCamilla, 1998). Private speech is defined as speech addressed to the self (self-directed speech) (Vygotsky, 1987). In private speech, the first language is used to internalize social interaction. Mirroring this concept, the use of Indonesian by the teacher participants played a key role as a mediating tool in their English language learning activities. In the interpsychological domain, teacher participants used Indonesian to discuss ideas that they could not express in English. Discussion in Indonesian helped them better understand the English language. In the intrapsychological domain, individual participants appeared to use Indonesian in their private speech to internalize social interaction. This was indicated by the fact that some teacher participants wrote the concept associated with their lesson plan first in Indonesian and then translated it into English, evidence that teachers used their first language (Indonesian) in thinking and constructing their understanding of their target language (English).

7.2.2. Self-Mediation

According to Nunn (2001), private writing, including writing reflective journals, is an act of self-mediation because it involves self-reflection and self-directed speech (inner speech). In writing reflective journals, learners are undertaking self-mediation because it involves the internalisation of external forms of dialogic communication (Nunn, 2001), talking to themselves in the mind or verbally (Rahimi & Tahmasebi, 2011), and thinking about actions to be taken (R. Ellis, 2003) to meet their learning goals.

In the case of the Indonesian teachers in this research, however, self-mediation did not occur as much as I had expected because teacher participants wrote only two reflective journals. As reported in the Findings chapter, participants only provided short answers to the questions in the reflective journal template. Even though they were encouraged to write any ideas freely and not feel limited to answering the questions, they only provided short answers and did not express deeper thoughts. The simple, reflective journals provided limited access to investigate self-mediation in the present research.

Since writing a reflective journal can be part of the learning process through making meaning from experiences (Boud, 2001), it is important to think of strategies to encourage teachers to write reflective journals. Spalding, Wilson, and Mewborn (2002) suggest that a variety of strategies are required since teachers may respond differently to different strategies. Critical reflection can lead to transformational learning (Carroll, 2010) – learning that produces changes (Clark, 1993) but teachers did not know how to do it and needed to learn. In the context of Indonesian teachers, transformational learning is related to changes in motivation and confidence in learning and using English for content teaching.

7.2.3. Artefact Mediation

In this section, I will discuss the artefacts that mediated the English learning of the teacher participants in the blended learning course. Tasks and technology are cultural artefacts that mediate second language learning processes (Lantolf, 2000).

7.2.3.1. Activity Mediated Learning

“Activity” in the blended learning course refers to peer teaching sessions as a preparation for classroom teaching. The activity is considered a mediating artefact in the blended learning course because it resembles actual classroom teaching. Teacher participants received feedback from the learning facilitator and their peers and thus enhanced their skills for performing the real teaching activity, which was to use English for content teaching. To complete the activity, teacher participants had to prepare lesson plans and learning materials in English.

I perceived my role in the blended learning course as a provider of a scaffold for the teacher participants. Then the participants re-interpreted and reapplied the way that scaffolding might be used with their students. The activity became mediating means for the teacher participants’ learning when they interpreted and re-interpreted it. Even though peer collaboration occurred through the provision of feedback during the micro-teaching sessions, each activity was designed as an individual task. The learning materials that teacher participants developed differed from one another, depending on their subject background. Activities were perceived as independent by individual teacher participants because they dealt with different content and terminology. However, in terms of the linguistic rules and functions of language, the activities led to a particular type of language behaviour: the use of English as a medium of classroom instruction.

7.2.3.2. Computer Mediated Learning

In computer-mediated communication (CMC), there are two main types of interaction: between people using computers as mediating tools and between people and computer technology. In this research, teacher interaction was mediated by a computer and internet communication tools. Such interaction occurred because the blended learning programme involved social networking for online interaction. Salomon (1990) viewed this interaction as a person-technology partnership through which constraints and affordances emerge. One could then ask whether the two types of interaction were internalised and whether they had an effect on the participants’ English learning. More importantly, did the interaction have an effect on their teaching practices in which English was expected to be used?

At the interpsychological level, interaction among the participants was mediated by computer technology. Teachers posted questions and drafts of their lesson plans and received feedback. They also participated in sharing opinions in a discussion and provided encouragement to their peers. During their interview, teachers reported that feedback from peers was helpful for improving their lesson plan. Teachers also reported that peer feedback increased their motivation and confidence in using English in the classroom. When language interaction is associated with changes in motivation and confidence, this indicates that the computer-mediated interaction with peers has been internalised at the intrapsychological level. Further discussion on increased motivation and confidence will be provided later in this chapter.

It was notable that teacher participants came from different cultural backgrounds and had varying accents and levels of English language proficiency. However, these differences did not influence their computer-mediated interaction. CMC environments allow people to interact, regardless of race, gender, accent, or power status and allow them to participate at their own pace (Warschauer, 1997). What mattered were the different levels of experience and expertise in CMC. Those differences created a distinction between more and less experienced users (Thorne, 2000, 2003) and thus influenced the way learners interacted discursively with each other (Lantolf, 2000).

Similar conditions occurred in the blended learning course. Thorne (2003) called this experience or expertise in CMC exogenous digital cultures. For example, a few participants had no internet access on their mobile phone or at home and needed to find a suitable time to access the internet on the school computer. These teachers had lower participation rates in comparison to participants who had more convenient access to the internet. This situation had consequences for their English language learning. Teachers who actively participated in online learning interaction had more opportunities to practise their English and receive corrective feedback than those who were less active.

As I reported in the Findings chapter, Edmodo was introduced because the participants requested it as a platform for online learning interaction in addition to Facebook. Most participants did not become familiar with Edmodo until they received help from me as well as from their peers who had learned and used it earlier. Then all participants subscribed to the Edmodo group that I had created

and used it for interaction. In contrast with the Edmodo situation, participants already had their own account on Facebook before the blended learning programme but did not use it for learning interaction with their students.

The teacher participants reported that their experience as learners using Edmodo and Facebook inspired them to do likewise with their students. I regard this phenomenon as an effect of the interaction between teacher participants and computer technology. In this case, there was a transformation of the role of teacher participants from learners to facilitators in the CMC environment. This is consistent with Salomon's (1991) claim about the cognitive residue of intellectual partnership between the individual and computer technology (Salomon, 1990), which leads to skill activation, skill internalization, and internalizing computer-based metacognition. Teacher participants' learning experience in the blended learning approach, particularly their computer-mediated interaction, influenced their teaching practices.

7.3. Theme 2: Collaboration in the Blended Learning Environment

The Findings chapter revealed two main factors that made collaboration in the blended learning programme possible: the context of the teacher participants and the design of the blended learning course.

7.3.1. The Context of the Teacher Participants

Kreijns, Kirschner, and Jochems (2003) argue that there is a set of interrelated conditions that enforces collaboration and that this set of conditions appears to exist in the context of the teacher participants in a blended learning course. They came to the course with similar contextual backgrounds. They shared the same problem: their schools required them to use English for content teaching, but they lacked English communication skills. The shared problem indicates that they also shared the same need and expectation from the blended learning course. The ability to use English as a medium of instruction became their shared goal.

Mahn and John-Steiner (2002) argue that sharing the same objectives has the potential to stimulate collaboration. As the teachers shared the same goal, success in English language learning in the blended learning programme became

the teachers' shared responsibility. Accordingly, the teachers encouraged and helped one another so that they could succeed together. The shared conditions and shared desire for success reinforced teachers' collaboration.

As reported earlier, during collaboration the teacher participants posted drafts of their lesson plans online and asked for corrective feedback. They also asked for an opportunity to teach in a micro-teaching session in order to obtain corrective feedback from their peers as well as from the learning facilitator. Participants encouraged and helped each other because they wanted to succeed in reaching their shared goal. As a result, interaction and collaboration occurred.

7.3.2. The Design of the Blended Learning Course

Since the teacher participants were adult learners, principles of adult learning were considered in the design of the blended learning course. The most noteworthy characteristics of adult learning are that adults perceive a need to learn and know what, why, and how they want to learn (Gravani, 2012). Thus, the first principle of adult learning incorporated into the design was authentic content and tasks.

At the beginning of the blended learning course, teacher participants were involved in identifying the problems they had in relation to English-medium content teaching, the content they needed to learn, and how they were going to learn. This approach is also consistent with problem-centred, as opposed to content-centred, adult learning theory (Merriam et al., 2007) because the challenge that faced participants was their use of English in the classroom.

Teachers' practical needs included, but were not limited to, the knowledge of classroom expressions in English, how to develop lesson plans and learning materials in English, and how to engage learners in classroom discussion. Teachers also wanted to practise teaching English-medium content with their peers before they implemented it with their students. Accordingly, the content and tasks in the blended learning course covered all these issues to meet the needs of the participants. I believe that authentic content and tasks played key roles for teachers' engagement and collaboration.

Authentic content and tasks are discussed frequently in adult learning theory as well as in social constructivist learning environments, such as in problem-based learning (Herrington, 2010; Hung, Jonassen, & Liu, 2008).

According to the social constructivist learning paradigm, authenticity is said to be the first issue to consider in any learning environment so that learners are more prepared to complete complex tasks in life (Collins, 2009). Smith (2003) argues that task type has a clear influence on learners' engagement in negotiation.

Another principle of adult learning considered in the design of the blended learning course is voluntary participation (R. Edwards, Sieminski, & Zeldin, 2013; Gravani, 2012). As I mentioned in the Methodology chapter, teachers' participation in the blended learning course was voluntary. The sixteen teacher participants were committed to participating in the blended learning course even though their participation was voluntary.

I am also convinced that interactive design, including social interaction, is important to enhance collaboration in a blended learning course. Social interaction is said to be a prerequisite for collaboration and collaborative learning (Kreijns et al., 2003). However, Kreijns et al. (2003) identify two factors as pitfalls to social interaction in computer-supported collaborative learning environments: (1) "taking for granted that social interaction will automatically occur just because technology allows it," and (2) "restricting social interaction to cognitive process" (pp. 340-341). Considering these two pitfalls, social interaction in the learning environment must be intentionally designed and organized (Flottemesch, 2000; Liaw & Huang, 2000; Northrup, 2001). To ensure that social interaction takes place, the inclusion of appropriate topics or content is necessary during the instructional design process. "Appropriate topics" means those that are relevant to the social condition of the learners. When learners are familiar with a topic, they are more likely to engage in social interaction. In the blended learning course, reading passages with questions for discussion were posted. Since the topics were relevant and familiar to the teacher participants, they expressed their interest and perspectives on the issues and online interaction thus occurred. This can be considered authentic interaction (W.-C. V. Wu et al., 2011). Through their interaction in English, participants collaboratively learned the language as they provided their peers with comments in English. Such social interaction acts as a new tool mediating new collaborative activities (Yamagata-Lynch, 2010) and leads to language learning.

7.4. Theme 3: Confidence from Positive Online Peer Interaction

The confidence of participants to use English for content teaching was reported as having increased after their participation in the blended learning course. Information about the increase in confidence was obtained from self-reports and observation notes. MacIntyre, Dörnyei, Clément, and Noels (1998) argue that confidence reflects an emotional reaction to prior experience. Thus it was important to investigate what prior experiences influenced the confidence of the teacher participants.

As I reported in the Findings chapter, teacher participants had opportunities to practise their English communication skills with the course facilitator and their peers, both face-to-face and online. They worked collaboratively by providing feedback on their colleagues' lesson plans and teaching performance. Constructive online feedback from peers appeared to have contributed to changing teachers' perspectives on English language learning and to increasing their confidence to teach in English. When the students were able to respond to the teachers' instruction in English, this indicated that the teachers' English was understandable. Such positive student response can be considered pleasant interaction. In the Literature Review chapter, I mentioned that continued practice and pleasant interaction experience contributed to increasing confidence. This was reflected in participants' willingness to communicate in English with their peers and with students.

Wu, Yen, and Marek (2011) claimed that online EFL interaction affected and increased the confidence of learners. Online peer interaction has the potential to create an online learning cohort within which peer relationships and social acceptability can be nurtured. This is especially the case when members share the same conditions and goals. This situation appears to have existed in the teachers' blended learning course which was designed for learning purposes, social interaction, and collaboration.

Collis and Jung (2003) suggest that in teacher development courses, teachers need to feel supported. In the online interaction of the blended learning course, teacher participants provided support to one another. The idea of creating a supportive relationship has been the underlying commonality in teacher professional development research. McClure (2007) noted that a supportive

relationship in a blended learning course had increased the confidence of learners. Similarly, I argue that peer online interaction in the blended learning course made participants feel supported and this, in turn, increased their confidence, which then acted as a new tool to mediate the activities that followed (Yamagata-Lynch, 2010).

7.5. Theme 4: Motivational Transformation

In the research survey questions, integrative motivational orientation was targeted in two questions of the survey. For example, “I learn English because it will help me better understand English-speaking people and their way of life,” as in question 9. Instrumental orientation was targeted in five questions of the survey. For example, “I learn English to improve my chances for a better career (e.g. to be a principal),” as in question 7.

I reported in the Findings chapter that changes in teacher participants’ motivation occurred in both the integrative and instrumental dimensions. Factors that contributed to the changes in motivation were reported to be both external and internal variables. External factors included responses from students, interaction with colleagues, and the blended learning environment. These three factors are consistent with extrinsic motivation (Deci & Ryan, 1985) and instrumental orientation (Gardner, 1985).

Internal factors that contributed to participants’ increased motivation included being aware of the benefit of having good English communication skills and their responsibility to help students with their English language learning. These two forms of awareness are consistent with intrinsic motivation (Deci & Ryan, 1985) and integrative orientation (Gardner, 1985). It is then necessary to consider what helped the participants become aware of the two conditions.

In response to this question, I believe that teachers’ awareness originated from social interaction in the blended learning activity system, a source external to them as individual participants. In the social interaction, participants exchanged ideas and perceptions, received positive feedback, and felt supported. Emotions were also involved in the social exchanges. Eventually, the teachers felt more competent and in turn, the feeling of being competent made them intrinsically motivated. Positive feedback, communication, or rewards as social-contextual

events promote a feeling of competence and enhance intrinsic motivation (Ryan & Deci, 2000; Vallerand, 1997). I consider that the gradually increased intrinsic motivation of teacher participants acted as a new mediating tool encouraging them to participate more actively in the blended learning activity system.

There was also a transformation in the perspective of the teacher participants from self-centred to student-centred. The interviews revealed that the teachers changed their objective in the blended learning activity system from improving their own English language proficiency to helping improve the proficiency of their students. However, to be able to help their students in learning English, the teachers had to improve their own language skills first. According to Nardi (1996b), an object or objective may change during the process of activity, and the changes in object might change the nature of an activity. Changes in objective can affect changes in motivation because motivation and objective are very closely related.

The transformation of participants' motivation from external to internal in the blended learning activity system revealed the important role played by the learning context. To understand the important role of context in the blended learning activity system, I will first discuss Nardi's (1996) study of context from the perspective of activity theory, situated action model, and distributed cognition.

According to Nardi (1996), context as the unit of analysis of the three approaches takes slightly different forms. In situated action models, the focus is on the activity of individuals in a particular setting and thus the context is the relation between an individual as the subject and the environment. Object or goal is excluded from the context.

In distributed cognition, the focus is on the individuals and the artefacts and thus the context is the relation between the subject and the artefacts. The focus is not only on what is in the head of the individual (internal context), but also on cooperation with other people and artefacts (external context) (Hollan, Hutchins, & Kirsh, 2000; Hutchins, 1995).

According to activity theory, the context is more comprehensive and includes subject, object, the activities, and the artefacts. Context in activity theory is a union of both internal and external. Internal context refers to the situation where the subjects (individuals) specify their object or goal, whereas external

context describes a situation where the subjects involve artefacts and other people in undertaking the activities.

Even though the three approaches view context from slightly different angles, they share the connection between internal and external contexts as common ground (Nardi, 1996b). In the teachers' blended learning activity system, the internal context was the relation between the participants as subject and their goal for learning English as the object. The external context was the relation or interaction between the teachers and the computer tools as artefacts, the school policy, and other people in the schools, such as the school principal and students (known as the division of labour in activity theory). The internal and external contexts interacted. Interaction with students (which is an external context) influenced the object (which is an internal context), and the interaction contributed to the transformation of external motivation to internal motivation.

7.6. Theme 5: Teachers' PCK Development in an English-Medium Content Teaching Environment

As discussed in the Literature Review chapter, pedagogical content knowledge (PCK) is "the knowledge of, reasoning behind, and planning for teaching a particular topic in a particular way for a particular purpose to particular students for enhanced student outcomes" (Gess-Newsome & Carlson, 2013). It is the knowledge of content and knowledge of the way to make that content understandable to students (Bausmith & Barry, 2011).

The context of the present research is the use of English for content teaching in an EFL environment. This context added an issue to teachers' PCK, especially because both teachers and students lacked English proficiency. Suggestions from teacher participants for the improvement of future blended learning courses indicate their concern about PCK for English-medium content teaching. The suggestions include samples or reference material dealing with English-medium content teaching practices in CD-ROM packages. This suggestion is consistent with the advice of Bausmith and Barry (2011) who recommended the use of various classroom instructional videos for teachers' PCK development.

From the videos, teachers can discuss various ideas, such as how students learn, how learning goals can be met in the classroom, and what the teacher in the video said and did to facilitate student learning. Such a discussion can contribute to developing teachers' PCK.

Another suggestion from the teacher participants was to allocate more time to micro-teaching sessions. Two positive ideas emerged from this proposal. First, the teachers considered the micro-teaching session helpful for their PCK development because they received constructive comments from the instructor and their peers.

Second, the suggestion aligns with the literature which argues that PCK is specific (Garritz, 2014) and includes knowledge of how to help students learn in various ways (Van Driel & Berry, 2012). The participants in the present research are experienced teachers. They had developed their PCK from their teaching experience before participating in the blended learning course. When they had to use English for content teaching, however, they felt that they needed specific knowledge, practice with their peers, and constructive feedback. All these contributed to their PCK development in an English-medium content teaching environment.

During their participation in the blended learning course, teacher participants implemented various strategies to develop their PCK, such as sharing teaching experiences in the online section and discussing issues relevant to their English-medium content teaching practice. As part of their PCK to make the content understandable to their students, teachers used various strategies in the classroom such as code-switching into Indonesian when they thought it necessary, using PowerPoint slides, writing important English words and phrases on the whiteboard to avoid student misunderstanding due to faulty English pronunciation, and engaging students in classroom discussion.

In her study, Zacharias (2013) argued that teachers' code-switching into Indonesian was a strategy to cope with their lack of English proficiency in an English-medium content teaching environment. In the present research, however, teachers code-switched to Indonesian not necessarily as a way to cope with their own inadequate English, but as a strategy to make the content comprehensible to their students.

In the Findings chapter, I reported that teachers applied problem solving strategy and engaged students in class activities, such as asking questions and giving comments, and in group discussion. As I mentioned in the Literature Review chapter, this approach could be interpreted as a strategy to cope with teachers' lack of fluency in English, as was the case. This strategy is consistent with the biology teacher who instructed students to ask questions and make comments to compensate for the teacher's lack of English proficiency (Nikula, 2010). I consider that all strategies applied by the teacher participants reflected their pedagogical content knowledge in an English-medium content teaching environment.

