

Report - Article 1 (pp. 966-967)

The three scales used in the present research are illustrated schematically in Figure 1. In the major scale, the pitch distance between low *doh* and high *doh* is one octave, or 12 semitones. As noted, adjacent tones in the scale are either 1 or 2 semitones apart. Multiplying the frequency of a tone by $2^{1/12}$ (i.e., by 1.059) yields a tone that is 1 semitone higher; multiplying the frequency of a tone by $2^{2/12}$ (i.e., by 1.122) yields a tone that is 2 semitones higher. Hence, the frequency of *doh* is twice that of *doh* an octave below (12 semitones = $2^{12/12}$). In the artificial, unequal-step scale, the pitch distance between the lowest and highest tones is also one octave. Instead of a division into 12 semitones, however, the octave is partitioned into 11 equal subdivisions, with the pitch distance between successive tones in the scale being either 1 subdivision (frequency multiplied by $2^{1/11}$ or 1.065)

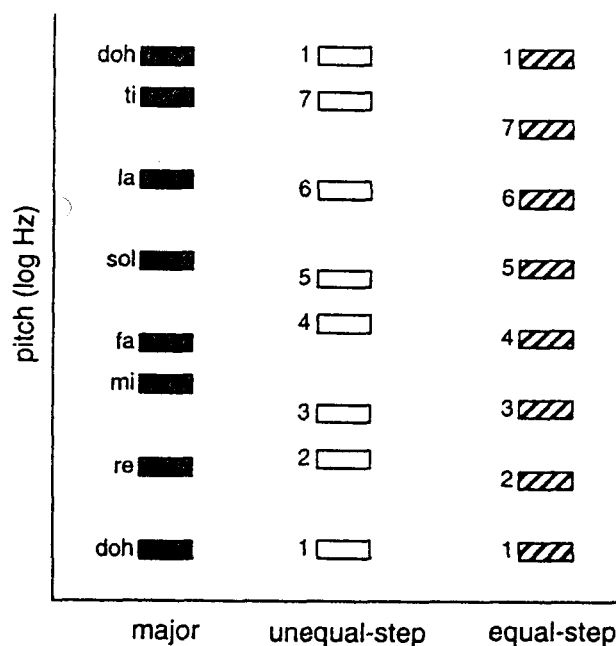


Figure 1. Schematic illustration of the major, unequal-step, and equal-step scales. Adjacent tones in the major scale are separated by a pitch distance of 1 or 2 semitones. Some steps in the unequal-step scale are twice as large as other steps; step size in the equal-step scale does not vary.

or 2 subdivisions (frequency multiplied by $2^{1/11}$ or 1.134). As with the major scale, adjacent tones in the unequal-step scale are either 1 or 2 subdivisions apart, although the unequal-step scale has three steps of 1 subdivision (vs. two 1-semitone steps in major) and four steps of 2 subdivisions (vs. five 2-semitone steps in major). In the equal-step scale, in which the lowest and highest tones are also an octave apart, multiplying a tone by $2^{1/11}$ (i.e., by 1.104) yields the next highest tone in the scale. The scale steps are all 1.713 semitones in size, which is equivalent to the mean size of scale steps in the major and unequal-step scales. Despite the apparent artificiality of equal-step scales, they are reportedly used in music from Thailand (Ellingson, 1992; Myers-Moro, 1993).

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and of a writer prepared to exploit (and not to be exploited) that, but that what it tells us about psychology that category actually covers) is probably a misunderstanding of the process of reading in common sense and the media, it is also still a discourse in English Literature classrooms.

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One might consider, for example, the New South Wales Syllabus documents (Board of Senior School Studies 1982) defining the goals of 2/3 Unit Higher School Certificate English – two years on from the students whose reading formed the basis of this analysis. Under the heading 'The study of texts' is the following opening sentence: 'Any sophisticated concept of "literary criticism" is here unhelpful' – the Leavisite position clearly defined. Interestingly, like Leavis, this Syllabus document identifies poetry as 'the most demanding [and] ... potentially the most rewarding' textual form for analysis. The following instructions about what constitutes the study of poetry are again extremely illuminating in terms of their theoretical source. In a paragraph which rails against students using any kind of theoretical apparatus to read poetry, the document establishes its legitimacy in moral terms: so the student 'may be tempted to collect information about poets and their "periods", about the characteristics of genres ... they may be tempted to catalogue the devices that a poem may employ ... they may be tempted, finally, to go to "the critics" in order to learn, and then repeat, what they take "the accepted view" of a poem or poet to be' (my italics). This language of temptation and fall, of sin, is used to legitimate the concluding instructions about how to study poetry: 'Biographical, descriptive, and critical information is often, of course, illuminating and valuable, and it may guide or support a personal response: but such "information" is not acceptable as a substitute for personal response. For it is particularly in the reading and study of poetry that students need to go beyond the mere acquisition of "information" and nerve themselves to say something on their own accounts.' (My stress.)

These documents demand a detailed analysis in themselves, but several features of the fragments quoted might be noted. First, Leavisite theory is clearly delineated, with its emphasis on personal response rather than theoretical awareness; indeed, in a classic Leavisite strategy, theory is denounced as useless. Secondly, in the passages recounted, terms such as 'information' and 'the critics' are consistently apostrophised, with the implication that

they are less than respectable and somehow inimical to the process of learning. Thirdly, the moral imperative used in the passage above reproduces a view of English derived from Matthew Arnold and continued by Leavis, which sees English as the saviour of 'civilisation' without ever defining or deconstructing what that 'civilisation' might be. Later deconstructions have in fact shown that the notion of civilisation that has traditionally been encoded in writings on English has been a consistently Anglocentric, bourgeois and patriarchal one.⁴ It is also worth noting here that students who accept literally this demand to give a personal response, at either General Reference Examination (Year 10) or Higher School Certificate level, are doomed to failure because the Leavisite demand for 'personal response' is not the commonsense language it appears superficially. Rather, it is a highly coded technical language meaning something quite different, as Joan Rothery's examination of sample GRE English marks demonstrated (Rothery 1991).⁵

(Report - Article 2.)
p.178)

Report - Article 2.

The "Improvements"

To explore the value of new technologies we will look at the literature investigating several of those claimed to have significant benefits:

- Structured Techniques
- Fourth Generation Languages (4GLs)
- Computer Aided Software Engineering (CASE)
- Formal Methods
- Cleanroom Methodology
- Process Models
- Object-Orientation

Structured techniques are defined as the use of structured analysis, structured design, structured programming, and/or any of a number of other techniques labeled as "structured."

Although there is some disagreement in the literature about what the term fourth generation languages means (some say what distinguishes these languages is that they are nonprocedural), here we take the position that a 4GL is a higher-level, problem-focused language. Most contemporary 4GLs are intended for the database/report generation application domain.

By Computer Aided Software Engineering we mean any automated tool that supports the software person in the process of building or maintaining software. Most contemporary CASE tools support systems analysis and design, but we do not limit our definition to that.

Formal methods is a term that has been subject to a wide variety of definitions. Here we take the fairly narrow but traditional computer science view that it applies primarily to formal specification and formal verification.

Cleanroom methodology's purpose is to remove errors from software. What distinguishes the approach is that programmers do no testing; instead, they do formal verification; testing is performed

only by independent testers; and testing is based on "statistical" approaches.

Process models are descriptions of the appropriate process to be used for building software. The most famous process model is the Capability Maturity Model of the Software Engineering Institute at Carnegie Mellon University.

Object-orientation is that methodology that focuses software problem solving on the objects inherent in the problem to be solved, and the generation of objects that address those problem

Discussion

significant benefits have been claimed for technologies, such as reuse or TQM. However, constraints preclude complete coverage of all technologies in this article. The ones presented here are those for which benefit has been demonstrated to be the most prominent and persistent.

Report -
Article 3.
(p. 75)

Report - Article 4.
(pp 123-124)

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The three most recent children's novels on the subject go much further in detailing abuses. What really started drawing public attention to negative

aspects of the schemes were the accounts by adults who were former emigrants, either written or transcribed from oral evidence, which were published in the studies of emigration that appeared in the 1970s and 1980s. Many emigrants look back at their childhood with tolerance and even affection and gratitude for what the emigration societies and their employers did for them. However, a number hint at abuse, and one gains the impression that they are reluctant or prudish to go into detail about this aspect. Nevertheless there is in their accounts a pervading poignancy which gets to the heart of modern perceptions of child emigration.

The Canadian writers who collected adults' recollections (notably Harrison, Bagnell and Corbett)¹⁰ frame them with an attempt to be evenhanded, explaining that although some children were treated badly - and the details, which include unnatural deaths and suicides, are appalling - most of the adults concerned were doing their best according to their means and the concepts of the treatment of children prevailing at the time. Corbett hails the organizers as "visionaries". They argue that the children's life-stories prove that they were better off coming to Canada, and they celebrate the pioneering spirit of the children who became the progenitors of a large proportion of the present Anglo-Canadian population.