7.7. Theme 6: Sustaining the Learning through Online Interaction

Teacher participation in the blended learning course, especially the online social interaction, contributed to sustain the English language learning of the participants. The fact that teachers gradually used more English in their classes by the end of the blended learning course indicated that the learning process was continued. Two important issues – change of behaviour and social presence – are viewed as important elements for sustaining the English language learning of teacher participants.

7.7.1. Change of Behaviour

According to Robelia et al. (2011), participation in learning can bring behavioural change in learners. Change of behaviour is a response to environmental stimuli (Heimlich & Ardoin, 2008) and the response “may include cognitive elements, unobservable mental process and choice in mediating the behaviour of the individual” (p. 216). The learning experience through social media networking effected change in the behaviour of teacher participants, evidenced by the increase in levels of motivation and confidence. Moreover, the use of English for content teaching itself was a kind of observable, behavioural change that occurred in the teacher participants.

Kreijns, Kirschner, and Jochems (2002) declare that social interaction is an important element to establish a social space in which social relationships, group cohesion, trust and belonging can be embraced. As reported in the Findings

chapter, through social interaction teacher participants provided support for each other and this contributed to their change in behaviour. The support that the teachers provided for their peers took the form of corrective feedback and encouragement through social interaction and collaboration and led to the increased use of English in the classroom.

My observation notes, the teachers' self-reports, and student observations consistently noted an increase in the use of English for content teaching. This indicated that the teachers manifested observable behavioural changes as a result of their participation in the blended learning environment. Another indicator of a change in participant behaviour was their use of social media networking in their teaching practice. This change shows the effect of their learning participation using Facebook applications. I suggest, therefore, that there is a connection between the change of behaviour and learning sustainability.

7.7.2. Social Presence

When reflecting on the teacher participants' changed behaviour, I believe that social presence is an element in online social interaction that could have led to it. Social presence was considered an important element in online interaction because it moved the teachers to actively interact with each other and me.

Social presence is associated with learner satisfaction to support collaborative learning in a blended learning environment, especially in the online section (Gunawardena & Zittle, 1997; Lowenthal, 2010; Richardson & Swan, 2003; So & Brush, 2008; Tu & McIsaac, 2002). Three definitions of social presence are given: (1) the degree of salience (that is, the quality or state of being there) between two interlocutors using a communication medium (Short, Williams, & Christie, 1976); (2) a measure of the feeling of community a learner experiences in an online environment (Tu & McIsaac, 2002); and (3) a student's sense of being a part of the online course and being able to interact with other students and the instructor (Picciano, 2002).

The three definitions have indicated a shift of meaning or emphasis in social presence from a communication medium to interpersonal interaction. Within such process, people exchange information, feelings, and meaning through verbal and non-verbal messages.

Facebook provides communication medium features that promote social presence, such as emotional icons (emoticons) to represent personal contact, as in face-to-face conversation. Facebook also provides space to post comments to a particular person and to post pictures. In the online section of the blended learning course, teacher participants employed the means available to them on Facebook to give support. They used texts to deliver information and negotiate meaning, and emoticons to create a feeling of presence similar to face-to-face experiences.

The research finding indicates that teacher participants endeavoured to create a community of online learning by using emoticons and providing interactive responses to show intimacy and the immediacy of verbal behaviour. Communication media in Facebook allowed the teacher participants to show social presence, which stimulated social interaction. In turn, social interaction can lead to collaboration in learning and contributes to the way learning is sustained in an online environment. Figure 16 below describes the role of social presence in sustaining online learning.



Figure 16. *The role of social presence to sustain online learning.*

Picciano (2002) claimed that “interaction may indicate presence but it is also possible for a student to interact by posting a message ...while not necessarily feeling that she or he is a part of a group or a class” (p. 22). Social interaction resulting from social presence is preferred because interaction without the sense of social presence might not be sustainable and might not contribute to collaboration.

In their study of social presence, Gunawardena and Zittle (1997) found that learners with “a higher sense of social presence enhanced their socio-emotional experience by using emoticons to express missing nonverbal cues in written form” (p. 23). This claim is consistent with the findings of the present research. For example, P1, P3, and P5 used emoticons to express emotion. P2, P3 and P5 used vocatives such as “friends,” “brothers” “sisters” to greet their peers.

Participants also replied to their colleagues' comments and provided personal advice and encouragement. All these responses indicated a high social presence amongst the participants.

7.8. Theme 7: Social Constructivist Perspectives on the Blended Learning Course

This section discusses the social constructivist learning practices that were evidence in the blended learning course in this research. As I discussed in the Conceptual Framework chapter, learning occurs on two levels according to sociocultural theories – starting at the social plane and then going on to the individual plane. This is consistent with Vygotsky's sociocultural approach to mediated action, holding that mental functioning in an individual derives from social life (Wertsch, 1991, 2008) or the social plane. As the notion of “social” comprises a wide range of phenomena (Au, 1998), the broad scope of a “social plane” in the blended learning course includes the historical changes in language policy and the education system, the prior English language learning experience of the teacher participants, the communal and shared perspective on teachers and learners, social interaction with peers, students, and the learning facilitator, and the social construction of perspectives on using English in the classroom.

A sociocultural approach views changes in motivation and confidence as derived from tool-mediated actions. To understand the many aspects of mental functioning, such as changes in motivation and confidence, it is important to know their origins and the transition process. The mediated activities in the blended learning environment originated from the school's policy to implement the use of English in the classroom.

On the social plane, the mediated action was the teacher participants' interaction with the policy, school principals, their peers, tools, and students in the school context as well as in the blended learning environment. Thus this social interaction was internalised at the individual level. This internalisation process involved meaning-making and knowledge construction, and stimulated the teachers' desire to improve their English competence on the individual plane. According to the a socio-cultural perspective, changes in the teachers' motivation

and confidence originated from their interaction on the social plane, the interaction then being internalised on the individual plane.

Changes in the teacher participants' motivation and confidence occurred at the same time. This is consistent with the sociocultural perspective that multiple forces of development may occur simultaneously (Wertsch, 1991). Motivation and confidence were interrelated, interacted with one another, and created the dynamics of change and improvement.

Social, cultural, historical, and natural factors played important roles in the changes in motivation and confidence. For example, the teacher participants had prior English language learning experience but with an emphasis on grammatical knowledge. Since their previous learning need was to pass an examination on grammatical knowledge, they focused on this. The success of their learning was measured by grammar tests instead of speaking or using the grammatical knowledge for interaction. This prior learning experience was set by the environment at that time.

The teachers brought this prior learning experience into the blended learning environment but at the same time also came with a different learning need – to use English for content teaching. This particular need influenced their thinking and perspectives and was powerful enough to change the emphasis in the English language learning. As adults and professional learners, they realised that the point of learning English was to enable them to use it for interaction instead of to pass an examination.

Culture and history are central in socio-cultural perspectives on learning (Cole & Engeström, 2007; Donato & McCormick, 1994; Wertsch, 2008; Wertsch et al., 1995) as well as for the teacher participants. Culture is accumulated over the life history of the group of teachers and therefore their learning history and experience are important elements to better understand their current behaviour. The teacher participants' behaviour in the classroom was influenced by their social, cultural, and historical values. An example can be seen in the expectations in the teacher-student roles, as described in the Findings chapter. In their learning experience, the students' role was mostly to listen to the teacher and to answer the teacher's questions but with little emphasis on asking questions. Teachers were people to whom respect was shown by listening to them. This cultural aspect was still reflected in their classrooms.

Learning involves the emotional dimension of an individual (Garneau & Pepin, 2014). Emotion emerges as subjective, biological, purposive, and social phenomena (Reeve, 2009). It plays a very important role in adult learning because it influences the meaning-making process (Dirkx, 2006) and can either impede or motivate learning (Dirkx, 2001, 2006).

In the blended learning course, teacher participants were exposed to information through interaction with school management, students, their peers, and other factors in the blended learning context. Teacher participants processed the information within themselves and this information processing involved emotion. For example, when teachers felt that they wanted to help their students to learn English, it was emotion that stimulated action. I believe that the emotion that emerged in individual participants served as motivation to learn and use English in the classroom. It was emotion that moved teacher participants to act, for example by asking for and providing feedback to their peers, and encouraging them and their students to use English. The transformation of external to internal motivation and the development of the teachers' confidence also involved emotion that grew from the social interaction.

As I reported in the Findings chapter, interaction among teachers from the same group occurred more frequently than between groups. Even though there was a communal cultural value (Indonesian culture) shared among the three groups, each appeared to be influenced by three different ethnic cultures: Balinese, Sundanese, and Jakarta. Online interaction on social media sites was culturally laden and closely associated with the cultural system of the three groups of teachers. I believe that strong social ties (Choi, Chu, & Kim, 2012), social distance (Schumann, 1976), and cultural safety (Garneau & Pepin, 2014) all played important roles in this context.

Social ties appeared to be stronger among participants in the same group. According to Schumann (1976), social distance occurs when there is incongruence among different groups, and this has a negative effect on second language acquisition. Cultural safety refers to a condition in which participants are not afraid of making mistakes before those with whom they are socially close. Thus, the nature of social relationship and interaction on social networking (Facebook) in the blended learning course appeared to reflect the individuals' social and cultural orientations.

7.9. The sustainability of blended learning approaches within Indonesian education

This research fills an important gap in our knowledge of the potential of social media and blended learning to solve a ‘real world’ issue – the use of English for content teaching in Indonesian vocational high schools. Even though the intervention in this research was a small case study, it has the potential to have an impact on the broader Indonesian teacher professional development context. However, a blended learning program such as was designed for this research needs to be leveraged so that it could be made available more widely across Indonesian teacher professional development. To extend this small-scale personal research into a national agenda in Indonesia, the Ministry of Education and Culture, through the Directorate General of Teachers and Education Personnel, and in collaboration with teacher training centres need to design a generic approach to teacher professional development blended learning courses. This section discusses the affordances and constraints of blended learning professional development courses and provides ideas for their implementation across the broader Indonesian context.

Internet access

Internet access is available in more than 90% of Indonesia (Rahmat, 2014) although some remote areas have limited bandwidth. Around 60% of the vocational schools are connected to the internet (Pemerintah Kabupaten Mandailing Natal, 2014). As reported in Chapter 2, the internet speed in Indonesia is 4.1 Mbps and 16.72% of the total population in Indonesia are internet users (Internet Lives Stats, 2014). Interestingly, 85% of users access the internet through cellular phones, and the most accessed sites are social media (Berliyanto, 2015). Therefore, given current internet access conditions, it would easily be possible for teachers to access social media.

Nevertheless, in spite of easy internet access, some constraints to using social media in teacher professional development exist. These include the fact that internet access is not yet ubiquitous in schools. Vocational schools in remote parts of the country still do not have easy access to computing infrastructure, yet are expected to teach content courses in English.

Schools, local government, and or the relevant directorate under the Ministry of Education and Culture need to pay attention to these constraints and affordances. To facilitate the provision of teacher professional development blended learning courses, schools need to have reliable internet access. Alternatively, teachers could be provided with internet bandwidth during their participation in a blended learning course so that they can access the internet through their cellular phones.

Human resources

According to the Direktorat Jenderal Pendidikan Dasar dan Menengah (2015), the number of Indonesian vocational high school teachers in the academic year 2015/2016 is 289,049, and they are distributed in 13,167 vocational schools across thirty-three provinces on different islands. The Directorate of Teachers and Education Personnel has a database of teacher results from the competency testing that was conducted in 2014 and 2015. These tests measured content and pedagogical knowledge. Additionally, Indonesia has seven teacher training centres, which have the capacity to provide blended learning professional development courses for vocational school teachers. Each centre has trainers for English language and information and communication technology (ICT). This background knowledge of teacher competencies and the availability of knowledgeable trainers can be considered as assets in the wider implementation of blended learning courses. However, in spite of the available teacher training centres and personnel, there remains a shortage of trained facilitators to design and run the blended learning courses, due to the large number of teachers who will need to be trained.

Teacher training centres, in collaboration with the Directorate of Teachers and Education Personnel will therefore need to increase the number of facilitators, and do so quickly. One idea would be to identify high-scoring teachers from the competencies database and upskill them to be mentors for their peers. The selected teachers will then need to be coached in the skills of peer mentoring, but they do already possess satisfactory language and ICT knowledge.

Training needs

The results of the teacher competency testing can also be used to identify and prioritize the skills in which teachers need the greatest intervention and improvement (Direktorat Jenderal Guru dan Tenaga Kependidikan, 2015). Reflecting on the needs of teachers who participated in the present research, it is likely that Indonesian teachers, in general, need to develop their English-medium content teaching skills and technological pedagogical content knowledge (TPACK). Therefore, teacher training centres will need to develop learning resources to meet the needs. Beglau et al. (2011) argue that providing technology tools to teachers does not mean that they will be able to use them for learning purposes. Teachers need explicit training on how to integrate technology into classroom instruction. As technology continues to change at a rapid pace, it is also necessary to select the technological tools, which support the intended learning outcomes.

A proposed implementation plan

The Ministry of Education and Culture needs to consider how blended learning courses can be implemented within the short term, medium term, and long term. For the purposes of this discussion, short-term is defined as 1-3 years; medium term would be 3-5 years; and long term would be 5-10 years.

A short-term plan would include the development of learning resources and the improvement of computing infrastructure at schools. In addition, a key goal in the short-term would be the up-skilling and extending of coaching capacity as has been described above. There is a critical need in the immediate term for more, and better-trained facilitators.

In the short and medium term, school principals need to understand the role and importance of blended learning course for teacher professional development. Given the huge number of schools, such understanding will take time to be completed. School principals will need to support teachers as they participate in professional development blended learning courses by moderating their teaching loads.

In the longer term, participation in blended learning professional development courses should become mandatory for all teachers as part of their initial teacher training programmes. At this level, teachers who have participated

in the coaching programs will play an important role as blended learning course mentors.

The design of the blended learning course

Lessons learned from this research include the importance of authentic content and appropriate topics for class discussion, technology-mediated social interaction, and collaboration as key elements in course design. In addition, it is important for course designers to consider how to establish productive online social networking relationships between facilitators, mentors, and teacher participants. Good online relationships can facilitate and support effective learning environments in blended learning spaces.

Program evaluation

Evaluation is an essential component of any professional development program (Brinkerhoff, Brethower, Nowakowski, & Hluchyj, 2012). As blended learning professional development is made available across Indonesia, robust evaluation must occur throughout the entire span of the short-term, medium-term, and long-term implementation. Such evaluation would need to consider the training needs, learning outcomes, course design, course implementation, and consideration of immediate and long-term effects on teaching. The teacher training centres and blended learning course designers would need to develop indicators of success for each activity within the program. In short, carefully constructed program evaluation would need to determine which aspects of the training were most effective and which needed improvement (Metz, 2007). Such evaluation should include on-going formative and summative data collection and reporting measures.

7.10. Summary

This chapter has discussed seven themes that emerged from the findings of the research. Theme 1 explains three forms of mediation that occurred: social mediation, self-mediation, and artefact mediation. Within the social mediation framework, teacher participants interacted with the learning facilitator as well as with their peers, and their first language was used when necessary to negotiate meaning. Within the self-mediation framework, teacher participants undertook

self-reflection and self-directed speech that mediated their English language learning. Finally, within the framework of artefact mediation, learning was mediated by interaction with tasks and ICT tools.

Theme 2 explains two factors that made collaboration in the blended learning course possible: the contexts of the teacher participants and the design of the blended learning course. Theme 3 deals with factors that contributed to increased confidence. Theme 4 explains how external motivation was transformed into internal motivation. Theme 5 shows how teacher participants developed their PCK in the English-medium content teaching environment. Theme 6 comprises two elements, change of behaviour and social presence, that contributed to sustain the English language learning of teacher participants in the blended learning course. Theme 7 explicates the socio-cultural perspectives of the blended learning course and illustrates how the teachers' development originated from their social interaction.

Finally, the concluding section discusses an overall plan for leveraging this small-scale teacher professional development blended learning course to the broader context of Indonesian education.

Chapter Eight – Conclusion, Implications, and Recommendations

8.1. Introduction

In this final chapter, I present an overall summary of the research findings, implications based on social constructivist learning theories, the limitations and implications, and some recommendations that emerged from the research. Recommendations are included for future research, for policy makers (the Ministry of Education and Culture of the Republic of Indonesia, and for the teacher training centre where I work as a trainer.

8.2. Summary of the Findings

A blended learning approach was effective to enhance Indonesian teachers' ability, motivation, and confidence in an English-Medium content teaching environment. This statement is supported by the research findings as described within five categories. The first consisted of factors in the blended learning course that contributed to enhancing the teachers' English language learning, including peer interaction and collaboration, reflective activities, and teachers' perspectives on the blended learning course. Peer interaction and collaboration occurred during face-to-face and online interaction. Teacher participants interacted and worked together in developing their lesson plans. They showed drafts of their lesson plans and learning materials to their peers and asked for corrective feedback. They practised delivering the learning content to their peers in micro-teaching sessions, and their colleagues provided comments. They also shared their classroom experiences and feelings with their peers, either face-to-face or in online interaction. They provided support and encouragement to their peers. Even though the level of participation varied from one teacher to another, all were engaged in the interaction and collaboration.

Teacher participants also undertook reflective practices by writing journals, comparing their own teaching practices using the Indonesian language and English as the medium of instruction in the classroom, and comparing their own teaching practices with those of their peers. While engaged in this process,

teacher participants rethought and made meaning from what they had done. Their practice contributed to the learning process.

Practices that indicated self-regulated learning were also undertaken by teacher participants. Initiating a discussion by raising a new topic was an example of self-regulated learning. I perceived that from the participants' perspective, this type of practice indicated a sense of belonging. They took responsibility and took the initiative. Thus self-regulated learning practices also contributed to adding meaning to their learning process.

The second finding was the increase in confidence, influenced by positive student and peer feedback, and the changes in teachers' perspectives on English language learning.

The third finding noted the perceived changes of integrative and instrumental motivation. Teacher participants began the blended learning course with varying levels of integrative and instrumental motivation and some even with a lack of motivation or none at all (amotivation) to learn English. However, their social interaction in the blended learning course influenced their perspectives and beliefs. For example, initially teachers said they started the blended learning course because of school requirements. Subsequently, interaction with their peers, with the learning facilitator, and with students was internalised and meaning-making and knowledge construction occurred during that internalisation process. Internalisation led teachers to change their perspectives and goals. They needed to learn English to improve their English language communication skills and to enable them to help students with their English. At the end of the blended learning course, participants lacking motivation had changed and had become more motivated. I believe that the transformation of instrumental into integrative motivation occurred here. This motivational transformation occurred because of their changed perspectives and goals.

The fourth finding relates to the effect of participation in the blended learning course on teachers' gradually expanding use of English for content teaching and on participants' teaching strategies (PCK development), which made use of social networking sites for teaching interaction with students.

The fifth finding reflects the perspectives of students in School 3 on their teachers' use of English. The students were supportive of their teachers.

All these positive changes indicated that online interaction worked well with face-to-face tutorials. This is consistent with the idea of blending the two modes of interaction in order to maximize the benefits of the two approaches. Teacher participants used face-to-face tutorials for micro-teaching as well as for oral communication practice. These two practices could not easily be conducted in an online environment and this was one of the reasons to blend the two modes of interaction. The time for face-to-face tutorials was reduced and replaced by online interaction. Teacher participants used online interaction for sharing experiences, requesting and providing feedback on their colleagues' lesson plans, and for online discussion and social interaction. English language learning was sustained through the online interaction, which was an element of the blended learning environment.