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A little Canadian children's story, *The Tin-lined Trunk* (1980) by Mary Hamilton,¹¹ takes the same line. Like the earlier Canadian stories, it stresses the sordid circumstances from which Barnardo rescues a brother and sister in England; it hastens over relating that the boy is moved from one home to another and that he has a brutal master who beats him, but the girl (like Anne) softens the heart of her stern mistress and at the end her employers take them both in permanently, like Betty and Bob. An "afterword" is supplied by Joy Parr (author of *Labouring Children*),¹² which stresses the factual accuracy of the story.

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Parr points out that two-thirds of the emigrants actually left close relations in Britain, although this is not made an issue in the story itself. The fact that most child emigrants were *not* orphans is what struck an Australian, Margaret Humphreys, when she encountered people who had come to Australia as children. They had been separated from their siblings, sometimes by force and often with deceit; the societies had entirely obstructed the children's attempts to communicate with their families, and when they became adults the societies had either lost or withheld information to assist them in tracing relatives. Humphreys' response was to found the Child Migrants Trust in 1986, which has since then counseled former emigrants and assisted them to trace their families.¹³

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Soon after the Trust was founded, Bean and Melville published *Lost Children of the Empire*¹⁴ about emigrants to Australia, including their recollections, which are blunter than the Canadians'. It emphasizes the lifelong emotional damage caused to these children by their insensitive treatment.

Report - Article 5. (pp. 34 - 35)

So what is this test, how was it decided on, and just how "modest" is the requirement? Briefly, IELTS is an international ESOL testing programme jointly operated by the British Council, the University of Cambridge Local Examinations Syndicate (UCLES) and IDP Education Australia: IELTS Australia. It is designed to provide an assessment of the preparedness of candidates for further and higher education and research work through the medium of English. A set of four modules covers the four macro skills of listening, reading, writing and speaking, tested in that order. There are two versions of the reading and writing modules - Academic and General Training. The first is designed for students wishing to study at an undergraduate or postgraduate level. The second, concentrating on "basic survival skills in a broad social and educational context", is "suitable for candidates who are going to h speaking countries to complete their Secondary education or undertake work experience or training programmes not at a city level" (IELTS, 1995:6).

It is the latter, the General Training Module, that aspirant "modest" immigrants over 15 needed to sit, obtaining a pass of Band 4.0 ("modest user"), the middle of a Band 1.0 ("non-user") to Band 9.0 ("expert user") scale. The descriptor for Band 5 is (IELTS, 1995:26):

Modest User
Has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.

Report - Article 6 (p.474)

System learning entails the construction of abstract rules that govern a whole set of items and, also, of the establishment of interrelationships between one abstract rule and another and, therefore, between one set of items and another. For example, the learner of L2 German, after learning a set of verb + e items, may construct a rule for the present simple tense, namely that - e is added to the root form of the verb in the first-person singular. This rule ultimately needs to be related to additional rules that govern other verb inflections in German. As I noted in the introduction to this paper, system learning entails the development of 'a set of elements that are so tightly organized that one cannot change the position of one without changing the position of others' (Labov 1971: 447). It contrasts with the kind of loose network that arises from item learning and which allows for the easy addition and elimination of individual items.

Report - Article 7 (p.1179)

Net primary production for the entire ecosystem in 1998 was 1662 g of dry matter per square meter per year in control plots and 2082 g m⁻² year⁻¹ in experimental plots (Table 2). Our estimates of biomass increment for the canopy pines (685 to 1087 g m⁻² year⁻¹) are within the range reported for other loblolly pine forests (20). The annual biomass increment in canopy pines plus litterfall accounted for 78% of NPP (1998), followed by contributions from fine roots, subcanopy hardwoods, and saplings, shrubs, and vines. Elevated CO₂ caused a consistent increase in NPP during the two full years of treatment (1997 and 1998). There was a trend of higher fine-root turnover and a significant increase in fine-root increment (86%) in the elevated-CO₂ plots in 1998. Higher fine-root turnover under CO₂ enrichment is consistent with higher rates of CO₂ efflux from the soil in fumigated compared with ambient plots [1066 ± 46 g of C per square meter per year in 1997 and 928 ± 19 gC m⁻² year⁻¹ in 1998 in ambient plots; 1183 ± 8 gC m⁻² year⁻¹ in 1997 and 1175 ± 132 gC m⁻² year⁻¹ in 1998 in elevated plots; paired *t* test within each year: *P* = 0.04 for both years, *N* = 3 (21)]. Model simulations of terrestrial ecosystems predict an 8% increase in NPP for the contiguous United States (22) and a ~9% increase for temperate coniferous forests with a doubling of CO₂ (23). It was therefore striking to find 25% stimulation in NPP with only a

Report - Article 8 (pp. 159-160)

Five of the images common to 'Farewell false love' and 'Contr'amour' are also found in 'Là've l'aurora', a long poem first published in 1553 in independent Venetian editions by Andrea Arrivabene (*Il sesto libro delle rime di diversi eccellenti autori*) and Lodovico Dolce (*Rime di diversi eccellenti autori; Stanze di diversi illustri poeti*). Each of these three collections attributed the poem to Egidio da Viterbo (Giles of Viterbo). In 1571 a new attribution was made. The poem was printed at Venice in Agostino Ferentilli's *Primo volume della scielta di stanze di diversi autori Toscani*. Ferentilli asserted that the author, Giovambattista Lapini of Siena, had written the piece for Laura Piccolomini de' Turchi.¹⁰ 'Là've l'aurora' is addressed to an audience of noble ladies. It praises the goddess 'Pudicizia' and attacks the depredations of Cupid. In the course of the poem, Love is characterized in terms very similar to those in 'Farewell false love' and 'Contr'amour':

Amor Tiranno accorto, empio Monarca;
Oracol di menzogna, albergo d'ira;
Larga strada d'error, d'inganni carica;
Tempio, in cui sol si piange e si sospira;
Porto inquieto, e perigliosa barca;
Rinchiuso labirinto, e prigion d'ira;
Fallace guida, e simulato scudo;
Nido di tradimenti ingrato e crudo.

Ei Sommo Re di pianto acerbo ed empio
Da far sol di sospir dure conserve;
Mostro del mondo, e di natura scempio;
Mortal nemico di chi'l segue e serve;
D'atti inonesti, e d'ogni vizio esempio;
Sfrenato ardor, che di lascivia serve;
Illiciti piacer, vergogna, e scorno
Sono i trofei, onde'l suo carro è adorno.

(stanzas 23-4)¹¹

Numerous verbal links—such as those between 'Larga strada d'error' and 'Large chemin d'erreur' (l. 28)—establish beyond question Desportes's indebtedness to 'Là've l'aurora'. Raleigh's poem, though, appears to derive entirely from Desportes's version. Nevertheless, since the sequence of images Raleigh uses in 'Farewell false love' is the most substantive point of contact between the Italian and French poems, it is possible that Raleigh was aware of both texts.¹²

'Farewell false love' circulated in three different states, as a text, variously, of three stanzas,¹³ of four stanzas,¹⁴ and of five stanzas.¹⁵ The three-stanza version—unique to the Houghton manuscript—is associated with a three-stanza poem attributed to Sir Thomas Heneage ('Most welcome love') which is clearly intended as a companion poem to 'Farewell false love' and which counters the images of Raleigh's first three stanzas line by line:

Report - Article 9

(pp. 12-13)

Results

Tables 1, 2, and 3 summarize the results of the study. Table 1 records lower-division requirements in writing and oral communication. Table 2, which summarizes the data on upper-division courses, arranges the data by the courses' institutional homes. The number of courses reflects the minimum standard and does not account for any of the various means used to exempt students from writing requirements, such as the substitution of a one-semester honors course for a two-semester writing sequence, writing placement exam results, or AP, CLEP, or SAT scores; only a few schools offer exemption procedures for a lower-division oral communication requirement. The course name gives a clue to the content, and I also collected, but do not include here, course descriptions and, in some cases, sample syllabi.

Most lower-division communication requirements consist of a course in public speaking; a few schools have a communication requirement that is not simply public speaking or presentation skills, but rather includes small group interaction, interpersonal communication, or organizational communication. Table 3 provides a partial listing of elective communication courses.

Report - Article 10 (p. 71)

Epistemologies grounded in phenomenology include a variety of disciplines, all of which regard being in the world as a pre-condition for coming to know.² Accordingly, as we think about learning to teach it is critical to ask about the nature of the worlds we inhabit. Weiner casts the issue in terms of theory and practice, a dichotomy that others have endeavoured to bring together in a variety of ways that have included the use of professional development schools (Ebert, 1997; Levine, 1997). While it is relatively easy to exhort teacher educators to bridge the gaps between the university and the field experiences it is quite another to have the tools to think about how to do this effectively when things do not work out as planned.

Bourdieu's (1992) theories of habitus and cultural capital are salient to the project of learning to teach. According to Roth and Tobin (1999), "Habitus generates, without reflection, the patterned ways we interact with the world, that is, our practices which embody both actions and perceptions."