Careful instructional design played an important role in the blended learning course, particularly in the online section. The design included understanding the contextual factors of the teacher participants, such as their problems, needs, perceptions, and the infrastructure available at their schools. This understanding was obtained after I visited the school and interviewed the teachers. A bottom-up approach was adopted in designing the syllabus to ensure that the learning content met the teachers' needs. The instructional design also included considering authentic content and social interaction, which led to online learning collaboration.

8.3. Implications of the Research

This research has sought to understand the learning experiences and thinking of the teacher participants in a blended learning environment from the perspectives afforded by social constructivist theory, adult learning theory, and an effective blended learning approach.

In the blended learning course, participants were challenged with real life problems related to their social role. The teachers discussed various topics, interacted and collaborated with their peers by providing feedback both in face-to-face and online modes, and English was used in that interaction. Teachers also interacted with their students in the classroom when they practised their English for content teaching. This teacher participation reflected the situated learning

theory, which argues that learning is legitimate peripheral participation (Lave & Wenger, 1991).

According to social constructivist theories, such interaction leads to the acquisition and modification of meaning and knowledge and the acquisition of new ways of thinking and problem solving. The acquisition process involves appropriation and internalisation and connects newly gained information with existing knowledge to form new understanding. This is consistent with the research finding that teachers' interaction and collaboration contributed to their English language learning. Through interaction and collaboration, teachers negotiated meaning and co-constructed knowledge, such as in lesson plan development and in the implementation of English-medium content teaching.

From an adult learning perspective, knowledge co-construction is more likely to occur amongst adult learners. Teacher participants brought their prior experiences, including English language learning and teaching experiences, to the blended learning course and knew what they needed to learn and why. They joined the blended learning course because they were challenged to use English for content teaching. Therefore, they practised English communication with peers and valued constructive feedback more. Teachers made meaning from their social interaction in English and co-constructed knowledge.

From the perspective of an effective blended learning approach, the course for teacher professional development in this research responded to and was situated in the teaching needs of teachers. It was an authentic experience and became a part of their daily practice. It was situated and authentic because the face-to-face training course was undertaken in the teachers' schools, was part of their everyday teaching practice, and the content was related to their everyday teaching needs.

Teacher participants did not leave their teaching jobs to attend the training course and the online section of the blended learning course connected teachers from different schools for learning interaction and collaboration. Since teacher participants were familiar with the use of Facebook for social interaction, its use provided positive results for teachers' learning.

Peer interaction and collaboration, including the technology-mediated interaction which was purposefully designed in the blended learning course, facilitated substantial changes in teachers' thinking about learning and using

English for content teaching. The course involved reconciling the newly-learned English-medium content teaching knowledge with teachers' usual teaching practices. Teachers discussed their English-medium content teaching experiences with peers as well as with the facilitator either face-to-face or online. This part of discussion occurred in a less formal environment and teachers also brought their experiences into a formal discussion environment, such as during the face-to-face section of the blended learning course.

The course involved individual and collaborative reflection. Individual reflection was undertaken through writing reflective journals and participants also shared their reflections with their peers in the online interaction. This shared individual reflection was commented on and discussed by peers and the discussion led to collaborative reflection.

The five quality principles of a blended learning course – learning effectiveness, learner satisfaction, teacher satisfaction, access and flexibility, and cost effectiveness – were reflected in the course. Learning effectiveness referred to the way the course helped teachers learn. The increased ability, motivation, and confidence in English-medium content teaching were evidence of this.

Learner satisfaction, which in this research context referred to the satisfaction of the teachers, was reflected in their excitement with their experience in the blended learning environment. Teacher satisfaction, which in this research context referred to the facilitator's excitement, was reflected in the enhanced interaction with teacher participants, increased teachers' engagement in discussion, and the flexibility of the teaching and learning environment.

Access and flexibility were reflected in the easy access of teacher participants to communication with the facilitator and peers through Facebook, Edmodo, and email from anywhere and at any time.

The blended learning course was cost-effective as teachers did not travel much and did not require accommodation, which reduced costs significantly.

The effectiveness of the blended learning course in this research entails the theoretical implication that a blended learning approach has the potential to provide effective teacher professional development if social interaction is carefully designed and learning material and tasks are appropriately selected to meet the needs of the teachers. Social networking has the potential to be adopted and appropriated as the learning interaction forum when the training course is

offered in a CMC environment. Other researchers, educators and policy makers may learn from the lessons gained from this research and apply them according to their own context of interest.

8.4. Potential Changes and Development from the Blended Learning Course

This section discusses the potential changes and development that serve as a reflection on the research and recommendations for school management.

8.3.1. Revisiting the Design of the Blended Learning Course

It is important to revisit, reflect on, and revise the design of the blended learning course. For a few of the teachers, there was a disparity between the level of their language skills at the beginning and the expected result – the ability to use English for content teaching. Thus, the four-month duration of the blended learning course was too brief to address the shortfall. Logically, if the four-month blended learning course produced some progress in motivation, confidence, and the amount of English used, a blended learning course for a longer period could deliver a better result. Language learning is a process that takes time, but maintaining motivation over a longer period of time needs to be considered.

In addition to time duration, other dimensions of the blended learning course need to be improved. For example, participation in online learning interaction and the frequency of teaching practice should be increased. Special terminology in vocational subjects must be enriched. All these proposals are consistent with the suggestions made by the participants during the interview sessions. This idea shows that it is necessary to redesign the blended learning course, to reconsider a range of possibilities, strategies, techniques, and tools for a better course in the future.

A test to select participants with relatively similar entry levels of English language communication skills might be required to avoid the learning disparity among teacher participants. A more thorough training need assessment might be necessary to better design the course. More appropriate ICT tools should be selected to facilitate the learning process and familiarization with the tools might be necessary prior to the content learning.

8.3.2. Distribution of Responsibilities

School management should consider distributing responsibilities to run its programmes. The term “distribution of responsibilities” in this research refers to the delegating to others of tasks other than teaching. Some teacher participants could not maximally participate in the blended learning activity system because they were also assigned other tasks by school management, leading to tension between teacher participants and school management. I perceived that there was a lack of commitment from school management in this case.

On the one hand, the teachers were expected to improve their English language proficiency and were therefore expected to participate in the blended learning course. On the other hand, they were also assigned other tasks that prevented them from attending the face-to-face meetings. I understand that various tasks at schools need to be done, but teachers should not be assigned two different tasks at the same time. Full commitment and consistency are needed to complete a task in an activity system. Well-organized time and human resource management are crucial to keep school programmes running well.

Instead of giving many tasks and responsibilities to one teacher to be performed at the same time, tasks and responsibilities should be distributed among many teachers. Consequently, teachers who are participating in a professional development course will not be burdened by additional tasks. At the same time, other teachers will be trained to assume more responsible in handling additional tasks. I consider that the distribution of responsibilities leads to and nurtures distributed leadership skills. This approach to distributing forms of leadership plays a very important role in school improvement (Bolden, 2011; Harris, 2004; OECD, 2012; Youngs, 2012).

8.3.3. ICT-Related Training for Teachers

As reported in the Findings chapter, teacher participants needed ICT-related training courses to enable them to integrate ICT tools into their teaching practices. Some teachers reported that their experience in the blended learning course inspired them to adopt the same approach with their students, but others did not feel confident to do so. They reported that they needed more guidance in the implementation of the blended learning approach in their teaching practice.

I believe these teachers needed a holistic training course rather than just an ICT training course. To enable teachers to integrate technology into pedagogy, teachers need technological as well as pedagogical content knowledge (Koehler, Mishra, & Yahya, 2007; Mishra & Koehler, 2006, 2008) that enables them to integrate content, pedagogy, and technology in their teaching practices. Even though this point goes beyond the scope of the research, enhancing teachers' knowledge and skills is always important to keep them updated with technological advances.

8.4. Limitations of the Research

In spite of the positive changes reported in the Findings chapter, this research has a number of limitations that need to be acknowledged and discussed. In particular, issues regarding data sources and their validity and the conduct of the blended learning course should be mentioned.

First, data for this research were mainly obtained from the teacher participants and my own observation. I consider this a limitation of the research. As Drysdale et al. (2013) suggested, a researcher needs to pay attention to all stakeholders to better understand the blended learning ecosystem. Additional perspectives, such as from school management, might have been important because the school management team had more time to interact more intensively with participants over a longer period. They also observed the behaviour of the teacher participants closely. Adding perspectives from the school management team might have enriched the findings. I did not anticipate the relevance of obtaining perspectives from school management in advance.

Secondly, one limitation of the research relates to the conduct of the blended learning course. The scope of the research was limited. For example, teacher and school participants did not represent all Indonesian vocational high schools because of the differing conditions found in the school environment. As mentioned in the Context of the Research in chapter, schools and teachers participating in this research were those that met the requirement outlined in Law 20/2000 (President of Republic of Indonesia, 2003) concerning schools projected to meet international standards.

Moreover, the number of teacher participants in this research is relatively small and the findings, therefore, cannot be generalized. However, the findings

were consistent with what has been reported elsewhere in the literature. Further studies should involve a larger number of teachers to be able to generalize the results.

Certain aspects were also absent in the blended learning environment such as an assessment of progress in English language learning, assessment of the effect of the participants' use of English on student learning, and disincentives and rewards for the teachers participating in the blended learning course. The English language proficiency of teacher participants was not assessed by using standardized tests. Instead, the measurement of change was undertaken through the teaching practice in which English was used as a medium of instruction.

Finally, limited access to technology for some teacher participants constrained their active participation. As some teachers did not have access to the internet at home, they participated in online interaction only when they had free time at school. As technology-mediated interaction was a key factor in the blended learning course, unlimited access to technology should have been considered in the design of the blended learning course.

8.5. Recommendations

Discussion of the research findings provides some recommendations including for future research, for policy makers (Ministry of Education and Culture), and for teacher training centres.

8.5.1. Recommendations for Future Research

To obtain more comprehensive findings, similar training courses should be offered with different conditions, such as applying assessments, extending the duration of the blended learning course, including more teacher participants and a system of rewards and disincentives. It is also important to find someone else to act as the learning facilitator in the blended learning course so that the researcher can be more impartial. Perspectives from school principals and management team members of the school as well as from students would add value to the research as they would provide different views. Observation conducted prior to the blended learning course would provide more comprehensive information on change as a result of participation in the course.

8.5.2. Recommendations for Teacher Training Centres

Considering the effectiveness of the blended learning approach as shown in this research, it is recommended that this approach for teacher training courses be adopted. It is effective because the online dimension of the blended learning approach helps teachers interact and remain connected. Teachers from different schools can share their best practices while practising their English for communication. Thus, a learning community for teachers can be created.

This approach is also cost effective because it saves the transportation and accommodation costs necessary for many teachers to come to a teacher-training centre. To attend an English-language learning programme, teachers do not need to leave their teaching jobs for a long period. To achieve better results in the training, the blended learning course needs to be carefully designed. Meaningful interaction has to be created to support knowledge co-construction.

Potential problems need to be considered such as the large number of Indonesian teachers who need to attend the blended learning course. There will be a lack of facilitators to facilitate the course. Capacity building for teachers can be a solution by utilizing technology, coaching, and community of learning (Beglau et al., 2011). It is a model of teacher professional development, which emphasizes teachers learning from peers, in which teachers act as mentors or models by utilizing the potential of technology. Mentors and mentees can also interact with facilitators from the teacher training centre through the use of social media.

8.5.3. Recommendations for Teacher Participants and Schools

Sixteen teacher participants from three different schools showed changed motivation and language gain through participation in the research. This achievement resulted from their active learning participation and interaction in both face-to-face and online modes. Knowing that learning interaction through the use of social networking is helpful, it is recommended that teacher participants maintain their interaction on the social networking site, share their best practices, provide feedback to their peers and, importantly, sustain their English language learning.

The management teams from the three schools showed their support for their teachers to participate in the blended learning programme. The schools need to maintain that support and encourage the teachers to sustain the learning

process. Teachers are assets for the schools to advance their accreditation and the schools should maintain and protect their assets.

8.6. Summary

In this chapter, the summary of the findings, and the limitations and implications of the research have been discussed. The research findings have shown the positive effect of teacher participation in the blended learning course on their English language proficiency, motivation and confidence to use English as a medium of instruction. The blended learning approach was effective in facilitating the English language learning of the teacher participants. Knowledge co-construction occurred through social interaction in the blended learning activity system. Understanding that the research has limitations and implications as described earlier, I have provided some recommendations for future research, for policy makers, and for the teacher participants and their schools. Assuming very careful instructional design, a blended learning approach is therefore recommended for the future conduct of training courses for Indonesian teachers in vocational schools.

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Appendices

Appendix A. Questionnaire Survey

Pre and Post Intervention Survey

The questions below are **designed** to **obtain** information about your current confidence, motivation, and your teaching practices **in relation to the use of English in the classroom**. You **are invited to** answer the same questions after your participation in this study. Your answers will give you and me information how much you benefit from your participation. All answers will be kept confidential.

Name:

School:

Date:

1. My confidence level when using English in daily conversation with friends is ...
 1. Highly unsure
 2. Unsure
 3. A little bit unsure
 4. A little bit confident
 5. Confident
 6. Highly confident

2. My confidence level when using English in daily **informal** conversation with my students outside the classroom is ...
 1. Highly unsure
 2. Unsure
 3. A little bit unsure
 4. A little bit confident
 5. Confident
 6. Highly confident

3. My confidence level when using English for instruction (**such as greetings, managing question and answer, providing feedback, and closing**) in the classroom now is...
 1. Highly unsure
 2. Unsure
 3. A little bit unsure
 4. A little bit confident
 5. Confident
 6. Highly confident

4. My confidence level when using English for content teaching (**explaining the content in English**) in the classroom now is...
 1. Highly unsure
 2. Unsure
 3. A little bit unsure
 4. A little bit confident
 5. Confident
 6. Highly confident

5. I learn English because I find English learning is interesting.
 1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree

6. I learn English because it will make me a more knowledgeable person.
 1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree

7. I learn English to improve my chances for a better career (e.g. to be a principal).
 1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree

8. I learn English to improve my chances to go overseas (e.g. field trip, attending seminar, short training course or further study).
 1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree

9. I learn English because it will help me better understand English speaking people and their way of life.
 1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree

10. I learn English because it is an important part of the school programme.
1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree
11. I learn English to meet the requirement from the school / government.
1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree
12. There may be good reasons to learn English, but personally I don't see any.
1. Strongly disagree
 2. Disagree
 3. Agree
 4. Strongly agree
13. I developed my learning materials
1. in the Indonesian language only
 2. in both Indonesian and English (but dominantly in Indonesian)
 3. in both Indonesian and English (50-50)
 4. in both Indonesian and English (but dominantly in English)
 5. in English only
14. Each day, I have been using English orally for classroom instruction (**such as greetings, managing question and answer, providing feedback, and closing**) in about ... % of the time
15. Each day, I have been using English orally for content teaching (**explaining the content in English**) in about ... % of the time.

Appendix B. Template of Reflective Journal

TEACHER'S REFLECTIVE JOURNAL GUIDELINE

1. What new English language content did I learn today? How did I get it?

2. What pedagogical knowledge did I learn today?

3. What did I do to participate in the session today?

4. What was the significant /interesting thing happened today?

5. My motivation/investment level toward using English today was:

6. My confidence level towards using English today was:

7. Comments/Notes/ideas/thoughts came to my mind:

Appendix C. Observation Notes Template

Format of field notes

Teacher:

No. of students:

Date:	Time in:	Time out:	Venue:	Topic:
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Time	Notes	Comments

Appendix D. Interview Protocol

TEACHERS' INTERVIEW PROTOCOLS

Name of teacher : _____
Pseudonym : _____
Subject matter : _____
Date / Time : _____

1. What would you like to tell me about the blended learning course?
2. What do you think you have learned from the programme?
3. Motivation/investment:
 - A. On a scale of 1 to 4, how would you rate your motivation/investment towards using English in the classroom before participating in this study?
 - B. On a scale of 1 to 4, how would you rate your motivation/investment towards using English in the classroom after participating in this study?
 - C. What made the change?
4. Confidence
 - A. On a scale of 1 to 4, how would you rate your confidence in using English in the classroom before participating in this study?
 - B. On a scale of 1 to 4, how would you rate your confidence in using English in the classroom after participating in this study?
 - C. What made the change?
5. Tell me about your experience working online with your peers.
6. What suggestions would you like to give to make the course better for future implementation?
7. Are there any other issues / concerns about the course that you would like to discuss?

Prompts:

1. What do you mean by that?
2. Can you clarify that for me?
3. What would be an example of...?
4. Tell me more about...?
5. Why would that be so...?
6. How do you know...?

Scale 1 to 4 for the level of motivation/investment:

- 1 – Very Unmotivated
- 2 – Unmotivated
- 3 – Motivated
- 4 – Very motivated

Scale 1 to 4 for the level of confidence:

- 1 – Very Unconfident
- 2 – Unconfident
- 3 – Confident
- 4 – Very confident

Appendix E. *General description of participating schools in 2012-2013*

	School 1	School 2	School 3
Status	Public	Public	Private
Accreditation	A	A	A
Number of students	1.604	640	584
Number of teachers	201	71	46
Participating teachers	8	4	4

Appendix F. *Schedule at School 1*

Date	Place	Type of documents and data collected	How the data were collected	No. of teachers	Remarks
11 Sep 2012	Meeting room	Consent form	Sign and hand in it in person	22	
12 Sep 2012	Meeting room	Classroom started			
		Pre-survey questions collected	Completed written form, handed in in person	19	Three people did not come
	Class room	Observation (pre-intervention)	Taking notes	1	
13 Sep 2012	Class room	Observation (pre-intervention)	Taking notes	2	
6-8 Nov 2012	Meeting room	Reflective journal 1	Completed written form, handed in in person	15	Seven did not attend any more classes, but sent journals through friends
8-9 Jan 2013	Teacher's room	Post-survey Reflective journal 2	Completed written form, handed in in person	8 8	Total: 8
8 Jan 2013	Class room	Observation 1	Taking notes	3	Total 8
	Teacher's room	Interview 1	Recorded and transcribed	3	
9 Jan 2013	Class room	Observation 1	Taking notes	5	
	Teacher's room	Interview 1	Recorded and transcribed	5	
26 Feb 2013	Class room	Observation 2	Taking notes	4	One absent for another job from school principal
	Teacher's room	Interview 2	Recorded and transcribed	4	
27 Feb 2013	Class room	Observation 2	Taking notes	3	
	Teacher's room	Interview 2	Recorded and transcribed	3	

Appendix G. *Schedule at School 2*

Date	Place	Type of documents and data collected	How the data were collected	No. of teachers	Remarks
17 Sep 2012	Meeting room	Consent form	Sign and handed in in person	10	
19 Sep 2012	Meeting room	Classroom started Pre-survey questions collected	Completed written form, handed in in person	6	Four people did not come
21-22 Nov 2012	Meeting room	Reflective journal 1	Completed written form, handed in in person	4	Two did not attend further classes
25 Jan 2013	Teacher's room	Post-survey	Completed written form, handed in in person	2	
	Class room	Observation 1	Taking notes	2	
	Teacher's room	Interview 1	Recorded and transcribed	2	
31 Jan 2013	Class room	Observation 1	Taking notes	1	
	Teacher's room	Interview 1	Recorded and transcribed	1	
	Teacher's room	Post-survey	Completed written form, handed in in person	1	
7 Feb 2013	Class room	Observation 1	Taking notes	1	
	Teacher's room	Interview 1	Recorded and transcribed	1	
	Teacher's room	Post-survey	Completed written form, handed in in person	1	
	Teacher's room	Reflective journal 2	Completed written form, handed in in person	1	
					Total: 4

Appendix H. *Schedule at School 3*

Date	Place	Type of documents and data collected	How the data were collected	No. of teachers	Remarks
1 Nov 2012	Meeting room	Consent form	Sign and hand it in person	7	
5 Nov 2012	Meeting room	Classroom started Pre-survey questions collected	Completed written form, handed in in person	4	Three unsure but came to class
14 Dec 2012	Meeting room	Reflective journal 1	Completed written form, handed in in person	4	Total: 4
19 Feb 2013	Teacher's room	Post-survey	Completed written form, handed in in person	2	Total: 4
	Teacher's room	Reflective journal 2	Completed written form, handed in in person	1	
	Class	Observation 1	Taking notes	2	
	Teacher's room	Interview 1	Recorded and transcribed	2	
20 Feb 2013	Teacher's room	Post-survey	Completed written form, handed in in person	2	Total: 4
	Teacher's room	Reflective journal 2	Completed written form, handed in in person	1	
	Class	Observation 1	Taking notes	2	
	Teacher's room	Interview 1	Recorded and transcribed	2	
13 Mar 2013	Class room	Observation 2	Taking notes	3	Total: 4
	Teacher's room	Interview 2	Recorded and transcribed	3	
14 Mar 2013	Class	Observation 2	Taking notes	1	
	Teacher's room	Interview 2	Recorded and transcribed	1	

Appendix I. Memorandum of Ethical Approval

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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

MEMORANDUM

To: Mangasa Arintonang
cc: Dr E. Marcia Johnson
Carl Mika
From: Associate Professor Linda Mitchell
Chairperson, Research Ethics Committee
Date: 28 June 2012
Subject: Supervised Postgraduate Research – Application for Ethical Approval (EDU058/12)

Thank you for submitting the amendments to your application for ethical approval for the research project:

**Investigating blended learning to sustain professional English language
learning of Indonesian vocational high school teachers**

I am pleased to advise that your application has received ethical approval.

Please note that researchers are asked to consult with the Faculty's Research Ethics Committee in the first instance if any changes to the approved research design are proposed.

The Committee wishes you all the best with your research.

Linda Mitchell

Associate Professor Linda Mitchell
Chairperson
Faculty of Education Research Ethics Committee

Appendix J. *Outline of the course*

No	Content / materials	Hours	Objectives	Activities
1	English for classroom management	4	To familiarize teachers with English expressions normally used in the classroom	<ul style="list-style-type: none"> • Work in Pair: Reflecting and identifying classroom expressions (before during, and after class activities) that teachers commonly say in their first language and find the English expressions, and report their findings to class. • Practice the expressions and discussion. • Class discussion: identifying English language errors (grammatical rules, pronunciation, word choice) • Sharing experiences and ideas in online discussion
2	Stories / reading texts, games	6	To enhance reading comprehension skills, enrich English vocabulary and grammar, and practice speaking by having a discussion about the story.	<ul style="list-style-type: none"> • Pair works: discussing stories, making arguments, and reporting to class • Games (information gaps) • Class discussion: identifying English language errors (grammatical rules, pronunciation, word choice) • Online discussion: posting opinions on stories provided by the facilitator, and providing comments to peers
3	Problem-based learning	4	To provide teachers with an alternative idea about teaching strategy, discuss and compare it with their regular teaching practices, and to practise speaking.	<ul style="list-style-type: none"> • Class discussion: problem-based learning • Group works: discussing strategies for involving students in learning, designing problem-based learning activities • Class discussion: identifying English language errors

				(grammatical rules, pronunciation, word choice)
4	Developing lesson plans	4	To facilitate teachers with lesson plan development	<ul style="list-style-type: none"> • Individual task: developing lesson plans in English • Peer/group discussion: lesson plan development and reporting to for class discussion • Class discussion: identifying English language errors (grammatical rules, pronunciation, word choice) • Online discussion: posting lesson plan, and providing feedback on peers' lesson plans
5	Developing learning materials	6	To facilitate teachers with learning materials development	<ul style="list-style-type: none"> • Individual task: developing learning materials (ppt slides, tasks) in English • Peer/group discussion: learning material development and reporting to for class discussion • Class discussion: identifying English language errors (grammatical rules, pronunciation, word choice) • Online discussion: posting learning materials, and providing feedback on peers' learning materials
6	Micro-teaching / peer-teaching	8	To provide teachers with opportunities to practise using English with their peers before the real teaching in the classroom, and get corrective feedback from facilitator and peers.	<ul style="list-style-type: none"> • Individual task: Micro-teaching • Class to provide feedback • Class discussion: identifying English language errors (grammatical rules, pronunciation, word choice) • Online discussion: sharing teaching experiences and providing feedback

Appendix K. *The twenty-six nodes from five primary data sources*

No	Nodes	Sub Nodes	Description	Example
1	Collaborative learning in asynchronous interaction		Uploading the completed online tasks <ul style="list-style-type: none"> • 	uploaded a file. Matching Like phrases Metaphors-kemahyasa.docx uploaded a file. Matching Proverbs,.docx
			Social interaction as a medium of English learning <ul style="list-style-type: none"> • 	Hi guys, congratulation for 11 teachers of ... who have graduated from post graduate (S2) in ... including me too. haha. So the task force of the school is more solid now. Let's make our school better and don't forget to improve your English. thanks also for Pak Ari.
			Sharing newly learned terminologies from microteaching sessions	we are listening a micro-teaching presentation by ... its about welding and its equipment: welding hood with filtered lens, welder's cap, safety goggles, welding jacket, welding gloves leg cover, work boots
			Sharing newly learned expressions and thanking for the sharing	the lesson of class expressions today: have you heard about that? shall we continue? so far, do you have any question? that's the end of our class today, thank you... good to share experience, buthanks
			Sharing learning experience	Since last Tuesday until today, I come home at 4 pm, because there are some activities in my school, such as English learning

				<p>and meeting. It is tired but I like it :)</p> <p>It was tiring, but I believe you enjoyed it.</p>
			Sharing experience of English for classroom instructions	<p>FYI : I always remember and practice: ' take one and pass it on' in the classroom, and the student repeat it. Hope they also have a courage to speak in English, even just a word.</p> <p>I was applying my 'Bilingual Physics Class' for the first time in X MM-1, because before they were taught by the university student in practice. When I spoke in English, their first response was "Buiiikkkk!!!" hahaha.....</p>
			Sharing experience of doing microteaching	<p>I presented my material about multimeter in micro-teaching class today (it was a challenge for me), but I tried my best to make a good presentation, and thanks to all my friends who become my audience today, from now on I'm more confident to speak in English.</p>
			Sharing experience and asking for corrective feedback	<p>Today I learn about assembling and soldering component, to making a digital trainer. It looks simple and easy. I try to finish my job with the best and I'm quaitesatisfied with the result of my job. But it wasn't perfect enough for my instructor. He say to me that I must be more practise. but overall I had a good project...(please check my sentence, is there a mistake with my sentence..? and please give me the right one)</p>
			Sharing experience about using Edmodo for classroom interaction	<p>Learning activities in class is over now and we're waiting for the final report of this semester. Some of my students have to take remedial task and for the Multimedia Department I provide the information about the remedial on Edmodo. It's really help. Thanks for Mr. MangasaAritonang and Bro. ... for the information about Edmodo.</p>

			Responding to sharing and providing encouragement	Hi, You have done a good job, it is a good start, anytime Mr. George and Mrs. Charlotte visit our school you can substitute me as an interpreter.
			Responding to new topic brought by peers	good job, mate wkwkwk....It implies that you as a teacher may feel that you have been working very hard to teach your students, but your students may not learn anything from you. That's why, do not dominate your class with your lecture. Give your students time to critically think, individually, in pair, or in groups. Let them work under your supervision. Thanks a lot pak.
			Raising new issue related to teaching practice for discussion	Pak ... if I teach in English, the students found it difficult to respond in English. How to motivate? If I ask to students in English, I want them to respond in English, too.
			Providing encouragement not to worry about grammatical mistakes	Good start ibu, making any mistake when learning English is not a big sin. Ok Grammar is number two in speaking English as a foreign language learner. The more important thing is you are confident and you like to use English.
			Providing corrective feedback on grammatical mistakes	Just change the sentences into the past form to make it consistent, and look up again for the spelling. There are some incorrect spellings in your writing; assembling> assembling, quait> quite, satisfield> satisfied, practise > practice.
			Planning and organizing works / reminding • •	Good morning for all members of English for classroom instructions, please prepare your lesson plan you will teach in January 2013 and send to Pak Artonang. He will check it and give it feed back to you for a better performance in English. thanks

			Discussion and sharing ideas based on the given topic	In my opinion, there are positive and negative sides for boarding school, let me start from the positive side, the boarding school gives the children opportunity to be more independent, to learn more things from many people from different regions, to be more discipline, and to learn to how to socialize like what RanyKranchees says above. Next, the negative side, the boarding school is good for children to be more independent, but somehow, they still have to get the parent's attention, their parents should also control their children anytime, and the parents will not know what their children do, and will they be fine in boarding school, the parents won't know about it exactly.
			Contributing / Raising a topic to discuss	Any comment?
			Collaboration in creating learning portal on Edmodo	Just visit to edmodo.com and sign up as a teacher and then create a group by class or subject! and your virtual class had just begun.....! If you're able to "play" with FB, you have no problem with Edmodo. Thanks Pak Kemah, it looks easy, I'll try that. I'll try first and then if I find some problems I'll ask you.
			Asking for and providing feedback on grammatical correction	please check my sentences..... (^_^) I try to teach by using more English today at X grade, and they gave me very good responses. Surprisingly, they can understand all of my instructions and they tried to answer me in English too. I gave them one exercise in English, and they can

				<p>understand it with no translation. How happy I am ... hehehe.... good job, that's great.</p> <p>about your sentences above, just change word "try" and "can" into the past form to make your writing consistent. but so far, your English is very good.</p>
			Asking for and providing advice for the English translation of sentences or phrases	<p>Today I prepare the administration for industrial practise. The industrial practise will be start at January 2nd 2013 until April 27th 2013. All The Students of XI grade will be follow that programme.</p> <p>Which one on right sentence, Industry Work Practices or industrial practise for PraktikKerjaIndustri</p> <p>industrial apprentice</p> <p>you could also say industrial internship programme.</p>
			Asking for and giving feedback to classroom tasks design and language	<p>Long time no see, hehe... in a certain class, I'm continuing my 'English-Indonesian Class Project' and this far I got a good responses from the students. Then I tried to give them this exercises: (your comment please....., weather the words I used is correct or not ^^)</p> <p>1. A box with a 50 kg in mass, is moved by a force of 100 N. What is the acceleration experienced by the box?</p> <p>2. A statue with a 75 kg in mass, is pushed in two direction. From the left side, its pushed by two forces of 50 N and 100 N, and from the right side its moved by two other forces of 25 N and 75 N.</p> <p>a. To which direction does the statue move?</p> <p>b. What is the acceleration?</p> <p>Hi ..., I don't think you have any serious problem in your</p>

				<p>sentences. Keep doing the good job.</p> <p>really? thanks a lot. go ahead ya... hehehe...</p>
			Asking for and giving advice on lesson plan	<p>I need your comment about my lesson plan..thanks</p> <p>LESSON PLAN X SMTR 2.docx</p> <p>very good.</p> <p>my comment: just translate the Indonesian words on "the teaching-learning activity point IV" into English.</p>
			Asking for advice on the powerpoint slides for classroom use	<p>Hi all so long time I couldn't join in English for classroom. Today I prepare the slide for teach tomorrow but I'm not so confident with my sentences. Can you help me to check the sentences below ?</p> <p>BASIC COMPETENCIES</p> <p>After following this study, student must be able to:</p> <p>Operate the milling machine</p> <p>One of the others knowledge to operate the milling machine is the milling machine equipment. Before the students operate the milling machine, they must have knowledge about the milling machine equipment.</p>
2	Collaborative learning occurred in face-to-face mode		Sharing and comparing teaching practices	<p>And I compare the situations, and it make us eeee....to have a discussion, not just online but also in our daily conversation. (Interview)</p>
			Reminding peers about tasks	<p>Eee,,,So, ...such as "have you written your lesson plan in English?..oh..not yet...only..."so...it's aa..it's a....not just a conversation, it become....if I can say, a meaningful</p>

				conversation. (Interview)
			Receiving encouragements from peers •	e...I was motivated by my institution and also another teacher, especially Mr Puput (another participant) hehhe...(laughing) (I)
			Encouraging to use Edmodo for classroom interaction •	Ya..Mrs Puput (another participant) suggest me to apply Edmodo (Interview)
			Discussion and interaction for English learning and practices	I got a lot of new things ee...in the..in our meeting eee..before we go online, eerr... from the discussion, from the interaction between the participants.(Interview)
			Collaboration to prepare lesson plans •	Today we discussed with college students about lesson plan that they practice to teach tomorrow. I am so glad have partner to using English, because their English is very good. (Online Interaction) Because.eeee... we have time to discuss with friends about the preparations of our presentation in English, first. Hehehhe (laughing). (Interview)
3	Confidence changes		• 60% confidence improved from 0% at the beginning •	I can get 60% confidence from 0% when it begins. (Reflective Journal) •
			• Confidence increased •	14.50 T continued to “Trigonometric ratios in quadrant 4”. T gave one task to students, and asked another student to do it on the whiteboard. (Observation notes)
			• Increased confidence at the second observation •	OK, I feel ee...very motivated to using English in the classroom eer...because eee...my students become more active to using English, too in the classroom, they are also trying to give greeting and answer my classroom by using English. (Interview)

			<ul style="list-style-type: none"> • Quite confidence from the start • 	<p>12.00 T ends the class by thanking the students. Ss greets the T</p> <p>Overall comment: T seems to be very confident in using English in the classroom. (Observation notes)</p>
			<ul style="list-style-type: none"> • Start getting confident after a while • 	<p>8.40 T asks students to do a task to complete a blank ticket. The details of an itinerary are provided by the T and ss complete the form with the details from the T. The itinerary is from Jakarta – Singapore – Bangkok – and Tokyo. The tickets used for the practice are photocopied forms. Ss work individually but some students discuss with their peers.</p> <p>Up to this point, T looks better, not nervous anymore. (Observation notes)</p>
4	Confidence levels increased / obtained	Currently confident	<ul style="list-style-type: none"> • From unconfident to confident • 	<p>Before this course, I think...second level ya, unconfident, and then after the...after the course, I think...I'm confident. (Interview)</p>
			<ul style="list-style-type: none"> • From very unconfident to confident 	<p>Ya, ee....before... eee.....I was very unconfident, but now I am confident. (Interview)</p>
		Currently very confident	<ul style="list-style-type: none"> • From confident to very confident • 	<p>ee...before the study, I had confidence, but now after this programme, I am very confident. (Interview)</p>
			<ul style="list-style-type: none"> • From unconfident to very confident 	<p>Unconfident using English before I study with this course. But after the course, I feel eee....very, very confident. (Interview)</p>

5	Contradictions		A feeling of unfairness because not all teachers involved •	I think every teachers in YPHB must participate at the course like this. So we can have enjoying learning process by blended learning. (Interview)
			Current level of English is too far from expected •	Ee...Because I..ee..not enough knowledge about grammar in English..so..I.. I afraid ee..afraid to use English in class. (Interview) Overall comment: T is not confident in using English, perhaps due to limited English proficiency. (Observation notes)
			ICT training not available, leading to not prepared to ICT integration •	Until this time I do not use online learning with my students, but I will try to use that if I get may be...ee...like that...like workshop about how to use online learning for the classroom. (Interview)
			Learning English is less prioritized than postgraduate study •	Hi guys, congratulations to 11 teachers ... who have graduated from post graduate (S2) ... including me too. haha. So the task force of the school is more solid now. Let's make our school better and don't forget to improve your English. Thanks also for Pak Ari. (Online interaction)
			No or less commitment from school •	Using English in a class is a part of school programmebecause..because our school is RSBI, eee...but there is no..no.. feedback from the..from this programme, from the management, not yet..yes...from the school management. (Interview)
			Reflect from previous English learning experience that has no impact. •	According to my ...observation, ee..after..may be ...before this study, there was also eee..a previous study in English, like we practised English, and we...eee...we...put..we collected teachers to learn English, but after the course was finished, they didn't want to speak English any more. (Interview)
			Some students are unprepared for English instructions	If I speak only in English, may be my students ee...don't

			•	understand, a lot of my students still... their English is still not too good. (Interview)
			Teachers are not free from various tasks, thus affect their attendance and participation •	Hello friends, how are you? I love you. Sorry, so long time I can't join you in English for classroom. (Online interaction)
			Teachers' belief that Learning English has no benefit due to the absence of reward and punishment •	I think they..they..ee...they don't have enough motivation or spirits to... I think they...they...they..they think that English is no use. (Interview)
			Teaching purpose is to help students pass exams that is in Indonesian language, so I use Indonesian language	...because it is chemistry. And...we know that material that is tested in national exam is in Indonesian, so I have give...I have to give special term <i>istilah-istilah khusus</i> (special terminology) in Indonesian, not in English. (Interview) My...my goal is to pass the exam. To help students understand my explanation, so I use Indonesia. (Interview)
6	Engagement in learning activities	Activities that create motivating environment	Teaching practise and class discussion •	I participated in micro-teaching session, shared my experience in the class on the group (facebook), tried to use English in the conversation with friends. (Reflective journal)
			Sharing newly-learned lessons	The lesson of class expressions today: have you heard about that? shall we continue? so far, do you have any question? that's the end of our class today, thank you... good to share experience, buthanks (Online interaction)
			Sharing best practices contributes to self-improvement	And then after this study, after this study..eerrr..I got self-improvement...some kind of self-improvement, when..when we upload a response to assignment, or uploading our response to

				the exercises, we got a feedback from the other participants, we got their comments on our experience, so we shared our experience online, and they...and they gave their comments, and we saw others' experiences, it makes eer...a... compare with my experience, I compared what I have experience in my class and I see what they have experienced in their class. (Interview)
		Meaningful conversation online and in daily interaction at school	•	And I compared the situations, and it make us eeee....to have a discussion, not just online but also in our daily conversation. Eee,,,So, ...such as "have you written your lesson plan in English?...oh..not yet...only..."so...it's aa..it's a...not just a conversation, it become....if I can say, a meaningful conversation. (Interview)
		Doing online assignment and asking for feedback	•	WangariMaathai is a wonder woman who worked hard to bring her great ideas. She dedicated herself for people to get better live and open their minds about keeping our earth. How about us? (Online interaction)
		• Asking questions and sharing opinion		Hello everybody, I have a question. What is "membacagambarteknik" in English, help me please. Thanks for your comment "Reading Picture of Technic" "to read engineering drawing" may be, you should find the appropriate term in your field! Thanks for your comment, and I will follow your advice Ex me, in machine engineering field usually we use Engineering drawing or Engineering Graphic terms. (Online interaction)
		Activities that support	• Sharing social activities in English as a learning process	It was a great time going together for vacation with Mr. Ari, Yulis, Artaya, Hadi. Sri Astiti and Supardha. We went to Lovina beach, Lunch in WarunglesehanIkanBakar in

		confidence		TanjungAlam, hm..... It's very nice. Then go to Budhist Temple in Banjar and finally to Banjar Holy Hot Spring. yep, yesterday was a very nice vacation for us. we shared something each other and laughed together. hopefully we can have such vacation again later. (Online interaction)
			<ul style="list-style-type: none"> Sharing teaching experience in discussion 	Good afternoon friends, Please check my sentences: Today I presented about measuring Resistance using LCR meter, I made the work sheet bilingually ,the students quiet interested, they tried to answer the questions in English, some of them still didn't have a courage to speak in English, but I'm sure they understand it. (Well, it was a small progress, but we're moving forward (∩_∩)). (Online interaction)
		Evidence of self-directed learning	<ul style="list-style-type: none"> Searching technical terminology through the internet 	Use phrases, technical terminology. I got it by searching the internet and also reading some books. (Reflective journal)
7	Factors to improve motivation	External	<ul style="list-style-type: none"> Being observed leading to motivation 	ya, especially for me, especially for me..some teachers...ee...some teachers also told me that ee....you just prepare it more ..ee..than usual just for observe..observation.. (Interview)
			<ul style="list-style-type: none"> First experience leading to motivation 	ya, more ya, More motivation because eee..consider my first experience teaching in English, so I get experience, ee.. how ..how I use English in classroom, or how I can give the students something in the classroom, so, yes..... (Interview)
			<ul style="list-style-type: none"> Learning experience and social interaction leading to improved motivation 	ya..because in the programme, there is so many experience, so many lo...ee...knowledge, you gave me how to learn English, you gave me ee..how to teach ..ee..teach in the class by delivering English, because my English is now improved so...