Through my many years of being a science teacher I developed a habitus that generates the practices I enact in my present research. Similarly, as a result of being in their lifeworlds and schools, the students I teach also have generated habitus that pertains to their being in science classrooms. However, teaching is most difficult because my habitus generates practices that do not fit well with their practices and the habitus that generates them. At issue is how coparticipation in the same classroom can lead to the development of a new habitus that applies to the communities associated with the teaching and learning of science. What forms of science learning will the habitus support, what curricular activities emerge as conducive to the learning of the students, and what are the optimal roles of teachers and students? (Ken)

not analyzed

Teaching is something that is done. Thus, when individuals speak about teaching they are speaking about re-constructions of teaching and the knowledge of teaching is not the object of their discussions and reflective analyses. However, while teaching, a teacher knows and does in the presence of others within a community (Roth, 1998a, 1998b; Tobin, 1998a). The interactions that occur constrain the knowledge in action and adaptations occur in ways that are reflexive and spontaneous—constrained by the actions of others in the community. As co-participation occurs the knowledge of teachers and students is adapted and mediated by the sets of interactions that occur (Tobin, 1998a). In addition, the habitus (Bourdieu, 1992), that cultural fabric that saturates all interactions but "exists" beyond consciousness and language, also is an integral part of what teachers know and can do.

Report - Article 11

(pp. 1176 - 1177)

The pupils rated their participation on the programme with a mean score of 4.96 (± 1.06 SD); a detailed distribution of the grade frequencies is displayed in figure 1. (~~In the traditional Swiss grading system a 6 represents the best and 1 the worst score; in Germany, for instance, the opposite is the case.~~) Similarly, responses to the Likert items were: 5 strong agreement, 3 neutral, and 1 strong disagreement. Responses to six post-test items, all dealing with acceptance and evaluation of the programme, are displayed in table 2; the response pattern ranged from 4.06 to 3.12 (note that 3 represents the neutral score).

In the pre-/post test comparison, as shown in table 4, pupils equally strongly rate that 'normal' Biology lessons should take place more often as outdoor lessons (4.29 ± 0.93 SD) although they would be less willing to join an after-school workshop (3.64 ± 1.18 SD). This latter item was the only one of four in table 4 which on

a $p < 0.01$ level scored significantly differently after the programme, implying that pupils were more willing after they participated in the programme to invest some of their 'free' time in an after-school education programme. Responses to the other items remained unchanged after participation in the programme: pupils equally disagreed with the statement that Biology lessons serve no particular purpose for later life (2.02 ± 1.14 SD). The pupils are similarly ambivalent about the statement whether their concern for the environment has been developed more by teachers at school than by their parents at home (3.07 ± 1.27 SD). The score in 'Pleasure to be a Pupil' remained constant (3.81 versus 3.91) (table 4) before and after the programme participation which indicates stability towards short-term interventions.

Relevant knowledge about the focus of the present programme was shown to be influenced by programme participation. All relevant 10 multiple choice statements are displayed separately in table 3. The described pre-/post testing, with at least one month time gap, showed an increase of transferred and retained knowledge ($p < 0.001$). Focusing on the argument of guessing the right answer in a multiple choice test, the present paper reveals that a successful transfer is given even when considering high possibilities of guessing. In this context, the score is very encouraging: the reader should know that most biology tests in both school systems are conducted shortly after teaching (only in main subjects tests are given after longer time periods).

Report - Article 12. (p. 240)

The notion of small culture does not therefore relate simply to something smaller in size than large ethnic, national or international cultures, but presents a different paradigm through which to look at social groupings. The small culture paradigm, set against the large culture paradigm is summarized in Table 1. The idea of small cultures (central column) is non-essentialist in that it does not relate to the essences of ethnic², national or international entities. Instead it relates to any cohesive social grouping with no necessary subordination to large cultures. Table 1 also distinguishes a research orientation for each paradigm. 'Research' is used here in the broadest sense, as any academic or non-academic process of learning about culture. Non-academic cultural research is naturally carried out by anyone 'approaching' an unfamiliar social grouping in the sense of Schutz' 'stranger', 'who has to place in question nearly everything that seems unquestionable to the members of the approached group' (1962: 96). In cultural research, small cultures are thus a heuristic means in the process of interpreting group behaviour. The idea of large cultures (right hand column), in contrast, is essentialist in that it relates to the essential differences between ethnic, national and international entities. Because the large culture paradigm begins with a prescriptive desire to seek out and detail differences which are considered the norm, and because it aims to explain behaviour in these terms, it tends to be culturist—a notion which I shall take up later.

Report - Article 14 (p. 160)

We should start by trying to define a network industry. For our purposes, two settings are relevant. In the first setting—where a network industry is defined by a physical network—a distribution grid typically is the backbone that defines the network and that in turn makes a network industry. Natural settings include telegraphs, railroads, telecommunications, oil and natural gas pipelines. Substantial fixed costs, natural uses and weak alternative uses, and an essential physical connectivity all characterize these industries.

These industries often coexist physically because the same connected set of rights-of-way can be used over and over. Telegraphs were strung up to parallel railroads from the very start. When Congress played amateur venture capitalist—giving cash and taking back no equity—and appropriated \$30,000 to allow Samuel Morse to test the “practicability and utility” of the “electro-magnetic telegraph,”¹ Morse turned to the Baltimore & Ohio Railroad to seek permission to string his wires along its rights-of-way, which he received in exchange for giving the railroad the right to use the telegraph for nothing.² Congress came to understand the natural relationship between railroads and the telegraph—one set of rights-of-way, two uses—and the land-grant program that led

Report - Article 15 (pp. 345 - 346)

The African human rights system is anchored in the African Charter, an instrument that is largely promotional with an ambiguous protective function and no credible enforcement mechanism. This is hardly surprising because virtually no African state, with the exceptions of the Gambia, Senegal, and Botswana could even boast of a nominal democracy in 1981, the year that the OAU adopted the African Charter.¹¹ Hopes by observers of the African Commission that its commissioners would robustly construe the Charter's powers to alleviate its weaknesses have largely gone unrealized. With respect to specific functions, and to its performance in general, the African Commission has been a disappointment. This section discusses the architecture of the African Commission and outlines its basic strengths and weaknesses.

The basic functions of the African Commission are both promotional and protective.¹² The promotional function, which the Charter emphasizes,¹³ includes research and dissemination of information through workshops and symposia, the encouragement of national and local human rights institutions, the formulation of principles to address legal problems in human rights, and cooperation with African and international human rights institutions.¹⁴ The Commission is empowered to interpret the Charter at the request of a state party, the OAU, or any organization recognized by the OAU.¹⁵ In contrast, the provision relating to the protective function is quite terse. It provides, without elaborating, only that the Commission shall "[e]nsure the protection of human and peoples' rights" in the Charter.¹⁶

More concretely, the African Charter charges the Commission with three principal functions: examining state reports,¹⁷ considering communi-

cations alleging violations,¹⁸ and expounding the African Charter.¹⁹ These functions follow the general script of other regional as well as universal human rights bodies.²⁰ In particular, the Commission seems to have drawn substantially from the procedures and experiences of the UN Human Rights Committee.²¹ Its Rules of Procedure,²² which provide for process before the Commission, and the Reporting Guidelines,²³ which specify the form and content of state reports, mirror the lessons of other human rights bodies. The Guidelines were supplemented by General Directives, an unpublished document that was sent to foreign ministers of state parties in 1990.²⁴ The Directives are just a precis of the Guidelines.

Report - Article 16

(pp. 973-974)

The object-oriented data model characterizes the latest DBMS generation and the new persistent programming languages (e.g. PJama [2]). In addition to 'pure' object-oriented DBMS (OODBMS),

such as ObjectStore [29], GemStone [10], O₂ [18], and persistent object-oriented programming languages, relational DBMS (RDBMS) are being extended with the features of such models, resulting into the so-called Object-Relational DBMS (ORDBMS).

The object-oriented data model is based on a number of fundamental concepts [8]. Any real-world entity is represented by only one data modeling concept: the object. Each object is uniquely identified by an *object identifier* (OID). The state of each object is defined at any point in time by the value of its *attributes* (also called *instance variables*). The attributes can have as values both *primitive* (or atomic) objects, such as strings, integers, or booleans, and *non-primitive* objects; a non-primitive object in turn consists of a set of attributes (note that when the value of an attribute *A* of an object is a non-primitive object *O*, the OID of *O* is stored in *A*).

Objects with similar attributes and behavior are grouped in classes. A class specifies a set of attributes, defining the object structure, and a set of methods, defining the object behavior. An attribute definition consists of a name and a domain. The domain can be any class, including a primitive class. The fact that a class *C'* is the domain of an attribute of a class *C* establishes an association, often called *aggregation relationship*, between *C* and *C'*. Since, in turn, *C'* has aggregation relationships with the classes that are domains of its attributes and so on, the definition of class *C* results in a direct graph of classes rooted at *C*, called *aggregation hierarchy*. We will refer to attributes of class *C'* in the aggregation hierarchy as *nested attributes* of *C*. An example of an aggregation hierarchy is shown in Figure 1. In the figure, an arc with a white arrow connects an attribute *A* of class *C* to class *C'* if *C'* is domain of *A*. An attribute is labeled with symbol '*' to denote that it is multivalued. Furthermore, classes are organized into inheritance hierarchies. A *subclass* inherits attributes and methods from its *superclass*, and in addition to these may have specific attributes and methods. In Figure 1, an arc with a black arrow connects a class *C* to class *C'* if *C'* is a superclass of *C*.

Because of the nested object structure, object-oriented query languages, such as OQL defined as part of the ODMG standard [12], support restrictions on objects based on predicates against both nested and non-nested attributes of classes. An example of a query, against the aggregation hierarchy of Figure 1, is the following:

Report - Article 17 (p. 238)

At present, education in general is looking precisely in the direction that humanistic language teaching has been moving for years. In Spain, for example, where a sweeping reform in education is underway, two significant changes are the introduction of values education in the classroom, including the EFL classroom, and concern with the emotional side of the learner. A similar trend is evident in the current curriculum reform in Finland. Kohonen and Kaikkonen (1996) summarize the goals established there in 1994 by the National Board of Education, which recognize 'the importance of supporting a holistic personality development of the learner, democratic citizenship education, active learning through learner involvement, and ethical reflection and the respect of cultural diversity'.

More examples are not lacking. The 1996 report on education for the twenty-first century, produced by the UNESCO Commission headed by Jacques Delors, concludes that education is teaching 'to understand, to do, to live together, to be'. The title of the report is 'Learning: the treasure *within*' (emphasis added).

Report - Article 18

(pp 71-73)

5. ECONOMIC ENVIRONMENT AND FDI INFLOWS TO DEVELOPING COUNTRIES

As noted earlier, increasing outflows to developing countries in recent years are one of the most significant changes in the pattern of FDI. Among the developing country regions, however, FDI inflows are rather unbalanced. Asia and the Pacific have received the bulk of these investments. It is estimated that about 70% of FDI flows to developing economies are in the Asia-Pacific region (The United Nations 1996).

Huge capital inflows into Asia and the Pacific, especially into East Asia and the Pacific, are closely related to the economic performance in this region (see Table 1). As indicated in Table 1, the average growth rates of both GNP and external trade in the region were the highest among all countries in the world while inflation and external debt remained relatively low during the 1980-93 period. In contrast, other developing country economies (especially Africa and Latin America and the Caribbean) experienced a relatively slow economic growth, and much higher inflation and external debt as well.³ It is evident that when the previous two periods are further compared

(i.e. 1980-93 and 1970-80), the economic performance of East Asia and the Pacific improved substantially while that of Africa and Latin America and the Caribbean deteriorated significantly.

Within the East Asia-Pacific region, China emerged as the largest recipient of FDI among all developing countries. FDI inflows to China grew, on average, by 30% annually during 1985-90. They leaped by 156% in 1992 and 134% in 1993 (The United Nations 1995). China alone accounted for 47% and 38% of the total flows into the largest ten host developing economies and all developing countries, respectively.⁴ Because of its large domestic market and extremely low wage rates, China has been regarded as an attractive location for FDI inflows.

In contrast, two country groups that have not benefited from the increase of FDI into developing countries continued to be Africa, Latin America and the Caribbean (most are least developed countries or LDCs). Their share of FDI flows into all developing countries has declined significantly; that is, from 12.3% and 34.9% during 1984-89 to 4.7% and 26.6% in 1995, respectively (The United Nations 1996).

There are currently 57 low-income countries (i.e. US\$725 or less of GNP per capita) without the inclusion of several Eastern European (i.e. former Communist countries) and central Asian (i.e. former Soviet Union states) countries (World Bank 1995). Almost 70% of these LDCs are in Africa. The latest statistics show that these LDCs have received only a very small share of FDI flows into developing countries and witnessed a substantial decline during the 1980-90 period.

In summary, it appears that the LDCs in East Asia and the Pacific (China) are faring much better than the LDCs in Africa and Latin America and the Caribbean. Because of existing and potential favorable opportunities, developed countries' firms that invest in these developing economies are more likely to achieve a better risk-return performance than those that invest, say, in the other developing country regions.

Report - Article 19

(pp. 690 - 691)

RESULTS

The mean scores of items (see the Appendix) indicate that although most companies were active in energy conservation, risk reduction, waste reduction, and protection of habitats, fewer companies were active in such areas as materials reduc-

tion, manufacture of less environmentally damaging products, and use of alternative fuels. Thus, fewer companies appeared to be engaged in the search for and adoption of innovative environmental technologies for redesigning products and processes and using sustainable materials.

Table 3 shows the completely standardized parameters and *t*-values of the hypothesized relationships in the structural model. The model appeared to be a good fit to the data, yielding fit indexes (that

is, the NFI, NNFI, and CFI) that exceed .90 and residuals (that is, absolute average off-diagonal standardized residuals [AOSR]) that approach .05, the value recommended for acceptable fit. The comparative fit index was .96, and the chi-square was 11.18 ($p < .01$) with 6 degrees of freedom. This indicates that the data fit the model reasonably well (Bentler & Wu, 1995).

Hypothesis 1, which states that the greater the degree to which a company's managers interpret environmental issues as opportunities, the higher the likelihood of the company exhibiting voluntary environmental strategies, was confirmed with a path parameter estimate that was negative and statistically significant ($t = -3.78, p < .01$).³ Hypotheses 2, 3, and 4 were tests of whether organizational context—namely, higher legitimation of environmental preservation as an integral part of corporate identity, higher discretionary slack available to managers for reducing environmental impact, and higher integration of environmental indicators in employee evaluation systems—will lead to lower threat interpretations of environmental issues. Hypotheses 2 and 3 were confirmed: managerial interpretations of environmental issues as opportunities were significantly influenced by both the degree of legitimation of environmental issues as a part of corporate identity ($t = -4.10; p < .01$) and the discretionary slack available to managers ($t = -3.55, p < .01$). However, the parameter estimate for the path between employee evaluation systems and managerial interpretations was not statistically significant. Therefore, Hypothesis 4 was not confirmed. Organization size, the control variable, was found to have a positive, statistically significant effect on environmental strategy ($t = 3.89, p < .01$). The other control, the scope of operations as measured by the retail exposure of companies, did not have a statistically significant effect on environmental strategy.

Report - Article 20

(pp. 192 - 194)

Table 1 displays the mean number of problems found by individual evaluators for each problem type and task description. The first analysis examined whether the types of problems found by participants differed based on task description (see Appendix for samples of problems by type and severity). The number of problems found by each participant were used as the basis for comparing the detailed and short task descriptions. Separate Kruskal-Wallis one-way ANOVAs were carried out for each problem type. The results are summarized in the following:

1. Missing or broken functionality: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 17) = .01$.
2. User would not know what to do: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 17) = .22$.
3. User would not be able to find appropriate control: Participants receiving short task descriptions found more problems than those receiving detailed task descriptions, $\chi^2(1, N = 17) = 6.48, p < .05$.
4. User would not know how to operate control: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 17) = .60$.
5. System does not provide appropriate feedback: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 17) = 2.32$.

Table 2 displays the number of unique problems found by the two groups of evaluators for each problem type. The second analysis examined the total number of unique problems found by the short and detailed task-description groups. The total number of unique problems found by both the short and detailed task-description groups was used as the entire set of problems. The two task-description groups were compared based on the number of problems found out of the total problem set. Separate chi-square tests were carried out for each problem type:

1. Missing or broken functionality: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 24) = 2.74$.
2. User would not know what to do: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 16) = 1.07$.
3. User would not be able to find appropriate control: Participants receiving short task descriptions found more problems than those receiving detailed task descriptions, $\chi^2(1, N = 50) = 5.33, p < .05$.
4. User would not know how to operate control: Short and detailed task descriptions did not differ in the number of problems found, $\chi^2(1, N = 20) = 0.22$.
5. System does not provide appropriate feedback: Participants receiving detailed task descriptions found more problems than participants receiving short task descriptions, $\chi^2(1, N = 52) = 5.04, p < .05$.

To summarize, the analyses demonstrated that individual evaluators given short task descriptions identified more problems where users would not be able to find the appropriate control. Further, this continued to be true when results were combined for groups of evaluators. The group-based analysis also demonstrated that, when a sufficient number of evaluators participated, detailed task descriptions resulted in the identification of more problems related to the system failing to provide appropriate feedback.

These results confirm that the type of task description an evaluator receives can affect the type of problems identified. Specifically, evaluators receiving short task descriptions found more problems related to difficulty locating the appropriate controls, whereas those evaluators receiving detailed task descriptions found more problems related to inadequate system feedback. However, the effect related to inadequate feedback was weaker than the effect related to locating controls as evi-

Explanation - Article 1 (p. 968)

$SD = 0.55$) significantly exceeded performance in the equal-step condition ($M = -0.15$, $SD = 0.62$), $t(38) = 2.45$, $p = .0190$.

Proportions of hits (head turns during change trials) and false alarms (head turns during no-change trials) were converted to d' scores for each infant according to yes-no tables of signal-detection theory (Elliott, 1964). To eliminate the possibility of infinite d' scores that could result from perfect responding, 0.5 was added to the numerator (the number of hits or false alarms) and 1 to the denominator (the number of trials), which altered the d' scores slightly but did not affect the rank ordering of scores (Thorpe, Trehub, Morrongiello, & Bull, 1988).