				<p>of course I am very motivated. (Interview)</p> <p>Ee....because I observed ee.....someone ..or other teacher so are so good...so,eee...I am motivated. (Interview)</p>
		<ul style="list-style-type: none"> • New and fun learning atmosphere created and thus leading to motivation • 		<p>ok, my motivation is improved because teaching in English can create a new fun learning atmosphere, so my students enjoy the learning process, and I feel more confident in this presentation because I am getting used to using English in the classroom. (Interview)</p>
		<ul style="list-style-type: none"> • Online learning through friends' comments on Facebook leading to motivation • 		<p>I can see my friends using their good English, and I hope I can motivate myself. <i>jadi</i> ..(so) I can learn from my friends and comment in the group facebook. (Interview)</p>
		<ul style="list-style-type: none"> • Opportunity to study (group discussion) with friends both online and offline leading to motivation • 		<p>eee...I like English. Eee..so, I am always motivated using English in the classroom. and then, by this programme, my motivation is more increased because we can share together soon with the group. (Interview)</p>
		<ul style="list-style-type: none"> • Practices leading to increased motivation • 		<p>OK, thank you Mr Artonang, eee... Join this programme..eee....make me more practise using English in the classroom and and I feel my motivation increased. (Interview)</p>
		<ul style="list-style-type: none"> • School's policy to create English speaking atmosphere • 		<p>ee...because...ee...I think that English is eeee., I..I need, I need English more, so the students...because..ee..my school programmethat students have to learn English more, that English is important to them to...to..to learn (Interview)</p> <p>ee...I was motivated by the institution and ee...also my peer teaching to improve my ee... English, my English, and also to improve myself to open my horizon wider in...in English. (Interview)</p>
		<ul style="list-style-type: none"> • Students' positive response leading to motivation 		<p>Halloo friends.. nice to meet all of you in this room ^.^</p>

			•	<p>yesterday I tried to follow what mr.MangasaAritonang shared about greeting in English, some students look excited and try to greeting me in English too. (Online interaction)</p> <p>I tried to teach by using more English today at X grade, and they gave me very good responses. Surprisingly, they can understand all of my instructions and they tried to answer me in English too. I gave them one exercise in English, and they can understand it with no translation. How happy I am ... hehehe.... (Online interaction)</p>
			•	OK, I feel ee...very motivated to using English in the classroom eer...because eee...my students become more active to using English, too in the classroom, they are also trying to give greeting and answer my classroom by using English. (Interview)
			<ul style="list-style-type: none"> • The learning system in BL approach leading to motivation • 	I think..I ..I got eee...more knowledge by..by speaking English, and..and.. by attending this course, eee...which is blending..err..which is combining classical and online, I..I ..I become..eee....it opened my mind, ohh..I can do that, too. (Interview)
			<ul style="list-style-type: none"> • To be a model for students in English learning • 	After the programme, I think, I can rate it three, motivated, because ee...if we eer...speak English frequently, and we motivate the students, we also have highly motivated to speak English, because eee... if I learn English, my students will be motivated too. (Interview)
		Internal	<ul style="list-style-type: none"> • Awareness on the importance of English communication skills leading to motivation • 	because I realize in English...eee...that English is very important for us. Ok, We can get ee...more knowledge from English. So, the motivation may be...my motiv...my level of motivation may be in four, very motivated. (Interview)
			<ul style="list-style-type: none"> • Encouraging students to enjoy English learning is my motivation 	ee..The change, ya...the change..ya from in between to very motivated...because when I learned eee. using English

			•	ee...from this study, I found that the matter is not just about using the English, but when I interact with my students, I found that it's some kind of a way to open my students' mind about using English. It's not a matter of "this is because the school programme". It's not a matter of that. But ee...when we try to use English, ee...it is not as hard as they thought about English. And...and I want to show my students that using English in a Physics class is... give us more eerr...interesting, challenging experience. Give them a chance ee...and open their mind that when they go..eer may be on internet trying to get information from ee..English resources, they can do it. Ya..They can do it. It's not as hard as they thought. That's all. And this far, ..this far, they...they <i>apanamanya</i> (what is it called)? I can say that eee..they began to enjoy it. (Interview)
			• • Feeling that English communication skills is improving leading to motivation	... because I think my English now is better than the previous. (Interview) •
			• Improved confidence leading to motivation •	...because I feel more confident now, the teaching with English. (Interview)
			• It's not about policy, but the benefit of having English language skills •	But I keep ee...make them feel that..using English in the classroom is not just about RSBI or not, it's more like eee..how we practise our English. When we learn something, it is never useless. (Interview)
			• Willingness for self-improvement in English communication skills leading to motivation •	ee...I motivate by the institution and ee...also my peer teaching to improve my ee... English, my English, and also to improve myself to open my horizon wider in...in English. (Interview)
8	Factors leading to	Various factors	• Being able to help student in his English homework leading to confidence	Someday, I ee...tried to help my student to answer her homework, she has homework in English,

	increase confidence			from that I...I have more confidence to help them. (Interview)
		<ul style="list-style-type: none"> Being aware that it is a learning process, and that making grammatical mistakes is understandable leading to confidence 		ok.eerr..Related to this confidence, once when we had discussion online, eerrr..there's a comment. There's a comment... that "it's OK if we make some mistakes in grammar, in structure, or .. <i>apa</i> (what..) words, like word choice. It's OK if we make some mistakes because we...we..are still learning English as a foreign language. We are learning English as a foreign language. But...So, it doesn't matter if we make eee...some mistakes as long as we can understand each other. Heheheheh (laughing) (Interview)
		<ul style="list-style-type: none"> Being observed and micro-teaching leading to confidence 		Like...eee...like eee...my statement before, there is observation, and microteaching and then ee... <i>apa</i> (what) using English eee...in daily....eeee...every day, I think, hehehhe (laughing) (Interview)
		<ul style="list-style-type: none"> Better preparation and face-to-face tutorials leading to confidence 		Because eerr...before I teach in classroom, we .. we must prepare...ya...we must prepare for teaching Yes. Preparation. And the more knowledge I have gotten from face-to-face classroom. (Interview)
		<ul style="list-style-type: none"> Feeling that English communication skill improved leading to confidence 		No, hehe (laughing) but now I just feel that my English is improved, and I am very confident. (Interview)
		<ul style="list-style-type: none"> First experience in using English in the classroom leading to confidence 		Ya..ya..the first observation is..eee..I think I had confidence but for today the second observation, more confident. (Interview)
		<ul style="list-style-type: none"> Increased vocabulary leading to confidence 		ya..ya..I think because we joint the programme, so our vocabulary ee..improved, our .. our English improved, so we... so our confidence ee..is very high now. (Interview)
		<ul style="list-style-type: none"> More practices leading to confidence 		and I feel more confident in this presentation because I am getting used to using English in the classroom. (Interview)

			•	
			• Perceive as learning together with students leading to confidence	coz...I..I learn English together with my students. (Interview)
			• References about classroom expressions in English leading to confidence	I got a lot of reference about expressions in teaching by using English. (Interview)
			• Relaxed and no pressure in learning atmosphere leading to confidence	ee...learning together.. we feel fresh... there is no pressure more relax in practising with my peers. (Interview)
			• Sharing with friends about developing lesson plan leading to confidence	yes, as I said before, eeee... my experience with this programme, I think, it is very useful for me. Ok, For example, I can share with another my friend...eee...how to make the lesson plan, the right one, ok, ..and...I become more confident. (Interview)
			• Spirit to improve English communication skills leading to confidence	So after I joined the course, my scale...I rate it three, ee..confident. Because..., I..I..I think it is not wrong if we speak English, even only me who is speaking English, e..o..only me and my students, may be...I just ..I just ...try to speak English to improve my ee....my skill in speaking English. eee..In my department, there is ..there is one teacher, but he quit. He don't want to continue the course. But, I..I think, ee...that is..may be he doesn't have a spirit to..to follow the study, ee...that did not stop me to, I..I..I still moving on, I continue to ..to explore my potential in speaking English, heheheh (laughing). Because.. I like speaking English, hehehe (laughing). (Interview)
			• Students' feedback in English leading to confidence	yes, of course, because ee.. when I used English in the class, I got feedback from my students as well, they also used English to greet me and I gave feedback to them, it's very good, I think. (Interview)
			• Students getting more familiar with English	I feel confident using English in the classroom, because

			instruction leading to confidence	ee....ee....we feel fluently in English in the classroom, because eee....frequency of using English in the classroom increased and students become more familiar in using English. That makes..that causes eee...we are more confident in our class with English. (Interview)
			<ul style="list-style-type: none"> Students more focused in English instruction a wow factor 	Compare before when I used Indonesian, not focused, but when I used English, my students are more focused. (Interview)
		Feedback	<ul style="list-style-type: none"> Discussion and feedback from peers leading to confidence 	Because.eeee... we have time to discuss with friends about the preparations of our presentation in English, first. Hehehhe (laughing) (Interview)
			<ul style="list-style-type: none"> Feedback from social online interaction leading to confidence 	Because..mmm... my learning material that Iused in a classroom had been checked through online activity, and there are more knowledge, of course. (Interview)
			<ul style="list-style-type: none"> Interaction, discussions and feedback leading to confidence 	OK,eer. Before this study, ee..long before this study, we had a programmeeee..using English in the class. But ee..sometimes, ee...at that time I had good a confidence, maybe I rated it at three. But after that, eee...as I said before that this programmewas not maximum. So after that I..I became unconfident again. Ok..Heheheehehe...(laughing) There was no feedback. And then..., after following this study, I think that after I got lots of experiences, I got lots of interaction, discussions, a lot of feedback, eerr..and I see my students' response, now.. I am very confident. So, I rate it from two..to four. (Interview)
9	Factors leading to lack of confidence		<ul style="list-style-type: none"> Less confident because of technical problem (electricity off) 	08.36 Electricity was off. T prepared ppt slides but could not show it. Instead, manually using textbook. T asks triggering questions in English, and Ss could answer. T looks nervous. (Observation notes)

			<ul style="list-style-type: none"> • Less confident because too often pronounce words incorrectly • 	<p>Less confident because too often pronounce word incorrectly. (Reflective journal)</p> <ul style="list-style-type: none"> •
			<ul style="list-style-type: none"> • Shy and not confident at the beginning 	<p>I feel ashamed shy. May be with ee....one or two students...I.. I...feel confident to speak English (Interview)</p> <p>07.13 T shows a picture on the LCD projector and askss for their opinion about the picture in English. A picture of a shadow of person facing something. One student expressed his opinion about the picture in bahasa. It seems that teacher is not quite confident in using English instructions. I can tell that from the way he speaks, not loud enough. I am not sure whether or not it is because of being observed. In class, this teacher is quite active and confident. (Observation notes)</p>
			<ul style="list-style-type: none"> • Teacher's lack of English leading to lack of confidence • 	<p>08.50 T tells steps of peripheral repair and shows it on a slide, already written in English. T explains in English and Bahasa Indonesia. T only reads the English text on a slide then explain further details in Bahasa Indonesia. T gives time for Q/A but no student asks question. Then T continues the explanation on tools and the function of each tool for peripheral repair. It seems that this T is not ready to use English, and students notice this unpreparedness by smiling. (Observation</p>

				notes)
10	Impact of blended learning approach to teaching practices		<ul style="list-style-type: none"> • Applying PBL approach in my classroom • 	ya...eee...This programme gives me er.. ee...I can say two impacts. The first is, in class, hm (coughing) I'm trying to use PBL (problem-based learning), sometimes I give them without an explanation first, I give them the exercises, and eee...motivate them to look for the answer in the module, in the module or somewhere else, or discuss it with your friends, so if you...or you can ask me if you have the problem, and then after that we can discuss it together. OK, that's the first impact. (Interview)
			<ul style="list-style-type: none"> • Inspired to do an action research on online learning (Facebook) • 	Actually I am really really interested about this programme. I want to know more about this programme. So, may be you can help me aa....to apply this programme, may be some..like some research. I want to ...do some action research using this programme. May be you can help me. I really want more information about this programme. (Interview)
			<ul style="list-style-type: none"> • Inspired to use Edmodo for online interaction • 	The programme is interesting, ya..I am interested, we can share everything with friends at other school, and it's inspiring me to apply it , to apply Edmodo it with my students. (Interview)
			<ul style="list-style-type: none"> • Inspired to use Edmodo for students in industrial work • 	...industrial experience...ya...so we send them the assignment and also some learning material by eeee.....blended learning, using blended learning in Edmodo and also in...by...FB. (Interview)
			<ul style="list-style-type: none"> • Inspired to use Facebook as learning media to students in industrial internship programme • 	such as...eee..right now...eee.. I often post my learning materials in my facebook because that's how I connected to my students, by facebook, sometimes my students asked me about..something they don't understand, then I give them by facebook chat, I give the...explanation from facebook chat.

				(Interview)
			<ul style="list-style-type: none"> Inspired to use Facebook for students' learning interaction 	Aaa...I make a group in the facebook. The name of the group is like the lesson, the name of lesson. So, I upload the material, in the first time I upload the syllabi, and then I upload the module, OK, after that I ask the students to ...to do some questions, like homework, and they have to collect the answer with...by upload again in the group. I think it is running well, but for the...for some students may be it is difficult. Because may be they have internet access...(Interview)
			<ul style="list-style-type: none"> More motivated and more confident to use English because it is perceived as learning English together with students 	Yes. There is an impact of the blended learning program to my teaching learning, such as I become more motivated, confident, to using English in the classroom. It make me ...it make me so happy to come to the classroom, because in the classroom I not only teach the material but also I learning English together with my students. (Interview)
			<ul style="list-style-type: none"> My instructional design and teaching method improved 	eee... We can eee...share some information with my friends and my peer teaching in my class, and also we can eee...exchange information that it is also important for me to improve my ee....instructional design, and also in eee...my teaching method. (Interview)
			<ul style="list-style-type: none"> My participation in BL approach contributed to the improvement of my classroom instruction 	The benefit is I can eee....improve myknowledge, my skill and also some information that I need to eeee.....to improve my eee.... instruction in eee.... my class. (Interview)
			<ul style="list-style-type: none"> Willing to learn how to use and manage learning in Edmodo 	eee.... At this time I do not use online learning with my students, but I will trying to use that if I get may be...ee...like that...like workshop about how to use online learning for the classroom. (Interview)
11	Issues related to culture and		<ul style="list-style-type: none"> Checking students' attendance is time consuming 	07.25 Greetings and attendance check by calling each name. A kind of wasting time, why not checking students who are absent

	value			only? (Observation notes)
		<ul style="list-style-type: none"> Disturbances in classroom 		09.38 The discussion was interrupted by announcement using microphone, but T continues the discussion. It would be better to stop talking, let the students pay attention to the announcement. (Observation notes)
		<ul style="list-style-type: none"> Female students dominated 		08.15 T has prepared her ppt slides when observer enter the room, and all students are already in the classroom. Ss sit in two columns and 4 rows, mostly female students. (Observation notes)
		<ul style="list-style-type: none"> Late comers for students and teachers 		07.45 Another T (Mr. Agus) comes to help teaching. It is a team teaching by two teachers. This teacher helps monitoring students and giving assistance to ss. The co-teacher was late because he was locked outside the school gate. It is the rule from the school that any student/teacher who comes later than 7 a.m. will be locked outside until one class period is over. (Observation notes)
		<ul style="list-style-type: none"> Teaching strategy vs time 		12.55 T continues to discuss about human factor in occupational accident and the bad working methods which workers commonly perform. Ss did not respond much perhaps due to their low English proficiency, or the time (after lunch time)? (Observation notes)