One-sample t tests were used to evaluate the detectability of the change, that is, whether the scores significantly exceeded chance levels ($d' = 0$, or an equal number of hits and false alarms) in each condition. Infants detected the mistunings in the major-scale condition, $t(19) = 2.47$, $p = .0229$, but not in the equal-step condition, $t(19) = -1.09$, $p = .2907$. An independent-samples t test confirmed that performance in the major-scale condition ($M = 0.30$,

Explanation - Article 2 (p. 968)

The aim of this chapter is to explore how and why the students ¹³

might have made that reading, in terms of the discourses - institutional, disciplinary, and pedagogical - operating in the secondary English classroom. In doing so I shall be delineating a theoretical positioning which makes sense of that reading - a positioning which can also assist students to situate their own reading in relation to the demands of the discipline and of the institution in which they are participating. This theoretical positioning holds that the meaning or meanings of a text cannot be decoded or interpreted simply by analysis of the textual manipulation or realisation of one or more semiotic systems. Instead, the theory holds that meaning-making is a complex operation, involving not only the reader (whose accumulated social and cultural capital gives her/him different kinds of access to readings), but also a number of interrelated textual and contextual (if such a division be permitted for reasons of analysis) features: first, textual semiosis or the 'poetics' of the text (how choices made in the production of the text - for example, genres used, intertextual referencing, language choices - contribute to the production of meaning); secondly, the institutional setting within which the reading takes place (which might range from classroom to schoolyard, each a site with particular discursive and material demands); and thirdly, the material practice constituting the text (that is, the technology involved in the constitution of the text with which readers may be more or less familiar).

Another fundamental premise of the theoretical position delineated in this chapter is that, as a consequence of this conceptualisation of meaning-making practice, texts are seen as potentially productive of a great number of meanings, not just one. However, this does not mean that every one of these meanings or readings has the same value, socially and institutionally. Basically, it means that for any text, at a particular time and place, there will be one or more readings which is/are institutionally approved and validated. These approved meanings or readings are produced when an approved methodology or way of reading is used to activate meanings which accord with the basic discursive practice of the institution within which the reading takes place. Within the institution of education, for example, this means using an approved methodology (discussed further below) to activate meanings which accord with the discursive practice of the institution, which is fundamentally liberal humanism informed by, for example, some feminist and anti-racist discourses. Other mean-

Other

Explanation - Article 6 (p. 474)

SLA researchers do not agree about how learners construct systems. One view emphasizes the importance of a specific linguistic faculty that dictates which rules are possible in a language and facilitates the rapid determination of these rules for a particular language from limited input. Another adopts an empiricist view of learning, seeing rules as regularities that are gradually abstracted from data using perceptual and cognitive mechanisms that are also involved in other kinds of learning. It is the latter position that accords most closely with the view of L2 acquisition I have espoused in this paper, although

Explanation - Article 7 (pp 1177 - 1178)

concentrations of CO₂.

E To examine the response of an intact forest ecosystem to projected elevated concentrations of CO₂, we installed a gas-delivery system in a 13-year-old loblolly pine (*Pinus taeda* L.) plantation in the Piedmont region of North Carolina (35°97'N 79°09'W) (8). The free-air CO₂ enrichment (FACE) system (9) increases the concentration of atmospheric CO₂ in 30-m-diameter experimental plots nested within this continuous pine forest (Fig. 1). Each FACE ring (plot) consists of a large circular plenum that delivers air to an array of 32 vertical pipes. The pipes extend from the forest floor through the 14-m-tall forest canopy and contain adjustable ports at 50-cm intervals. These ports are tuned to control the atmospheric concentration of CO₂ ([CO₂]) through the entire volume of forest. In the three elevated CO₂ plots, CO₂ was injected to maintain the atmosphere at ambient [CO₂] plus 200 μl liter⁻¹ (~560 μl liter⁻¹); three ambient CO₂ plots were treated identically

but without the addition of CO₂ (10). Unlike closed growth chambers or open-top chambers, the FACE system controls atmospheric [CO₂] without changing other variables. Moreover, its size permits the experimental manipulation of an entire forest ecosystem, including vegetation and soil components. The injection of CO₂ was initiated on 27 August 1996.

Explanation - Article 8

(pp 158 - 159)

Raleigh's indebtedness is clear. His most obvious alteration is to reposition Desportes's initial definitions of love within a valedictory framework which resembles the ending of the French poem. He alters the order of images but retains enough of their phraseology to demonstrate his own poem's dependence. Five of Desportes's phrases are closely Englished. 'Oracle de mensonge' (l. 27) becomes 'oracle of lyes' (l. 1), 'Large chemin d'erreur' (l. 28) 'A way of error' (l. 5), 'Temple de trahison' (l. 29) 'a temple full of treason' (l. 5), 'Meurtrier de tout repos' (l. 32) 'murtherer of repose' (l. 8), and 'Nid de deception' (l. 41) 'a neast of deepe deceipte' (l. 11). The links are only slightly less clear between 'a beaste with rage possesst' (l. 4) and 'Bestiale fureur' (l. 35), 'A maze wherein affection fyndes no ende' (l. 15) and 'Labyrinthe subtil' (l. 40), and between 'A bastarde borne' (l. 4) and 'bastard songe-malice' (l. 34). Raleigh's translation of Desportes' line 33 ('Bruvage empoisonné, serpent couvert de fleurs') omits 'Bruvage' but retains the adjective 'empoisonné': 'A poysoned serpent covered all with flowers' (l. 7). (Later on, 'Bruvage empoisonné' is transmuted to 'A gilded hooke that holdes a poysoned bate', l. 12.) Desportes's 'ennemy de pitié' (l. 27) becomes in Raleigh's hands 'A mortall foe, an enemye to reste' (l. 2), while Raleigh's descriptions of Love as 'An envyouy boye from whom all cares aryse' (l. 2), 'An idle boy that sleepes in pleasures lapp' (l. 22), and 'a nurse of tremblinge feare' (l. 19) are severally paralleled in Desportes's envoi: 'Adieu! enfant plein de malice, | Adieu l'Oiseveté, ta mere et ta nourrice' (ll. 172-3). 'A school of guile' (l. 11) appears to derive from Desportes's lines 61-2 (not quoted above): 'Tout ce qu'on peut aprendre en tes vaines escolles, | Ce sont des trahisons, des feintes, des paroles . . .'.⁸ 'Mother of sighes' in line 8 concretizes 'La seule occasion qui fait que l'on soupire' (l. 26). The image of fancy's 'Dead . . . roote' (l. 30) in the closing line of Raleigh's poem echoes Desportes's 'Racine de malheur' (l. 39), while the abstract definitions at the end of Raleigh's fourth stanza—'A deepe mistrust of that which certeyne seemes, | A hope of that which reason doubtfull deemes'—echo Desportes's 'Entretenu d'espoir, de crainte et de desir' (l. 42; cf. also 'une esperance vaine', l. 92). Here at line 24, as also at line 7 ('In all effects contrary unto reason'—a rewriting of 'Bref, en tous tes effets, contraire à l'amitié', l. 30) and line 13 ('A fortresse foyld whom reason did defend'), Raleigh departs from his source to stress Love's opposition to Reason. The allegorical framework established at the beginning of 'Contr'amour'—Reason's role as the agent who has persuaded the writer to eschew 'false love'—is thus imported into Raleigh's more concise text. The

Explanation - Article 10 (pp. 71 - 72)

In the act of teaching, a teacher's habitus generates practices as part of enacting a curriculum; as such, the teacher interacts with learners and the artifacts that serve as resources to support learning. The habitus frames teaching without conscious thought and to the extent that the curriculum is enacted smoothly there is little conscious thought about the various components of teaching. Only when the habitus of the teacher does not fit with the habitus of the students is there a need for deliberation and change. At this time a teacher can become conscious of the components of his/her habitus and identify parts that are working and those that are not. Through reflection and subsequent action it is possible to generate a new habitus that may be better adapted to the milieu in which teaching is to occur.

Because of the complex faces of teacher knowledge it is important that prospective teachers be given opportunities to learn to teach science by teaching science. An obvious way that has been tried and tested for as long as there has been teacher education is to place student teachers in classrooms and allow them to teach a whole class alone for a sequence of lessons. Student teaching has been structured to allow this to happen for a long time. However, another important way to learn to teach is to teach alongside others who are teaching (Roth, Masciotra, & Boyd, 1999). In this way a person not only learns by doing but also has opportunities to experience teaching of others as it is done in a co-participatory way. Because co-teaching individuals see the classroom from the same vantage point, they truly share their experiences. The shared experiences associated with co-teaching are then starting points for conversations about practice, discussions about events and issues associated with practice and the reflective possibilities for future teaching episodes. Co-teaching enables student teachers to experience relative success and failure while teaching in the same space as another. The other teacher can be another student teacher, a cooperating teacher, a methods instructor or a college supervisor. Recently our teacher education program has begun to arrange for co-teaching to occur, not only at the beginning of a student teaching assignment but throughout that experience so that a person learning to teach has opportunities to "become like the other" through co-participation. Although co-teaching situations create opportunities for reflective discussions after the teaching has occurred, they also are sites for learning through co-participation those aspects of teaching that are beyond language. What is salient in this learning situation is that the knowledge of teaching, as it is enacted, is adapted in situ—as distinct from the reconstructed knowledge that is adapted during reflective analyses that occur after teaching has occurred.

Explanation - Article 11 (pp 1171 - 1172)

The purpose of the programme was to bring pupils into close contact with the natural history of a local endangered bird by integrating inside- and outside-the-classroom approaches as well as cognitive and affective objectives and methods. The programme was developed by environmentalists of two Swiss non-profit conservation agencies (Schmid 1995, Vogel and Müller 1995, 1996) and offered to all interested schools of the German-speaking part of the country. This project included letters to invite participation and provision of the programme material free of charge to all interested schools. The outline consisted of a brief description of the course over a school year; however, the programme was intended to be flexible regarding individual integration into school curricula. The instruction was recommended by the regular teacher and not by external instructors. No additional special training for the participating teacher was provided.

The first unit 'We become acquainted with an enduring flyer' was intended to lay a cognitive foundation by concentrating on the Swift's natural history. A 3-hour lesson was developed. This includes becoming acquainted with the bird's excellent adaptation to its life in the air, its hunting strategies and its morphological distinction to Swallows. Why Swifts are acknowledged as native birds to Europe despite their rather brief season in the region is also discussed.

The second unit 'We construct and mount nest-boxes' is a hands-on science lesson which required some extra-curricular lessons. The lack or loss of adequate nesting possibilities is featured as a major threat to the bird population. This offers a genuine chance to intervene directly, other factors such as the protective status of the biotope quality could not possibly be influenced by pupils of this age group in such a direct manner. Under a teacher's supervision every pupil constructs a wooden nest-box in the craft room at school. This is quite different from 'normal' lessons, since this lesson's outcome is directly visible to the pupils.

The third unit 'We write to African children' attempts a still rare bilingual approach in Biology lessons. Swifts stay only three months with us before they depart for their winter quarters in western and southern Africa, passing different vegetation zones. With a simple cord along a globe or a ruler on the page of an atlas, the pupils were able to follow and imagine this long route across continents. This instruction unit finally emphasizes the climate and biotopes of Senegal but also features three main environmental problems of this country: deforestation, over-grazing and climate warming. German-speaking pupils contact pen-pals in Senegal by writing in French and acquire original information from children of the same age-group. Relevant addresses as well as information on a current environmental control programme in Senegal were provided as part of the programme.

The fourth unit 'We observe Swifts' entails watching, if possible, the self-constructed nesting boxes; it required an afternoon trip. Although this was also made possible in protected colonies, since many boxes were not yet occupied by the bird, observing Swifts on their 'own' nest-boxes was preferred for additional emotional advantages. This unit was developed in the conviction that promoting children's abilities to watch for long periods even when behaviour processes are not observable (as in densely condensed television slots) is nowadays a great didactic challenge in this context.

Explanation - Article 12 (p. 248)

Small culture is thus a dynamic, ongoing group process which operates in changing circumstances to enable group members to make sense of and operate meaningfully within those circumstances. When a researcher looks at an unfamiliar social grouping, it can be said to have a small culture when there is a discernible set of behaviours and understandings connected with group cohesion. The dynamic aspect of small culture is central to its nature, having the capacity to exist, form and change as required. According to Beales *et al.*, 'the outstanding characteristic of a cultural system is that it is in process; it moves' (1967: 5). Small culture is thus 'the sum total of all the processes, happenings, or activities in which a given set or several, sets of people habitually engage' (*ibid.*: 9). Thus, small culture constitutes a social 'tool-kit' which emerges to 'solve problems' when required (Crane 1994: 11). Moreover, it involves an underlying competence in which 'people are not passive "cultural dopes"; they are active, often skilled users' (*ibid.*: 11). A good example of this is the classroom group where a small culture will form from scratch when the group first comes together, each member using her or his culture-making ability to form rules and meanings in collaboration with others.

Explanation - Article 13 (pp 142-143)

The importance of sustainability in project objectives, frequently referred to in the ELT literature, is an essential feature in the planning of all aid projects (King 1991, Iredale 1990). The assumptions made in the project framework document require a clearer and more flexible consideration of, among others, the following areas:

Appropriate briefing More could be done before the prospective ELT practitioner takes up his or her new post, in the form of on-the-job advice, backed by the experiences of previous personnel. A thorough grounding in the language and culture of the host country, and in problems affecting projects in countries with similar profiles, should be provided. Reference material, including Coleman (1992), Holliday (1992, 1994, 1995), and Davies (1991), would also be useful here. The ELT practitioner should be made aware at the outset of local (institutional) politics, and previous projects and interventions in other areas of the institution's work. Regular discussions with sponsoring aid personnel are also essential, in case adjustments to objectives become necessary. At the University of Malawi, undercurrents of resentment over the effects of previous ELT work caused difficulty. Significantly, very little remained of the materials or methodologies introduced from a previous project, some 10 years before. Knowledge of this work and an examination of the reasons for its apparent long-term failure might have offered valuable assistance in avoiding early mistakes.

Parallel projects Co-ordination with other local project teams is essential for good management, especially where responsibilities may overlap. In Malawi, for instance, German and Dutch aid projects were both working in science education, but co-ordination in areas affecting language was negligible. ELT projects in Botswana, Namibia, Zambia, and Malawi remained isolated from each other, although contact with projects in adjacent countries could have avoided duplication of effort, and provided ideas and warnings to those working on similar problems.

Time-scale of project Greater flexibility is needed in deciding on the time-scale of a project, since innovations cannot be sustained in short periods. Unreasonable time constraints may prevent the development of strategies for dealing with the real-world situation found at institutions, which may not have been apparent from the brief visits made by aid personnel at the initial planning stages. In Malawi, the ODA's shift in policy towards support for primary schools required a hasty withdrawal from tertiary institutions. This occurred at a time of political change and

Explanation - Article 14 (p. 180)

This analysis lets us look at the special issues posed by an intellectual property overlay on *Aspen Skiing*. Notwithstanding how we casually talk about patents or copyrights, the immediate goal of the patent law or copyright law is not to confer a monopoly on the rights holder. The point of intellectual property law is to create a scheme of meaningful property rights for a particular slice of intellectual property. The intellectual property rights holder should have the same right to intangible property that I have for my tangible property. I exclude you from my watch by possessing it, but I cannot exclude you from my intellectual property in the same way. Hence, intellectual property law creates the power to exclude others, a power implemented through an infringement action. We could say that we have given you a monopoly over your intellectual property, but that would not be any more meaningful than saying that I have a monopoly over my watch.

Explanation - Article 15 (pp. 347 - 348)

Although the Charter does not explicitly require it, communications are considered in private or closed sessions.²⁹ If the Commission determines that one or more communications "relate to special cases which reveal the existence of a series of serious or massive violations"³⁰ of human rights, it must draw the attention of the OAU to such a situation and, presumably, conduct an on-site investigation. In the case of an emergency, the Commission must inform the Chair of the OAU and request an in-depth study, which most likely would call for on-site fact-finding.³¹ The Commission's power to conduct such investigations is clearly authorized by the Charter, which empowers it to "resort to any appropriate method of investigation."³² This provision had remained a dead letter until 1995 when the Commission, with the assistance of the OAU Secretary General, secured the agreement of Senegal and Togo for field investigations.³³ Until this point however, the commissioners had been reluctant to claim these powers.³⁴

The Commission's formula for considering individual communications closely mirrors that of the UN Human Rights Committee (HRC).³⁵ In a format similar to that of the HRC, the Commission arranges its decisions into sections dealing with facts, arguments, admissibility of evidence, merits of the case, and the final conclusion. However, each of these sections is scant in both substance and reasoning. For example, in *Constitutional Rights Project v. Nigeria*,³⁶ a petition challenging a death penalty that was imposed in violation of due process protections, the Commission adopted a scripted presentation, "declared" a violation of the Charter provisions, and "recommended" that Nigeria free the petitioners.³⁷ Likewise, in another petition, *Civil Liberties Organization v. Nigeria*,³⁸ the Commission cursorily found that the government enacted laws, in violation of the African Charter, to abridge due process rights and undermine the independence of the judiciary. However, it is fair to say that the communications procedure has come a long way since the early days. A predictable tradition of more fully considering petitions is slowly evolving.

A comparison of the decisions over the years shows that while room remains for considerable improvement, the quality of the Commission's reasoning and decision making has continued to evolve positively. In the past two years, the decisions of the Commission have been more substantive and elaborate on the issues of law and fact that are raised in and considered by communications.³⁹

Explanation - Article 16 (pp. 993 - 994)

The aim of the calibration step is to derive the factors for the generic cost formulas presented in Section 4. In particular, we have estimated only the factors belonging to the first two groups (subscripts 0 and 1), in order to better analyze index performance.

In order to derive calibration factors for the cost formulas of the generic cost model, when used on a given OODBMS, a synthetic database must be used. Values for calibration factors are then derived from the cost of executing such queries and updates against such database.

In order to reduce the impact of physical storage factors, such as pagination and data placement, Gardarin *et al.* in [24] suggest for calibration a specific synthetic database whose attribute values guarantee uniform distribution criteria. Another important requirement is that the synthetic database and the calibration procedures must guarantee the prediction of the execution strategy that will be used by the optimizer. Under this assumption, the results obtained by executing queries and update operations can be used to determine calibration factors.