		<ul style="list-style-type: none"> Male dominated technical course 	07.24 The classroom is for workshop filled with practical tools on the sides of the room, and chairs and desks in the middle of the class. There are 30 students, only 2 female students sitting at the front row of the class. (Observation notes)
		<ul style="list-style-type: none"> Prayer time to begin and end school hours 	07.00 Bell rings and ss start praying in their own classroom. All students pray while the pray is led centrally using a loud speaker to all classrooms. (Observation notes)
		<ul style="list-style-type: none"> School's regulation or disciplines 	10.45 T enters the room and prepare her laptops connected to LCD. Ss sit in three columns and 5 rows. Ssgreets T with Islamic greetings, T responded in the same way. T checks attendance, and no one is absent. One student voluntarily cleans the whiteboard. To start the class, T asks ss to be silent. Instruction is given in English. (Observation notes)
		<ul style="list-style-type: none"> Seating arrangement in computer laboratory uncomfortable for students 	The position of the LCD projector is on the north side where as the T stands on the south. Ss seats in rows in east and west side. Ss have to turn their heads to left or right and upside to see the projector as the projector is too high. The position is not very comfortable as sshas to turn their heads right or left and lift it up. (Observation notes)
		<ul style="list-style-type: none"> Students are less critical or dare not to ask questions 	12.08 T continues explaining about pixel measurement: DPI (dots per inch) and PPI (pixel per inch). T shows a camera and

				takes a picture of students to show the pixel. T shows a picture of computer monitor and discuss about the pixel of the monitor using English. T gives time to students to ask questions if any, but it seems no one asks question. Then T says he will ask questions if students don't have any. (Observation notes)
			<ul style="list-style-type: none"> Students' greetings are seen as to respect teachers 	10.45 T enters the room and prepare her laptops connected to LCD. Ss sit in three columns and 5 rows. Ssgreets T with Islamic greetings, T responded in the same way. T checks attendance, and no one is absent. One student voluntarily cleans the whiteboard. To start the class, T asks ss to be silent. Instruction is given in English. (Observation notes)
			<ul style="list-style-type: none"> Teacher dominated the class and less attention to all students 	13.00 Some students sitting at the back did not really pay attention to the teacher, instead, they fall asleep and / or talk to their friends. T is not aware of this condition as she is focusing on her laptop while talking/explaining. The student might be hungry. T should make the class more lively, active participation from student to avoid sleepy students. (Observation notes)
12	Lessons learned from the BL programme		<ul style="list-style-type: none"> BL approach and tried to apply it to students 	Learning activities in class is over now and we're waiting for the final report of this semester. Some of my students have to take remedial task and for the Multimedia Department I provide the information about the remedial on Edmodo. It really helps. Thanks for Mr. MangasaAritonang and Bro. ... for the

				information about Edmodo. (Online interaction)
			<ul style="list-style-type: none"> Classroom expressions in English, vocabulary enriched 	eemmmmm....By this programme, I can learn much about how to use English in class. Emm.... May be just like how to make a lesson plan in English, and then how to get...give drilling in class, closing the class, and explain the materials. (Interview)
			<ul style="list-style-type: none"> Conversation practise and teaching practice 	I learned about vocabulary, pronunciation and conversation which I got through teaching practice, talking with my friends in our English class and discuss with my tutor. (Reflective journal)
			<ul style="list-style-type: none"> Culture related to English speakers 	Obligation and culture. I got it from the discussion with the teacher and my peers in the classroom, and online assignment. (Reflective journal)
			<ul style="list-style-type: none"> English proverb 	Today I learned about "proverbs". I got proverbs from Mr Aritonang as a teacher. We were asked to match the words to make the completed proverbs. (Reflective journal)
			<ul style="list-style-type: none"> English terminology for Mathematics 	I learned about Mathematics term from friends and dictionary. (Reflective journal)
			<ul style="list-style-type: none"> Grammar and vocabulary 	eee..we have learned ee..vocabulary, grammar, and pronunciation (Interview)
			<ul style="list-style-type: none"> Learn about stories and teachers' best practices through sharing 	eee..like the story, and then how the other teacher at the other school teach in their class. (Interview)
			<ul style="list-style-type: none"> Learning sentence structure 	<p>look at the sentences:</p> <p>- "I try to finished my job with the best and I'm quaitesatisfield with the result of my job" it's better to say "I tried to do my best to finish my job and I was quite satisfied with the result of my job"</p> <p>- instead of saying "he say to me that I must be more practise. but overall I had a good project", it's better to say "he said that I</p>

				had to do more practices" (Online interaction)
			<ul style="list-style-type: none"> Learning to be more confident 	I have learning to be more confident in teaching with English, and I have learning that learning process is not always be in face-to-face mode. (Interview)
			<ul style="list-style-type: none"> Learning to develop lesson plan in English 	<p>uploaded a file.</p> <p>I need your comment about my lesson plan. Thanks</p> <p>LESSON PLAN X SMTR 2.docx</p> <p>very good.</p> <p>my comment: just translate the Indonesian words on "the teaching-learning activity point IV" into English. (Online interview)</p>
			<ul style="list-style-type: none"> Learning to use online media such as Facebook for learning interaction with students 	ee..from this programme, I learned to explore about my learning media, not only from ee....only..eee..regular meeting with the students in face-to-face ... but now I also ee..use internet to share my...my material. The students give some feedback, they can ...they can ask me questions through facebook. (Interview)
			<ul style="list-style-type: none"> Methods, strategy and models of learning 	by online we discuss or share ..and share with my peers a..about methods of learning process, strategy and models of learning process. (Interview)
			<ul style="list-style-type: none"> More motivated, more learning resources, challenging 	by online we discuss or share ..and share with my peers a..about methods of learning process, strategy and models of learning process. Ya, eee....make new challenge for me... (Interview)
			<ul style="list-style-type: none"> PBL and Edmodo are interesting things to learn 	Yes, of course. I.. I've learned lots of things in this study, in this blended learning course. I know more about how to give feedback to the students in English, and then I know about PBL (problem-based learning), and I am searching more specific information until now about PBL, and I'm trying to practice it in my class. And one..one that made me very very happy is I

				know Edmodo, hehehe... from the learning online, and until now I have made my ..my own Edmodo. (Interview)
			• Presentation techniques	I learn how to make a good presentation using English. A good presentation is if the audience understand our presentaion and they give feedback or conclusions. (Reflective journal)
			• Pronunciation practices	I learn about English pronunciation and practicing English. I get it by listening when friend present their learning materials in English. (Reflective journal)
13	Literacy leaders		• Reminder from Literacy leaders	Good morning for all members of English for classroom instructions, please prepare your lesson plan you will teach in January 2013 and send to Pak Artonang. He will check it and give it feed back to you for a better performance in English. thanks OK, tanks for reminding. (Online interaction)
14	Motivation changes		• Fluctuated motivation due to lack of commitment from school management	Using English in a class is a part of school programmebecause..because our school is RSBI, eee...but there is no..no.. feedback from the.. from the management, from the school management. For me, it is not maximum, it's not maximum, so ..sometimes I am motivated because the students give..give me good responses. (Interview)
			• From motivated to very motivated	before...I have ...I have motivation but not...not..not that strong now is four, but before is three. (Interview)
			• From unmotivated to motivated	OK, Before I participate in this study, I...I..may be my scale is two, unmotivated. Because ...I think sometimes the students is not too interested ...if I am speaking English, and then...they don't understand what I am saying. Like that. After the programme, I think, I can rate it three, motivated. (Interview)

			<ul style="list-style-type: none"> From unmotivated to very motivated 	e.. Before I participated in this study, eee...is there a scale of two and a half? Hehehe..if..if there is a scale two and a half, because I...it's not motivated and it's not unmotivated, so in between. But now, after I follow this study I think I can say that I...I am very motivated. (Interview)
			<ul style="list-style-type: none"> <i>Improved motivation at the second observation</i> 	<i>OK, I feel ee...very motivated to using English in the classroom eer...because eee...my students become more active to using English, too in the classroom, they are also trying to give greeting and answer my classroom by using English. (Interview)</i>
15	Motivation levels		<ul style="list-style-type: none"> Motivation increased 	My motivation using English was increased compare before.(Reflective journal)
16	Online learning experience		<ul style="list-style-type: none"> Comparing and sharing experiences online make the discussion alive 	I got an interesting experience on Edmodo today. I made the assignment in English, and one of the question is "What is the acceleration of the object?" and some of my students answer this question by explaining the definition of acceleration instead of calculating it. I feel like "Gubraaaakkkkk!!!!" wkwkwk.... may be I should use "calculate" or "determine" next time. hehe... yesibu..., you need to be very specific in giving instruction. (Online interaction)
			<ul style="list-style-type: none"> Learning from feedback other people provided 	I agree with RanyKranchees, let the children choose where they want to study. learning is not an enforcement, but learning is a will or willingness. (Online interaction) ya, I just read your feedback to other ...other friends, other peers, that I can learn about the correct or incorrect task (Interview).

		<ul style="list-style-type: none"> • Online English interaction influence daily offline conversation 	...to have a discussion, not just online but also in our daily conversation. Eee,,,So, ...such as “have you write your lesson plan in English?...oh..not yet...only...”so...it’s aa..it’s a....not just a conversation, it become....if I can say, a meaningful conversation. (Interview)
		<ul style="list-style-type: none"> • Online interaction provides more feedback rather than face-to-face 	eee...may be if...in online... I can express my opinion widely, so ...and the feedback is more than if I speak face-to-face..eee...maybe I can just get one comment from...if I speak face-to-face. But if I do online, more friends from other schools can give feedback, can participate in our group. (Interview)
		<ul style="list-style-type: none"> • Receiving feedback in online discussion is interesting 	I think it’s so interesting. I enjoy to working online with my peers. ee...I get eee..much feedback, much eem... <i>apa</i> (what) knowledge, ee...from reading my peer’s feedback. (Interview)
		<ul style="list-style-type: none"> • Receiving feedback online leading to improvement 	Working online for me is a new experience, new challenge. And I’ve..I find it a very interesting experience, very fun. Before this study, ee...online for me is just eee...log in to facebook, say hello to friends. After this study..eerrr..I got self-improvement...some kind of self-improvement, when we upload a response to assignment, or uploading our response to the exercises, we got a feedback from the other participants, we got their comments on our experience, so we share our experience online. (Interview)
		<ul style="list-style-type: none"> • Sharing experiences or best practices through online interaction 	My experience working online with my peers is very interesting. Eee...I can share my problems at classroom to facebook group and have many feedback and solutions about my problem, it’s very helpful to me. (Interview)
		<ul style="list-style-type: none"> • Social interaction using English on Facebook 	eee.....I send the message sometimes I use in...ee...send to my friends, just in simple things, but when they send me back, I am happy, and then we can speak to each other. I am really

				interested in English, that's the way I do that. (Interview)
			<ul style="list-style-type: none"> Vocabulary enriched through social online interaction 	I have many benefit when I use online eee...online course, for example I can improve my eee.... vocabulary, also improve....eeee...for all my ...my English. (Interview)
17	Percentage of using English in the classroom		<ul style="list-style-type: none"> 75 to 80% using English as a medium of instruction at the second observation 	and the percentage of using English is about seventy-five percent or eighty may be, right now, because I also often greeting in English with my friends in <i>bengkellistik</i> (electricity workshop). (Interview)
			<ul style="list-style-type: none"> 80-90% using English as a medium of instruction at second observation 	ya, and the percentage of using English in the classroom is increasing, up toabout eighty percent. (Interview)
			<ul style="list-style-type: none"> Increased up to 90 and 100 % of English instruction 	...getting more confident, and the percentage of using English about 90 until 100% .. (Interview)
			<ul style="list-style-type: none"> Up to 50% using English as a medium of instruction 	I think I can't using full English in the classroom, for percentage may be 50% and for 50% again I still use Indonesian language. (Interview)
			<ul style="list-style-type: none"> up to 60% English instruction in discussing content but all English in opening and closing, checking students' understanding, giving motivation, giving quote of the day 	In opening and closing, checking students' attendance, and giving motivation, I always use English. I usually give them a quote of the day in English to give them motivation, and eee...try to increase their confidence in learning Physics. And then, eee....to material, may be about ee...sixty percent English, it depends on the conditions of the class. (Interview)
			<ul style="list-style-type: none"> Up to 75% increase in using English as a medium of instruction 	I think I used English, I practise English ee...more than before, ok, ee...may be about fifty percent until seventy-five percent increase. (Interview)

			<ul style="list-style-type: none"> Up to 95% using English as a medium of instruction. 	The percentage of using English is may be until 95% using in English. But sometimes I... use Indonesian in the conduct ...of my lesson in my classroom. (Interview)
18	Perspective s on BL approach		<ul style="list-style-type: none"> Afraid at the beginning due to lack of grammar 	Ee...because ..not enough knowledge about English grammar, so..I.. I'm afraid to use English in class. (Interview)
			<ul style="list-style-type: none"> BL approach as a good method to increase students' motivation 	I think blended learning course is a very good method to increase the students' motivation in learning process. In blended learning course, we get a new learning experience and new learning atmosphere. (Interview)
			<ul style="list-style-type: none"> BL approach is efficient because we can get access from anywhere 	I think ee...that the blending learning course is good enough because it is combining classical learning and the online learning so that we can eee... use our time efficiently,...(pause) and the learning can be held anywhere as long as there is internet access. And then ...we can discuss more widely with friendseeee....from other schools through the facebook media. And we can also share our experience in presenting learning in English.
			<ul style="list-style-type: none"> BL approach is new for me and allows online interaction 	This programmeis good and it's a new programmefor me. I can ask question online and offline. (Interview)
			<ul style="list-style-type: none"> BL programmeas a place to discuss and share problems 	With this blended learning course, we can discuss and share our problem that we found in using English. (Interview)
			<ul style="list-style-type: none"> Blended learning approach as a new learning experience and encourage interaction both speaking and writing 	Blended learning course is a new method for me. It is not only face-to-face, but also online. So, we can communicate by speaking directly and communicate by writing indirectly. (Interview)
			<ul style="list-style-type: none"> Discussion, interaction , getting responses 	I think it's interesting. I got a lot of new things from our meeting from the discussion, from the interaction among the

			and doing assignment in BL approach are interesting and challenging	participants. And when we go online, I got new experiences in doing exercises, the assignments, receiving responses. I think it is very challenging. (Interview)
			• Enjoying the learning through internet technology	I think this is good for me, using the blended learning, with many methods to learn knowledge, for example with the face-to-face, and then by internet like facebook, skype and edmodo also. (Interview)
			• Experience in BL approach inspired me to apply the same approach to my student	In the blended learning course, we can talk to our students by Skype, or by ee... facebook, or chatting, and et cetera. (Interview)
			• It allows sharing with teachers from different schools	we can share, we can share everything with the other schools, the teachers in other schools. (Interview)
			• It is useful because it allows and helps teachers using more interesting visual aids such as Facebook	blended learning course is more interesting because we use visual aids for example internet, facebook, that encouraged our students to study, I think. (Interview)
			• Online learning as a solution when time is limited for face-to-face tutorial	We know that it is very necessary for us. If we combine with long distance learning, I think it will help us when we have no time for class. So it is very useful for us. (Interview)
			• Online learning is more interesting in BL approach	I think it is more interesting with online learning. (Interview)
			• This BL approach is a kind of a force to make us learn	This programme is some kind of a force. We can accelerate, we can get more motivation, we can get more confidence to ...practice, to increase our competence in using English. (Interview)
19	Problems		• Nervous and less confident due to	08.36 Electricity was off. T prepared ppt slides but

	occurred during classroom observation : Effects to teachers		<p>technical problems (electricity off)</p> <ul style="list-style-type: none"> • 	<p>could not show it. Instead, manually using textbook. T asks triggering questions in English, and Ss could answer.</p> <p>T looks a bit nervous because of this problem. (Observation notes)</p>
			<ul style="list-style-type: none"> • Technical problems did not seem to seriously affect the confidence and the teaching performance • 	<p>Ss stands up and greets teachers. T asks ss to tidy up how they dress, and pick up rubbishes from the floor to clean the classroom. T wants to emphasize on the attitude. T asks observer to introduce himself to ss. T prepares her laptop with LCD connection, but there is a problem with socket. T uses whiteboard, and introduce the topic “Chemical bonding”. T reviews previous lesson by asking questions to students about natrium configuration using English. Ss answer in English. T continues explaining about natrium</p> <p>Even though with some grammatical errors, T is doing her best to use English. (Observation notes)</p>
20	Reasons for using (mixing) Indonesian language in English instructions		<ul style="list-style-type: none"> • Different model of task required explanation in Indonesian • 	<p>Because the task is a new model of task. That’s why they are not used to doing that task. My students asked me to use Indonesian because some students don’t understand with my English. (Interview)</p>
			<ul style="list-style-type: none"> • For difficult materials, use Indonesian language • 	<p>I think, for some material I will give, I combine with Indonesian, or bilingual instruction, especially for difficult material. (Interview)</p>

			<ul style="list-style-type: none"> Limited vocabulary for particular terminology 	I still mix ee...language in explaining my lesson by English and Indonesian, because sometimes I forget the words or the sentence in English. (Interview)
			<ul style="list-style-type: none"> Referring to national exam that still uses Indonesian language, bilingual is a good choice 	because it is chemistry. And...we know that chemistry test in national exam is in Indonesian, so I have to give special terminology in Indonesian, not in English. (Interview)
			<ul style="list-style-type: none"> Students' lack of English proficiency 	I think if I only speak in English, may be my students don't understand, a lot of my students, their English is still not good. And then in our school, we often use bahasa Indonesia. (Interview)
			<ul style="list-style-type: none"> To make sure that students understand the English instruction 	<p>11. 02 To reinforce and to make sure that students understand, T explain a little bit of the lesson in Bahasa Indonesia. But then T continues again using English.</p> <p>To check students' understanding actually T could ask questions to students. No need to explain in Bahasa. (Observation notes)</p>
21	Self-directed/self-determined /self-regulated learning		<ul style="list-style-type: none"> Self-determined about learning choice (vocational terminologies) relevant to teachers' own needs 	<p>Hi all. Today I prepared the slide for teach tomorrow but I am not so confident with my sentences. Can you help me to check the sentences below?</p> <p>BASIC COMPETENCIES After following this study, student must be able to:</p> <p>Operate the milling machine</p> <p>One of the knowledge to operate the milling machine is the milling machine equipment. Before the students operate the</p>

				milling machine, they must have knowledge about the milling machine equipment. (Online interaction)
			• Self-determined about the choice of online learning platform for student learning	Yes, I use online elarning, but I don't ..I don't use Edmodo like Mr Ari use. I use e-learning YPHB, e-learning of YPHB. (Interview)
			• Self-regulated learning about when and to whom to practise the English language communication skills	Sorry, I haven't practised English in classroom yet, because I still have 3 college students in practice. But I always use English in my discussion with them. English must be practised. Now, I feel more confident than before. (Online interaction)
22	Significant and interesting things during learning process (Teachers' perspectives)		• Brave and confident in joining English conversation	I presented my material about multimeter in micro-teaching class today (it is a challenge for me), but I try my best to make a good presentation, and thanks to all my friends who become my audience today, from now on I'm more confident to speak in English. (Online interaction)
			• Discussing issues around teaching practise using English instruction	Grammar is number two in speaking English as a foreign language learner. The more important things are you are confident and you like to use English. (Online interaction)
			• Learning class management and motivating students to speak	I learned how to manage my class and motivate my students to speak English.(Reflective journals)
			• Learning idioms and vocabularies	I learn about new idioms and vocabulary that I did not know before. (Reflective journal)
			• Learning to understand English proverb	The lesson was interesting because we discussed about new proverbs in English.(Reflective journal)
			• New vocabulary items	I learned many new words. Therefore, I feel more confident to

				<p>speak up.(Reflective journal)</p>
			<ul style="list-style-type: none"> • Participating in teaching practise and receiving feedback 	<p>I participated in the teaching practice with feedback from teacher and friends.(Reflective journal)</p>
			<ul style="list-style-type: none"> • Receiving feedback and comment to my teaching practice 	<p>It was all interesting especially when I got some corrections for my English so I can improve it. (Reflective journal)</p>
			<ul style="list-style-type: none"> • Students responded positively to my English instruction 	<p>I presented my learning material in English and the students are quite interested. (Reflective journal)</p>
			<ul style="list-style-type: none"> • Students were more focused in English instruction 	<p>My students more focus when I explained my lesson in English.(Reflective journal)</p>
			<ul style="list-style-type: none"> • Studying together with friends is interesting and made me happy 	<p>I can study with friend and teacher. That made me happy to study. (Reflective journal)</p>
			<ul style="list-style-type: none"> • The confidence regardless the mispronunciation 	<p>Even though the pronunciation is not too good, but the class speak English confidently.(Reflective journal)</p>
			<ul style="list-style-type: none"> • Understanding the difference between 'the' and 'a' 	<p>I understand now when to use 'the' and 'a'. (Reflective journal)</p>
23	Students		<ul style="list-style-type: none"> • Idea of using English is great 	<p>In my opinion, they are teaching with very-very great. But sometimes, they speak English with Indonesian accent, that's</p>

	perspective s and comments: Focus group interview		•	why it is a little bit boring, anyway.
			• It was fun and learning English at the same time	I like because it is more fun. We can share about pronunciation and words when teacher ask question, and we can study English more.
			•	
			• Mathematic terminology is difficult	I think they teach well in English. But sometimes we...maybe in mathematics, we found hard language, like mathematical language that we couldn't understand. So, that's quite difficult too, but it's OK.
			•	
			• Prefer both English and Indonesian because I can learn both languages	I prefer both because I can understand what in English and what in Indonesian, too. So, when I have exercise of questions, sometimes like in English so I can understand it and answer it.
			• Prefer English only to frame myself in English speaking everyday	I prefer English... because it can frame myself just as natural to speak English every day. From now I have to speak English every day, and for the future it's just like a habit, so it's gonna be easy.
			•	
			• Prefer Indonesian instruction because it is easier to understand	I prefer Indonesian. It's quite easy to understand.
			• Student noticed teacher's mistakes in using English	Some teachers who teach in English are good, but there are also a few mistakes that I see, from their intonations, and some of the language, too. But...I understand what they say.
			•	
			• Students could tolerate the mistakes teachers made in English expressions	Everyone makes mistakes. Nobody is perfect.
			•	
			• Students noticed that teacher got nervous using English	I saw that they are nervous.
			•	

			<ul style="list-style-type: none"> Students noticed that teacher made progress in using English as a medium of instruction. 	<p>Yes, they make progress. There is a time we see they make progress.</p> <p>Really great. It makes us more understand what they say to us.</p>
			<ul style="list-style-type: none"> Students help correct teacher's English 	<p>Ya, because may be the teacher sometimes confused with what they say, the word, so we help them to make it correct.</p>
			<ul style="list-style-type: none"> Teachers need to check students' understanding 	<p>Teachers just need to make sure that the students understand completely all what they say</p> <p>Ya, even we just say yes, but actually we don't</p>
			<ul style="list-style-type: none"> Teachers' pronunciation was hard to understand 	<p>I think, it's really great when my teachers teaching us with English, because we can have more English pronunciation for us. But sometimes the teacher, when teach us, we can't understand it because their accent is weird.</p>
			<ul style="list-style-type: none"> Teachers speak English with Indonesian accent which is boring. 	<p>But sometimes, they speak English with Indonesian accent, that's why it is a little bit boring, anyway.</p>
			<ul style="list-style-type: none"> Teachers still need to study to improve their English 	<p>And, the teacher just needs err...more ...study English, I think.</p>
24	Suggestion for future learning		<ul style="list-style-type: none"> A native speaker of English is needed 	<p>I hope I can listen English from native speaker and at the end of this programme. (Reflective journal)</p>
			<ul style="list-style-type: none"> All teachers should participate in this BL approach 	<p>It is expected that all people around me especially at school speak English, so I will have more time to practise my English. (Interview)</p>
			<ul style="list-style-type: none"> A more specific case in online discussion 	<p>For me, to make it better, there's a more specific that related to the class, how to open, or given a situation, and how the</p>

		would be interesting	teachers will handle the situation in English. (Interview)
		<ul style="list-style-type: none"> English learning as compulsory for all teachers 	I think study English in this school must be compulsory for all of the teachers. (Interview)
		<ul style="list-style-type: none"> ESP topics are needed for learning materials 	Our concern is the topic, I think I need more specific topic in English learning material, because our topic is tour guiding. Tour guiding is very limited here in...in Indonesia, so I have to...to find from the internet. (Interview)
		<ul style="list-style-type: none"> Interactive CD is needed to support conversation practice 	May be you can give us an interactive CD which contains the sample of the conversation in teaching, so we all can practice at home. (Reflective journal)
		<ul style="list-style-type: none"> More face-to-face tutorial needed 	I think we need more face-to-face classroom because it improves my motivation and my confidence. (Interview)
		<ul style="list-style-type: none"> More references needed for using English in the classroom 	Search some books in practice teaching English. (Reflective journal)
		<ul style="list-style-type: none"> More teaching practises needed 	I think, we need more face-to-face classroom with teaching practice. How to make easier to deliver the lesson to students, and daily conversation with students. (Interview)
		<ul style="list-style-type: none"> More time and intensive for learning 	I think, time for study English in this school must be increased, must be intensive. (Interview)
		<ul style="list-style-type: none"> Need to sustain the English learning for teachers 	The programme is good so hopefully it's not only for this time, I mean we can apply it at school, but we need to maintain this programme.

			<ul style="list-style-type: none"> • Post-test to measure capability of teachers to use English 	I hope at the end of this programme, a post-test to evaluate the capability of teacher using English is held. (Reflective journal)
			<ul style="list-style-type: none"> • Students can also participate in the BL approach 	I think to join this programme, it is not limited for the teachers only, we can make students to join this programme. We can get feedback from students about how is the performance when we teach in English. (Interview)
			<ul style="list-style-type: none"> • We also need to motivate students to be more confident in English 	We need to motivate students to be more confident speaking English. (Reflective journal)
25	Use of English in the classroom		<ul style="list-style-type: none"> • Bilingual to help students better understand 	<p>07.32 Showing next slides and explains “Why we should understand about hand tools?” T uses bilingual, English and then in Bahasa when she sees that students could not understand. The slides are also in bilingual.</p> <p>Good idea, but at least she exposes the English instructions to make students with English expressions. (Observation notes)</p>
			<ul style="list-style-type: none"> • Confidence regardless of grammatical and pronunciation error 	<p>09.45 T gives another task on a slide for students to complete: “What skills must be have by an entrepreneur in running his business?”</p> <p>Ss work in pairs. T emphasizes that this task is about skills, not attitude. Instructions and brief explanation was given in English. The task is written in English, and ss are requested to answer in English.</p>

				T uses English confidently even though there are some grammatical and pronunciation errors. (Observation notes)
		<ul style="list-style-type: none"> No responses from students to the English instructions 		<p>09.13 T draws a simple picture on the whiteboard to help students understand.</p> <p>T continues his explanation by showing a table. In his teaching, T asks ss some questions, but he answers the questions by himself as there is no response from the ss. Again, T gives the explanation in both English and Bahasa Indonesia.</p> <p>This might be difficult for the teachers, but he is trying his best to conduct bilingual class. (Observation notes)</p>
		<ul style="list-style-type: none"> PBL approach was applied 		<p>14.43 Ss start working in groups. After the students sitting in groups, T continues the rules of the game. Then T announces that students have limited time to work on it.</p> <p>Playing game in group work seems to be effective because the time of the class is the last period of the day. It avoids students from falling asleep. (Observation notes)</p>
		<ul style="list-style-type: none"> Powerpoint slides and written words on whiteboard helps students understand 		<p>11.00 After explaining the formula about <i>sinus</i> (<i>sin</i>), <i>cosinus</i> (<i>cos</i>), and <i>tangen</i> (<i>tan</i>), T asks ss: “any questions? One student raises her hand and ask question in English: “Bu, is it always like that?” T also responded in English.</p>

				T's English has some grammatical errors, but it seems it is not a problem for students to understand as the grammatical error is not too fatal. For example: $y=r$, T reads <i>y equals is r</i> . Some words/numbers are pronounced incorrectly, but since she writes what she says, it helps students to understand. Good strategy. For example 100 is pronounced "wan handrid." (Observation notes)
			<ul style="list-style-type: none"> Strategies to involve students in English interaction 	<p>10.50 T asks ss to work in 7 groups to find out the answer to similar questions. T gives time for students to work in groups. T monitors each group. T encourages to discuss in English while working in groups, but it seems ss use Indonesian language.</p> <p>Good. Group work is better. (Observation notes)</p>
			<ul style="list-style-type: none"> Students could understand the English instructions given by the teacher 	<p>09.33 T asks a pair of students to come to the front of the class to read their works. Ss answered the task in English, and give explanations in English. T asks ss if they have questions to the ss in the front, but no question. T asks the pair to back to their seat. T asks other pairs of students about the characters an entrepreneur should have. Instruction was given in English. All students could give the answer in English. T asks ss to clap their hands to praise the ss.</p>
26	Others		Thinking of how to put all comments and	Idea to put the comments and feedback into practice in my class teaching.(Reflective journal)

			feedback into practice	
			Teaching in English is a beautiful adventure	Teaching in English is a beautiful adventure. (Reflective journal)
			Social interaction for English practices	<p>It was a great time going together for vacation with Mr. Ari, yulis, artaya, Hadi. sriastiti and supardha. we went to Lovina beach, Lunch in WarunglesehanIkanBakar in TanjungAlam, hm..... It's very nice. then go to Budhist Temple in Banjar and finally to Banjar Holy Hot Spring.</p> <p>yep, yesterday was a very nice vacation for us. we shared something each other and laughed together. hopefully we can have such vacation again later. (Online interaction)</p>
			Marking should be involved to encourage online participation	I use school e-learning platform, if I have no time to give the material, ee....I will give assignment or task from e-learning. I just upload my materials and also the tasks, for example quiz, in multiple choice, and they just fill and do the task and the result or score will be sent. (Interview:)
			Keep practising English conversation	I always try to practise my English with my friends and my students. (Reflective journal)
			Keep encouraging students to learn in English	Trying to get close to the students and showing them that English in physic is not a hard as they thought. (Reflective journal)
			Fun and excited at first experience using English in the classroom	I think it's very fun and I feel excited. (Interview)
			Creating the habit for students to use English	OK, using English in the classroom improves my English but on the other side creates a habit to using English for students. English is not eee...like a magic, but English is a language, it's

				a habit. (Interview)
			Concern to encourage students to learn English	Yes. I would like to discuss about how we can give motivation to students who are desperate to learn English? (Interview)
			Aware of the importance of English, school's policy is expected to maintain the policy to use	English is ee...international language, it's very very important for our students and for teachers in competitive, global era. Eee...and I hope eeee...my institution policy still support using English in the class. (Interview)
			Reflection	My students more focus when I use English. They more focus in learning. Compare before when I use Indonesian, not focus, but when I use English, my students more focus. (Interview)
				<p>"I try to teach by using more English today at X grade, and they gave me very good responses. Surprisingly, they can understand all of my instructions and they tried to answer me in English too. I gave them one exercise in English, and they can understand it with no translation. How happy I am ... hehehe...." (Online interaction)</p> <p>" I got an interesting experience on Edmodo today. I made the assignment in English, and one of the question is "What is the acceleration of the object?" and some of my students answer this question by explaining the definition of acceleration instead of calculating it. I feel like "Gubraaaaakkkkk!!!!" wkwkwk.... may be I should use "calculate" or "determine" next time. hehe... (Online interaction)</p>

				<p>And then after this study, after this study..eerrr..I got self-improvement...some kind of self-improvement, when..when we upload a response to assignment, or uploading our response to the exercises, we got a feedback from the other participants, we got their comments on our experience, so we share our experience online, and they...and they gave their comments, and we saw others' experiences, it makes eer...a... compare with my experience, I compare what I have experience in my class and I see what they have experienced in their class. And I compare the situations, and it make us eeee...to have a discussion, not just online but also in our daily conversation.</p>
				<p>I feel so happy to get correction and feedback when I finished my microteaching from some people. (Reflective journal)</p>

Appendix L. *The twenty-four potential themes*

No	Nodes	Sub Nodes	Codes
1	Collaborative learning in BL programme		<ul style="list-style-type: none"> Asking for advice for the English translation of sentences or phrases Asking for and giving advice on the powerpoint slides for classroom use Asking for and giving advice on lesson plan Asking for and giving feedback to classroom tasks design and language Collaboration in creating learning portal on Edmodo
2	Confidence changes		<ul style="list-style-type: none"> 60% improved from 0% at the beginning Confidence increased Increased confidence at the second observation Quite confidence from the start Start getting confident after a while
3	Confidence levels increased / obtained	Currently confident	<ul style="list-style-type: none"> From unconfident to confident From very unconfident to confident
		Currently very confident	<ul style="list-style-type: none"> From confident to very confident From unconfident to very confident
4	Contradiction		<ul style="list-style-type: none"> A feeling of Unfairness because not all teachers involved Current level of English is too far from expected ICT training not available, leading to not prepared to ICT integration Learning English is less prioritized than postgraduate study No or less commitment from school Reflect from previous English learning experience that has no impact Some students are unprepared for English instructions Teachers are not free from various tasks, thus affect their attendnace and participation Teachers' belief that Learning English has no benefit due to the absence of reward and punishment Teaching purpose is to help students pass exams that is in Indonesian language, so I use Indonesian language
5	Engagement in learning	Activities that create	<ul style="list-style-type: none"> Asking questions and sharing opinion

	activities	motivating environment	<ul style="list-style-type: none"> • Doing online assignment and posting online for feedback • Sharing newly-learned lessons • Teaching practise and class discussion
		Activities that support confidence	<ul style="list-style-type: none"> • Sharing social activities in English as a learning process • Sharing teaching experience in discussion
		Evidence of self-directed learning	<ul style="list-style-type: none"> • Searching technical terminology through the internet
6	Factors to improve motivation	External	<ul style="list-style-type: none"> • Being observed leading to motivation • Feeling that English communication skills is improving leading to motivation • First experience leading to motivation • learning experience and social interaction leading to improved motivation • New and fun learning atmosphere created and thus leading to motivation • Online learning from friends through comments on Facebook leading to motivation • Opportunity to study with friends both online and offline leading to motivation • Practices leading to increased motivation • School's policy to create English speaking atmosphere • Students' positive response leading to motivation • The learning system in BL approach leading to motivation • To be a model for students in English learning
		Internal	<ul style="list-style-type: none"> • Awareness the importance of English communication skills leading to motivation • Encouraging students to enjoy English learning is my motivation • Improved confidence leading to motivation • It's not about policy, but the benefit of having English language skills • Willingness for self-improvement in English communication skills leading to motivation
7	Factors to increase confidence	Various factors	<ul style="list-style-type: none"> • Being able to help student in his English homework leading to confidence • Being aware that it is a learning process, and

			<p>that making grammatical mistakes is OK leading to confidence</p> <ul style="list-style-type: none"> • Being observed and micro-teaching leading to confidence • Better preparation and face-to-face tutorials leading to confidence • Feeling that English communication skill improved leading to confidence • First experience in using English in the classroom leading to confidence • Increased vocabulary leading to confidence • More practices leading to confidence • Perceive as learning together with students leading to confidence • References about classroom expressions in English leading to confidence • Relaxed and no pressure in learning atmosphere leading to confidence • Sharing with friends about developing lesson plan leading to confidence • Spirit to improve English communication skills leading to confidence • Students' feedback in English leading to confidence • Students getting more familiar with English instruction leading to confidence • Students more focused in English instruction a wow factor
		Feedback	<ul style="list-style-type: none"> • Discussion and feedback from peers leading to confidence • Feedback from social online interaction leading to confidence • Interaction, discussions and feedback leading to confidence
8	Factors to Unconfidence		<ul style="list-style-type: none"> • Less confident because of technical problem (electricity off) • Less confident because too often pronounce words incorrectly • Shy and not confident at the beginning • Teacher's lack of English leading to lack of confidence
9	Impact of blended learning approach to teaching practices		<ul style="list-style-type: none"> • Applying PBL approach in my classroom • Inspired to do an action research on online learning (Facebook) • Inspired to use Edmodo for online interaction • Inspired to use Edmodo for students in

			<p>industrial work</p> <ul style="list-style-type: none"> • Inspired to use Facebook as learning media to students in industrial internship programme • Inspired to use Facebook for students' learning interaction • More motivated and more confident to use English because it is perceived as learning English together with students • My instructional design and teaching method improved • My participation in BL approach contributed to the improvement of my classroom instruction • Using school's e-learning platform for online learning • Willing to learn how to use and manage learning in Edmodo
10	Issues related to culture and value		<ul style="list-style-type: none"> • Checking students' attendance is time consuming • Disturbances in classroom • Female students dominated • Late comers for students and teachers • Less appropriate timing • Male dominated technical course • Prayer time to begin and end school hours • School's regulation or disciplines • Seating arrangement in computer laboratory uncomfortable for students • Students are less critical or dare not to ask questions • Students' greetings are seen as to respect teachers • Teacher dominated the class and less attention to all students
11	Lessons learned from the BL programme		<ul style="list-style-type: none"> • BL approach and tried to applied it to students • Classroom expressions in English, vocabulary enriched • Conversation practise and teaching practice • Culture related to English speakers • English proverb • English terminology for Mathematics • Grammar and vocabulary

			<ul style="list-style-type: none"> • Learn about stories and teachers' best practices through sharing • Learning sentence structure • Learning to be more confident • Learning to develop lesson plan in English • Learning to use online media such as Facebook for learning interaction with students • Methods, strategy and models of learning • More motivated, more learning resources, challenging • PBL and Edmodo are interesting things to learn • Presentation techniques • Pronunciation practices
12	Literacy leaders		<ul style="list-style-type: none"> • Reminder from Literacy leaders • Schedule arrangement for observation
13	Motivation changes		<ul style="list-style-type: none"> • Fluctuated motivation due to unstrong commitment from school management • From motivated to very motivated • From unmotivated to motivated • From unmotivated to very motivated • Improved motivation at the second observation
14	Motivation levels		<ul style="list-style-type: none"> • Interested in teaching and learning English • Motivation increased
15	Online learning experience		<ul style="list-style-type: none"> • Comparing and sharing experiences online make the discussion alive • Learning from feedback other people provided • Online English interaction influence daily offline conversation • Online interaction provides more feedback rather than face-to-face • Receiving feedback in online discussion is interesting • Receiving feedback online leading to improvement • Sharing experiences or best practices through online interaction • Social interaction using English on Facebook

			<ul style="list-style-type: none"> • Vocabulary enriched through social online interaction
16	Opinion about BL approach		<ul style="list-style-type: none"> • Afraid at the beginning due to lack of grammar • BL approach as a good method to increase students' motivation • BL approach is efficient because we can get access from anywhere • BL approach is new for me and allows online interaction • BL programme as a place to discuss and share problems • Blended learning approach as a new learning experience and encourage interaction both speaking and writing • Discussion, interaction, getting responses and doing assignment in BL approach are interesting and challenging • Enjoying the learning through internet technology • Experience in BL approach inspired me to apply the same approach to my student • It allows sharing with teachers from different schools • It is useful because it allows and helps teachers using more interesting visual aids such as Facebook • Online learning as a solution when time is limited for face-to-face tutorial • Online learning is more interesting in BL approach • This BL approach is a kind of a force to make us learn
17	Percentage of using English in the classroom		<ul style="list-style-type: none"> • 75 to 80% using English as a medium of instruction at the second observation • 80-90% using English as a medium of instruction at second observation • Increased percentage up to 85% • Increased up to 90 and 100 % of English instruction • Up to 50% using English as a medium of instruction • up to 60% English instruction in discussing content but all English in opening and closing, checking students' understanding, giving motivation, giving quote of the day • Up to 75% increase in using English as a