In order to calibrate the formulas of the generic cost model presented in Section 4.1, we have followed this approach and we have used the database presented in [24]. The database is composed by six classes that are interconnected as shown in Figure 7. Each object, an instance of one of these classes, has seven attributes, on which some simple indexes are defined. Objects in each class have an average fan-out equal to 4. Values are assigned to object attributes so that the uniform distribution of attribute values is guaranteed for different kinds of query (equality and range queries) and for different access methods (DFF, simple index, complex indexes). On this database, several queries and maintenance operations have been performed, on direct and nested attributes. We refer the reader to [24] for further details on the synthetic database.

Values for calibrating factors have been derived as follows. First of all, the number of page accesses and the time required to execute queries and maintenance operations have been determined by using a monitoring tool available for the OODBMS at hand. Such tool allows one to tune database operations in terms of page accesses, classified with respect to the 'type' of accesses. For example the counter for the system access allows one to establish values for the first group of parameters (see Section 4) and response time. Using this information, we have determined the values for calibrating factors. The obtained values are presented in Table V.

Explanation - Article 17

(p. 239)

Similarly, Stevick (1996) strongly emphasizes the importance for language learning of the influence of affect on the cognitive processes involved in memory.

Contemporary theorists in pragmatics tell us that, for language to achieve its communicative function, the role played by affect is essential. Janney and Arndt (1992) stress the importance of the modification of verbal and non-verbal behaviour in signalling feelings and attitudes as a universal means to avoid conflicts. Since misunderstandings are inevitable in intercultural communication, it is important for speakers to express themselves in a tactful manner. 'In an atmosphere of empathy and respect partners are able to view misunderstandings as temporary breakdowns in communication rather than having to interpret them as threats to face' (ibid.: 21). There are important implications on both the interpersonal and the international levels in this point of view. So we also find pragmatic justification for taking into account affective as well as cognitive aspects of learning when we strive to help our students by 'extending their language competence', a goal that humanistic language teachers most certainly share with Gadd.

As for Gadd's praiseworthy desire to deal with his students' general education, particularly 'developing the ability to reason', many humanistic teachers have been working in that area for years. For example, the use of material from de Bono (1970, 1982) is quite common in humanistic-type language classes, and I might remit Gadd to Berer,

Explanation - Article 18

(p. 68)

It is widely suggested that successful international operations of a firm depend on the ownership advantages it possesses and the local environment host countries provide (Qian 1994, 1996). These can be regarded as necessary conditions for achieving higher profits and lower risks in international operations. Firms will select foreign locations in which they can exploit their ownership advantages.

According to FDI theory, firms must possess ownership advantages not available to existing and potential local competitors when they invest in overseas markets (Buckley and Casson 1976; Caves 1971, 1982; Dunning 1973, 1979; Errunza and Senbet 1981; Hood and Young 1979; Hymer 1960, 1976; Kim *et al.* 1989; Kindleberger 1969; Markides and Ittner 1994; Yu and Ito 1988). These ownership advantages, largely in the form of intangible assets, represent a range of competitive strengths which are essential to their continued growth and ultimately to their survival (Dunning 1993). The advantages provide these firms an edge over their competitors in similar locations and thus serve to compensate for the additional costs of operating across national boundaries.

Firm-specific advantages of MNCs (e.g. technical expertise) can be made available to subsidiaries in developing countries at a low cost whereas a local firm would have to bear the full cost of obtaining them. These significant advantages can be transferred with little additional cost to the parent firm and help subsidiaries exploit developing country markets to a great extent (Rugman 1981). It is therefore expected that these firms can achieve higher profits when they invest in developing countries than in developed countries or in the home country.

Explanation - Article 19 (pp. 686 - 687)

~~-gas industry~~ I used a self-report measure (triangulated via multiple informants) based on a 54-item seven-point Likert scale to elicit responses on environmental actions in eight categories of industry environmental impact. These categories were based on my exploratory research, on the Coalition of Environmentally Responsible Economies (CERES) principles, and on the environmental strategy literature (e.g., Gladwin, Kennelly & Krause, 1995; Schmidheiny, 1992; Starik & Rands, 1995).

To externally validate this measure, I asked a panel consisting of an environmental consultant to the industry, an environmental activist, and a retired director of the AERCB to rate the 99 responding companies on a one-to-seven scale, drawing on their perceptions of the extent to which the companies' environmental actions went beyond con-

formance to regulatory compliance and common industry practices. Each panelist had been associated with the oil and gas industry for a minimum of 25 years and was able to broadly compare the environmental practices of individual companies. I averaged the rankings of the three to arrive at a final panel ranking on a one-to-seven scale. I compared the panel scores for each company to a single composite self-report score from company managers on the eight categories of industry environmental impact. Even though individual company scores varied, the correlation between the two sets of scores was .79 ($p < .01$). Nine out of the ten companies ranked highest by all three panelists also had the highest self-report scores from managers. Similarly, six of the ten firms ranked lowest by the panelists had the lowest self-report scores.

Explanation - Article 20

(p. 192)

Both the type and severity of the problems found were analyzed to determine whether the characteristics of the problems differed based on the task description provided. Two statistical tests were utilized for each analysis.

The first analysis examined the number of problems found by individual evaluators to determine whether the task description had an effect on the characteristics of the problems found. This analysis used the Kruskal-Wallis one-way analysis of variance (ANOVA).

Because it is common for results to be combined for multiple evaluators, a second analysis examined the number of unique problems found by groups of evaluators. The set of unique problems was determined by assembling all of the problems found and eliminating duplicates (i.e., if the same problem was found by multiple evaluators, it counted only once). These data were subjected to a chi-square test comparing the number of unique problems found when using short and detailed task descriptions.

Discussion - Article 1 (p. 965)

The diversity of musical forms across cultures (e.g., Western, Indian, Chinese, African) and even within a culture (e.g., pop, jazz, Baroque) implies that there are few defining features of music. Accordingly, definitions of music are necessarily general, as can be seen in the following examples: "the art of combining vocal or instrumental sounds (or both) to produce beauty of form, harmony, and expression of emotion" (Allen, 1990, p. 781) or "humanly produced sequences of tones or tone combinations that are non-referential" (Trehub & Schellenberg, 1995, p. 2). Nevertheless, diversity does not preclude the possibility of structural commonalities across musical cultures (Dowling & Harwood, 1986; Trehub, Schellenberg, & Hill, 1997). For example, acknowledged musical universals include the musical equivalence of tones an octave apart and the use of discrete pitches rather than infinitely variable pitches (Dowling & Harwood, 1986; Handel, 1989).

Indeed, because music and its perception are undoubtedly influenced by cognitive constraints, one would expect a number of similarities across cultures. For example, limitations of working memory constrain the size of the pitch set (i.e., the number of discrete tones) in any musical scale (Dowling & Harwood, 1986), which in turn constrains the melodies derived from such scales. Musical scales across cultures typically have five to seven pitches, remaining well within the range of working memory capacity (Miller, 1956). This limited set of pitches allows the listener to

Discussion - Article 3

(pp. 75 - 76)

The Findings

Here the relevant findings for each of the improvements listed previously will be considered and discussed.

Structured techniques. The earliest improvement touted as a breakthrough solution for software problems was the structured techniques. In the early 1970s, the techniques were advocated in a series of documents from IBM. Nearly all software professionals and students have by now been exposed to these techniques. Given the length of time that the techniques have been used in both practice and academia, one would expect numerous research findings identifying the benefits of the approach.

Those expectations are in fact false. Ten years after their first usage, a research study [12] reviewed the literature on the techniques and found "equivocal results, and no solid benefit data, to support the use of the approach. It is important to note that the findings did not suggest that the structured techniques had no value; it only found that that value had never been determined.

That study, although it happened 10 years after the onset of the structured "revolution," was published nearly 15 years ago. Have the intervening years been any more productive in evaluating the benefits of the structured techniques?

The answer is no. One recent study found "modest-measurable, but not overwhelming" advantages of structured design over more informal design approaches [7]. There have been few other objective attempts to evaluate these approaches.

4GL. In striking contrast with the qualitative studies of the structured techniques, there have been some interesting research into 4GLs. Three studies conducted in the 1980s found specific benefits and costs regarding 4GLs vs. traditional third generation languages such as Cobol.

The studies, by Misra and Jalics, Matz and by Verner and Tate, summarized in [1], report the following results:

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Discussion - Article 4

(p. 121)

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The human drama of these children and their experiences in Britain, on the journey to the colonies, and after arrival in the new lands, provides rich potential for child-centred literature. It might have been expected that contemporary authors would have made use of the theme, and that modern writers of historical fiction would have seen this as a worthwhile subject. Yet the interest has been exceedingly limited: I can trace only six juvenile novels, both contemporary and modern, that feature these emigrant children.

Certain periods in history are favourites with historical novelists while they remain silent over others. The subject of child emigration ought to have been attractive for several reasons. One is the amount and variety of source material available: without going to primary sources such as the files of the emigration societies, one can have access to official reports and Parliamentary Papers; histories and specialized studies of emigration schemes; contemporary letters and oral testimony by the children and various adults, including newspaper debate, reproduced in these studies; oral and written memoirs by grown-up emigrants; biographies and autobiographies; tracts by organizers of the schemes; verse by one of the organizers; a book-length first-hand account by a journalist; photographs; and documentary and mini-series television films. Even an African folk tale in Andrew Lang's *The Orange Fairy Book* (1906) is drawn into the *melange*.²

It is easy to imagine a post-modern young adult novel on child emigration along the lines of Gary Crew's *Strange Objects* (1990), comprising a variety of documents modelled on genuine items.³ There is, in fact, a fair degree of intertextuality between what fiction has been produced and some of these sources, for the novels not only create imaginary voices, but include real people, events and documents.