			<p>medium of instruction</p> <ul style="list-style-type: none"> Up to 95% using English as a medium of instruction
18	Problems occurred during classroom observation: Effects to teachers		<ul style="list-style-type: none"> Nervous and less confident due to technical problems (electricity off) Technical problems did not seem to seriously affect the confidence and the teaching performance
19	Reasons for using (mixing) Indonesian language in English instructions		<ul style="list-style-type: none"> Different model of task required explanation in Indonesian For difficult materials, use Indonesian language Limited vocabulary for particular terminology Referring to national exam that still uses Indonesian language, bilingual is a good choice Students' lack of English proficiency To make sure that students understand the English instruction
20	Self-directed/self-determined /self-regulated learning		<ul style="list-style-type: none"> Self-determined about learning choice (vocational terminologies) relevant to teachers' own needs Self-determined about the choice of online learning platform for student learning Self-regulated learning about when and to whom to practise the English language communication skills
21	Significant and interesting things during learning process (Teachers' perspectives)		<ul style="list-style-type: none"> Brave and confident in joining English conversation Discussing issues around teaching practise using English instruction Learning class management and motivating students to speak Learning idioms and vocabularies Learning to understand English proverb New vocabulary items Participating in teaching practise and receiving feedback Receiving feedback and comment to my teaching practice Students responded positively to my English instruction Students were more focused in English

			<p>instruction</p> <ul style="list-style-type: none"> • Studying together with friends is interesting and made me happy • The confidence regardless the mispronunciation • Understanding the difference between 'the' and 'a'
22	Students perspectives and comments: Focus group interview		<ul style="list-style-type: none"> • Idea of using English is great • It was fun and learning English at the same time • Mathematic terminology is difficult • Prefer both English and Indonesian because I can learn both languages • Prefer English only to frame myself in English speaking everyday • Prefer Indonesian instruction because it is easier to understand • Student noticed teacher's mistakes in using English • Students could tolerate the mistakes teachers made in English expressions • Students noticed that teacher got nervous using English • Students noticed that teacher made progress in using English as a medium of instruction • Teachers help correct teacher's English • Teachers need to check students' understanding • Teachers' pronunciation was hard to understand • Teachers speak English with Indonesian accent which is boring • Teachers still need to study to improve their English
23	Suggestion for future learning		<ul style="list-style-type: none"> • A native speaker of English is needed • All teachers should participate in this BL approach • Case study in online interaction would be interesting • English learning as compulsory for all teachers • ESP topics are needed for learning materials • Interactive CD is needed to support conversation practice • More face-to-face tutorial needed

			<ul style="list-style-type: none"> • More references needed for using English in the classroom • More teaching practises needed • More time and intensive for learning • Need to sustain the English learning for teachers • Post-test to measure capability of teachers to use English • Students can also participate in the BL approach • We also need to motivate students to be more confident in English
24	Use of English in the classroom		<ul style="list-style-type: none"> • Bilingual to help students better understand • Confidence regardless of grammatical and pronunciation error • No responses from students to the English instructions • PBL approach was applied • Powerpoint slides and written words on whiteboard helps students understand • Strategies to involve students in English interaction • Students could understand the English instructions given by the teacher

Appendix M. *The twenty potential themes*

No	Semantic / explicit level	Latent / interpretive level
1		BL promoted collaborative learning
2		Interaction in BL triggered confidence
3	Increased confidence in BL programme	
4		<p>Contradictions:</p> <ul style="list-style-type: none"> • Subject (teachers) – Rules (Policy from Ministry level): Selection of teachers • Subject – Rules (Policy from Ministry and school level): Entry level of teachers' English language proficiency against the language policy • Subject – Rules and Div. of Labour (Policy from Ministry and school level): ICT training opportunity is very little for teacher development • Subject – Rules (Policy from Ministry level): English proficiency versus postgraduate study • Subject – Division of labours (school principal): No rewards and punishment related to English instructions • Subject – Division of labours (peer teachers): No or less commitment to use English • Subject – Division of labour (students): Entry level of students' English proficiency is low. • Subject – Div. of labour (less commitment): teaching and extra load of works while participating in BL programme

		<ul style="list-style-type: none"> • Subject – Div. Labour (peer teachers' belief): no benefit of learning English • Subject – Rules (Policy from Ministry and school levels): Inconsistency between English instructions and Exams in Indonesian language.
5		<p>Active engagement in BL programme:</p> <ul style="list-style-type: none"> • created motivating environment for learning and using English • triggered teachers' confidence • promoted self-directed learning
6		External motives emerged from BL programme
		Internal motives emerged from BL programme
7		<p>Classroom experiences contributed to increase teachers' confidence in using English for classroom instruction:</p> <ul style="list-style-type: none"> • Successful first experience • Positive response / feedback from students • More focus and attention from students (wow factor) • Being relaxed and no pressure • Being able to help students in English homework • Being observed by facilitator <p>Activities in BL programme contributed to</p>

		<p>increase teachers' confidence:</p> <ul style="list-style-type: none"> • Micro-teaching sessions • Better preparation after receiving feedback during micro-teaching • Sharing lesson plans and receiving feedback <p>Self-awareness lead to confidence:</p> <ul style="list-style-type: none"> • Understanding that it is a learning process and, thus, making mistakes is understandable • Feeling that English communication skills were improving • Spirit to improve English communication skills <p>Constructive feedback contributed to build confidence:</p>
8		<p>Conditions that weakened confidence</p> <ul style="list-style-type: none"> • Technical problem during classroom observation • Lack of English language communication skills
9	<p>Impact of BL approach to teaching practices</p> <ul style="list-style-type: none"> • Inspired to do ICT integration in teaching practices (Edmodo, Facebook) • Inspired to undertake classroom action research related to English instructions • Inspired to implement problem-based learning approach 	

10	<p>Typical Indonesian classrooms:</p> <ul style="list-style-type: none"> Teachers' talk dominated the classroom Students' role mostly to answer questions and do tasks instead of asking questions and sharing opinion Technical problems: electricity power off (national issues) 	
11	Blended learning approach triggered motivation to learn and use English for classroom instruction	
12		Contribution of online learning experience for teachers' learning
13		Teachers' perspectives on BL approach
14	The increase percentage of using English as an evidence of motivation and confidence improvement in BL approach	
15		The effect of technical (unanticipated) problems to teachers' confidence
16		Reasons for using bilingual (Indonesian and English): Teachers' perspectives
17		BL approach promoted self-directed / self-determined / self-regulated learning
18		Students' perspectives on teachers' English
19		Teachers' suggestions for future learning
20		Teachers' perspectives on English for classroom instructions

Appendix N. *The thirteen final themes*

No	Themes
1	BL promoted collaborative learning in the English learning process of participants
2	BL promoted self-directed/self-determined/self-regulated learning
3	BL is associated with the changes in the confidence of participants to use English as a medium of instruction
4	BL is associated with the changes in the motivation of participants to use English as a medium of instruction
5	The blended learning course has impacts to the teaching practices of participants
6	Issues around culture, values, and tradition of classrooms
7	Teachers' perspectives on blended learning course
8	Teachers' use of English as a medium of instruction
9	Students' perspectives on teachers' use of English as a medium of instruction
10	Various contradictions or disconnectedness underpinned the blended learning course for Indonesian teachers of vocational high school
11	Knowledge construction / gained
12	Marking should be involved to encourage online participation
13	Reflection? Through micro-teaching, through discussion (comparing and contrast) past experience and new experience

Appendix O. Example of a lesson plan sent through email attachment



LESSON PLAN

Subject : Physics
Class/Semester : X / 2
Meeting : 1st
Time Allocation : 3X40 minutes
Standard Competency : Applying the concept of impulse and momentum
Basic Competency : Understanding the concept of impulse and momentum conservation law

Indicators :

1. Elaborating the concept of impulse and momentum in mathematical formula
2. Explaining the concept of impulse and momentum conservation law in mathematical formula

I. Purpose of the Study

1. The students are able to define and formulate the momentum and impulse
2. The students are able to use the concept of momentum and impulse to solve many physics problems
3. The students are able to formulate momentum conservation law and use it in solving problems

Comment [A1]: define

Comment [A2]: What do you mean?
Can you say it in Bahasa so that I know how to correct it.

II. Materials

Momentum

Momentum is defined as the multiplication product of mass and velocity of the object. Thus, mathematically momentum can be determined as follows

$$p = m v$$

where,

m = mass (kg)

p = momentum (kg m/s)

v = velocity of body (m/s)

The relation between momentum and impulse

Impulse is defined as the change of momentum possessed by an object. Mathematically, impulse is formulated as follow:

$$I = \Delta p$$

Where:

I = impulse (N s)

Δp = momentum possessed (kg m/s)



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F12/WKS21

Momentum conservation law

The momentum conservation law state that "the total momentum of object before collision is equal to the total momentum of object after collision. Thus, mathematically momentum conservation law can be determined as follows

$$p_1 + p_2 = p_1' + p_2'$$

$$m_1 v_1 + m_2 v_2 = m_1 v_1' + m_2 v_2'$$

Where:

p = momentum of object before collision (kg m/s))

p' = momentum of object after collision (kg/m/s)

m = mass (kg)

v = velocity of body before collision (m/s)

v' = velocity of body after collision (m/s)

III. Teaching Methods

Models : Cooperative Learning

Strategy : Students center

Methods : Discussion

Comment [A3]: Student-centered learning

IV. Teaching Steps

KEGIATAN	RINCIAN	WAKTU	Comment [A4]: Stages
Pre-activities	<ul style="list-style-type: none"> The teacher greets the students. The teacher checks the student's attendance The teacher gives the students some information about the purpose of the study. The teacher gives motivation to the students by asking them some question: have you seen the event of traffic accidents? If the mass of motorcycle is the same, which is more damaged that move fast or slow? The teacher informs the students about the teaching methods, that is about group discussion 	15 minute	Comment [A5]: Activity Comment [A6]: Time Comment [A7]: attendance Comment [A8]: learning objectives Comment [A9]: which motorcycle would get worse damaged, the ones running fast or slow?
Whilst activities	<ul style="list-style-type: none"> The teacher explain the students the material about momentum, impulse and momentum conservation law. The students listen the teacher explaining The students join into their groups The teacher gives the students some tasks to discuss in their groups The students discuss the tasks given by the teacher and answer the questions The teacher guide groups who are experiencing difficulty in answering the question discussion 	100 minute	Comment [A10]: Listen to
Post activities	<ul style="list-style-type: none"> The teacher gives the students some homework The teacher end of learning 	5 minute	Comment [A11]: The learning



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F12/WKS2/2

V. Teaching Aids



VI. Assessment

Indicators	Technic	Form	Questions
Elaborating the concept of impulse and momentum in mathematical formula	Writing test	description	<ol style="list-style-type: none"> 1. What is the defined of momentum and impulse? 2. Write the mathematical formula of momentum and impulse! 3. Determine the momentum from the data given below! <ol style="list-style-type: none"> a. A car of 1000kg in mass moves northward at a velocity of 30 m/s b. A child of 40 kg in mass runs southward at a velocity of 5 m/s. c. A body of 20 gram in mass moves at a velocity of 300 m/s. calculate its momentum! 4. An object of 1 kg in mass is at rest, then it is hit by a force F so that it moves at velocity of 8m/s. if the hitter touches the body for 0,02 second, determine the change of momentum of the body!
Explaining the concept of impulse and momentum conservation law in mathematical formula	Writing test	description	<ol style="list-style-type: none"> 1. Explain the conservation law of momentum! 2. A bullet with a mass of 5 gram is fired at a wooden block with a mass of 4 kg. the bullet touches the block and nests in it. The velocity of the bullet when touching the block is 200 m/s. calculate the velocity of the system (block and bullet) after collision!

Comment [A12]: How would you define momentum and impulse?

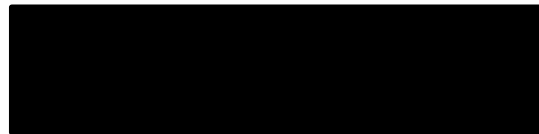
Comment [A13]: Law?



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F12/WKS2/3

	$p_1 + p_2 = p_1' + p_2'$ $m_1 v_1 + m_2 v_2 = m_1 v_1' + m_2 v_2'$ Where: p = momentum of object before collision (kg m/s) p' = momentum of object after collision (kg m/s) m = mass (kg) v = velocity of body before collision (m/s) v' = velocity of body after collision (m/s)	
6. A bullet with a mass of 5 gram is fired at a wooden block with a mass of 4 kg. the bullet touches the block and nests in it. The velocity of the bullet when touching the block is 200 m/s. calculate the velocity of the system (block and bullet) after collision!	$M_b = 5 \text{ g} = 5 \times 10^{-3} \text{ kg}$ $M_b = 4 \text{ kg}$ $V_b = 200 \text{ m/s}$ $V_o = 0$ (the block is at rest before being hit by the bullet) $m_b v_b + m_o v_o = m_b v_b' + m_o v_o'$ because $v_b' = v_o'$ (the bullet nests in the block, so that after collision the velocity of both will be equal) then, $v_b = v_o' = v'$ $m_b v_b + m_o v_o = (m_b + m_o) v'$ $(5 \times 10^{-3} \text{ kg}) (200 \text{ m/s}) + (4 \text{ kg}) (0) = (5 \times 10^{-3} + 4) v'$ $1 \text{ m/s} = 4,005 v'$ $v' = 0,25 \text{ m/s}$ Thus, the velocity of the system (block + bullet) after collision is 0,25 m/s	40
Maximum Score		200
Final Score = (Score / 2)		100



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F12/WKS25

VII. Rubrics

Questions	Key Answers	Scores
1. What is the defined of momentum and impulse?	Momentum is defined as the multiplication product of mass and velocity of the object and Impulse is defined as the change of momentum possessed by an object.	20
2. Write the mathematical formula of momentum and impulse!	Mathematically, momentum is formulated as follow: $p = m v$ where, $m = \text{mass (kg)}$ $p = \text{momentum (kg m/s)}$ $v = \text{velocity of body (m/s)}$ Mathematically, impulse is formulated as follow: $I = \Delta p$ Where: $I = \text{impulse (Ns)}$ $\Delta p = \text{momentum possessed (kg m/s)}$	20
3. Determine the momentum from the data given below!		
a. A car of 1000kg in mass moves northward at a velocity of 30 m/s	$p = m v = 1000 \text{ kg} \times 30 \text{ m/s} = 30.000 \text{ kg m/s}$	20
b. A child of 40 kg in mass runs southward at a velocity of 5 m/s.	$p = m v = 40 \text{ kg} \times 5 \text{ m/s} = 200 \text{ kg m/s}$	20
c. A body of 20 gram in mass moves at a velocity of 300 m/s.	$p = m v = 0,02 \text{ kg} \times 300 \text{ m/s} = 6 \text{ kg m/s}$	20
4. An object of 1 kg in mass is at rest, then it is hit by a force F so that it moves at velocity of 8m/s. if the hitter touches the body for 0,02 second, determine the change of momentum of the body!	The change of momentum $\Delta p = m v_2 - m v_1$ $= (1 \text{ kg}) (8 \text{ m/s}) - (1 \text{ kg}) (0 \text{ m/s})$ $= 8 \text{ kg m/s}$	40
5. Explain the conservation law of momentum!	The momentum conservation law state that "the total momentum of object before collision is equal to the total momentum of object after collision. Thus, mathematically momentum conservation law can be determined as follows	20

Comment [A14]: Definition?



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F12/WKS2/4

Appendix P. Example of a lesson plan posted in Facebook group

Pak ... I am not so confidence with my lesson plan can you help me to correct.

LEARNING IMPLEMENTATION PLAN (LIP)

Competence Skills : Machining Techniques

Subject : Vocational Competence

Class / Semester : XI / 3

Meeting to : 1- 4

Time allotment : hours @ 45 minutes

Competency Standards : Perform Milling Operation

Competency Code : 014 KK 10

Basic Competency : Explaining how to operate a milling machine.

Indicators :

- a. Classifying milling machine tools.
- b. Identifying of milling cutter.
- c. Explaining the milling method.
- d. Calculating the cutting speed for milling
- e. Calculating the turn for the milling machine
- f. Setting the rotation speed of milling machine
- g. Installing cutter in accordance with standard operating procedures.
- h. Setting up work pieces in accordance to operating standard procedures
- i. Making work piece in accordance with job sheet.

I. Purpose of study :

Meeting 1

- Learners can classify the milling machine tools.
- Learners can identify of milling machine tools.
- Learners can explain the milling method.

Meeting 2

- Learners can calculate the cutting speed for milling.
- Learners can calculate the turn for the milling machine.
- Learners can set the rotation speed of milling machines

Meeting 3

- Learners can install cutter in accordance with standard operating procedures.
- Learners can set up work pieces according to operating standard procedures

For indicator part b: you don't need "of" there. It should be Identifying milling cutter. Or else, you could say "Identification of milling cutter."

Appendix Q. Example of classroom observation notes and how much time was spent by one participant

The amount of minutes taken by P1 to use English for classroom instructions at the first week of the blended learning course (Observation 1)

Time: 08.30 – 09.15			
Topic: Gaus Law			
Activities	Amount of minutes	English	Indonesian
Greetings and checking attendance	5'	5'	-
3 other teachers came in to inspect students' neatness (clothing and hair). T stop talking	3'	-	-
Asking students how they feel about the inspection	2'	2'	-
Reviewing previous lesson by asking questions using English and Indonesian	5'	2'	3'
Content delivery: Gaus law in Indonesian with very few English words	13'	2'	13
Supervising and helping students working in groups	17'	-	17

The amount of minutes taken by P1 to use English for classroom instructions at the end of the blended learning course (Observation2)

Time: 09.20 – 10.00			
Topic: Calculating power of alternating power			
Activities	Amount of minutes	English	Indonesian
Greetings and checking attendance	5'	5'	-
Review previous lesson by asking questions	3'	3'	-

Motivating students through a discussion on how to face problems in life	2'	2'	-
Content presentation in English and Indonesian, but dominantly English <ul style="list-style-type: none"> ➤ Powerpoint slides written in English 	18'	10'	8'
Checking students' understanding by asking questions	2	2'	-
Discussion / question and answer sessions in English and Indonesian with about the same amount.	5	5'	-
Asking students to work in group	5	5'	-

The amount of minutes taken by P1 to use English for classroom instructions at the third observation (Observation 3)

Time: 08.29 – 09.12			
Topic: Rotation motion and Equilibrium of rigid body			
Activities	Amount of minutes	English	Indonesian
Greetings and checking attendance	4'	4'	-
Content presentation in English <ul style="list-style-type: none"> ➤ 4 questions written in English displayed on a slide and discussion ➤ Discussion on Q1 and Q2 	12'	12'	-
Discussion on Q3, English used and switched to Indonesian when T suspected that students did not understand the discussion in English.	21'	15'	6'
Discussion on Q4 in English <ul style="list-style-type: none"> ➤ Warning students who were talking while teacher's talk ➤ Closing and giving announcement for next week's class 	6'	6'	-