Another fascination about child emigration is that it forms a case study in changing conceptions of children's rights. A corollary to this is the debate over whether to apply modern ethical judgements to events of the past, or to contextualize the treatment of the children in history and condone what happened by arguing for relative standards.

The decision to use this particular test was apparently based on "trialing IELTS on some 400 customers from ex-Yugoslavia and the Middle East" by the NZIS Bonn office, with "90% of customers achiev[ing] a pass at band 5 (modest user) or above" (CCEIE, 1995a:Part II:3). Since IELTS is a reputable, internationally recognised ESOL test provided in a large number of countries and it measures not only proficiency but also communicative performance, it is a suitable tool for assessing English language skills. Treasury's belief that a "fair and impartial test of English is crucial to the transparent and effective operation of immigration policy" (CCEIE, 1995a:Part II:3) is clearly met by such a test. Moreover, the General Module is identified as being suitable to measure "basic survival skills in a broad social and educational context", so it seems to be appropriate in the immigrant resettlement context, even though it was not designed for such a purpose.

However, there are questions regarding not only the motivation behind but also the actual 1995 test requirements for "targeted" immigrants. In particular, there are two issues that do not seem to have been taken into account in the Bonn office "trialing", or at least in the discussions and decisions which ensued. First, between November 1991 and October 1995, PAs involved in the "trialing" were accepted as having met the required standard if they received an aggregate score of Band 5.0 *overall*, whereas the NZIS *Operational Manual* requires that applicants score 5 on *each* of the four macro skills (NZIS, 1996:PRO 3-8 and POL 3-16). This makes the "modest" pass level rather less modest

and much harder to attain. Second, between 1991 and 1995 it was only PAs in the General Category and one family member over 17 years of age for business migrants who had to meet the minimum English language requirement, whereas the new policy required all immigrants over 15 years of age in both categories to reach the new minimum standard. Nor did the requirement take into account the specific needs of the applicants. According to the IELTS handbook, *receiving institutions* should always consider the particular language demands of a course, both how linguistically demanding it is and which skills it will require when assessing the suitability of students. They should also take into consideration the age and motivation, educational and cultural background, and first language and language learning history of a candidate (IELTS, 1995:27). Presumably, so too should *receiving countries*.

In August 1997, sharp criticism was levelled at the impact of the October 1995 policy changes, especially the new English language requirement, in the wake of an announcement that arrivals were well down with particularly large reductions in numbers from Asian countries. Total General Category/General Skills Category approvals were down, from 25,616 in the eight months ending August 1995 (and around 40,000 for the 1995 year) to a mere 9,096 in the eight months ending August 1997 (NZIS, 1997:4). In the same period, the inflow of skilled and business category migrants from non-English speaking backgrounds slowed from a rush to a trickle. This reduction could in part be attributed to changes in the point system, a tightening of taxation residency requirements for new residents and the requirement for PAs in some 25 occupations to gain registration before departure (see Trlin, 1997), or other reasons such as the anti-Asian element in the 1996 election campaign (see Trlin *et al.*, 1998). The notable decline in numbers from non-English speaking background countries must, however, at least in part, also be attributed to the "combination of a new, more objective English test, [and] the English language requirement extended to all General Skills migrants 16 years and over..." (NZIS, 1997:4). John Read, a Senior Lecturer at the English Language Institute, Victoria University, questioned whether Band 5 was an appropriate level (a) in the final analysis, and (b) in the

Discussion -
- Article 5
(pp. 35-37)

Discussion - Article 6

(pp. 476-477)

The VARBRUL studies raise some important issues to do with the identification of free variation. Should the default position in variability research be that (1) variation is systematic until it can be shown to be non-systematic or (2) that variation is free until it is shown to be systematic? The de facto position adopted by many researchers seems to be (1). This is reflected in Berdan's discussion of error in his study. It would seem more appropriate to adopt (2), however, as this represents the null hypothesis. Thus, if researchers fail to demonstrate that the variables they have investigated account for learners' linguistic choices, the appropriate conclusion is that the variation is non-systematic. This is, in fact, the stance adopted by Young (1996). Further, the VARBRUL studies (both those of Young and Berdan and others) frequently show that a portion of the tokens they are investigating (usually the greater portion) involve systematic choices but that there is sometimes a portion (usually smaller) that does not. This raises another intriguing issue. Is variability in learner language entirely systematic or is it, in fact, a mixture of systematic and non-systematic variability? Again, the assumption of many researchers (such as Berdan) is that interlanguage variability is entirely systematic. However, the theoretical stance adopted by some sociolinguists, such as Labov, is that variability in language use is both systematic and non-systematic. It is precisely this position that I wish to argue for. Before I do so, however, we will consider what a number of other researchers have had to say about the importance of free variation.

Discussion - Article 7 (p. 1176)

It is unclear if the response of this young fast-growing southeastern forest will be sustained over many years or if other vegetative types will respond similarly. In simulation with process-based models (24), the initial increases in forest NPP after a step doubling of CO₂ declined dramatically with time as tree growth exceeded the rate of soil nitrogen mineralization. Similarly, individual trees exposed for long periods to elevated CO₂ (25) and forests near natural CO₂ sources (26) show a rapid attenuation of the CO₂ growth response with age. Thus, the growth stimulation observed for this pine ecosystem under CO₂ enrichment may represent the maximum response. If it applies to forests globally, the 25% increase in NPP that we observed suggests that enhanced uptake of CO₂ by forests will not exceed 50% of the CO₂ emitted from fossil fuel combustion in the year 2050, when the atmospheric [CO₂] is expected to reach 560 μl liter⁻¹ (1, 27).

Discussion - Article 8 (pp. 161-162)

Raleigh's indebtedness to Desportes proves that 'Farewell false love' was composed before 'Most welcome love', despite its transcription in the Houghton manuscript after Heneage's poem.¹⁷ The Raleigh-Desportes link, though, is less useful in adjudicating between the various theories put forward to explain the existence of the three different states of Raleigh's poem.¹⁸ Pierre Lefranc suggests that 'Farewell false love' was written in three stages between 1584 and 1592. Michael Rudick, wielding Occam's razor, argues that, as only the three-stanza version is answered in detail by Heneage, no other version can safely be attributed to Raleigh. Steven W. May argues that Heneage's poem replies to the full five-stanza version of 'Farewell false love'. He points out that Heneage's line 2 ('Thow roote of life, and ruiner of debate')

does not clearly reflect Raleigh's second line but seems instead to transform a phrase from the last line of Raleigh's poem, 'Dead is the roote' into 'thow roote of life'. Furthermore, the dead 'fancy' of Raleigh's last line seems to be echoed by Heneage's 'waye to fasten fancy most to reason' (l. 5), as opposed to Raleigh's 'waye of errour, a temple full of treason'.¹⁹

The reading 'Racine de malheur' (l. 39) in 'Contr'amour' raises the possibility that Heneage was replying to an ur-text of 'Farewell false love' in which Desportes's phrase was translated in Raleigh's second line, and that his scribe copied a later text of Raleigh's poem into the Houghton manuscript. No similar argument applies to Heneage's reference to 'fancy', though, and May's suggestion remains persuasive, if not unassailable. All five of Raleigh's stanzas can be linked without difficulty to passages in 'Contr'amour', although Raleigh's indebtedness decreases as the poem progresses. Despite this, Lefranc's thesis of three chronologically distinct phases of composition fails to convince.²⁰

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Discussion - Article 9 (pp. 17-18)

This study represents a comprehensive report on all communication standards in undergraduate business education. However, it is not possible to say whether the actual requirements are increasing, decreasing, or staying about the same, because there is no extant publication for comparison. But what is clear is that writing and communication standards are taken seriously at most undergraduate business schools. In my discussions with deans and program administrators over the past six months, as I completed research for this project, no plans surfaced to eliminate or discontinue courses in writing and communication. If anything, the overriding message was that more rigorous requirements were being considered, even if none were yet in place. Schools that had recently revised, or have been in the process of revising, their curricula have tended to raise standards for communication.

At New York University, Organizational Communication will now be a required course for all undergraduate business students; the course has been an elective for many years, but as of the current entering class, the course will now be required. Moreover, NYU has revised its freshman writing sequence, so that the second required course is now jointly administered by the writing program and the business school. At the University of Minnesota, which is making a transition from the quarter to the semester system, undergraduate business students will be required to take a

total of four writing courses—two as part of lower-division liberal arts requirements and two upper-division courses housed in the business school itself. The upper-division courses include a new business communication course, as well as a writing-intensive business policy course. These courses significantly increase the amount of communication training students will receive, especially in the business school. Thus, it would seem that business communication is becoming a permanent force in undergraduate business education.

Discussion - Article 10

(p. 74)

We are most impressed with the recent research on co-teaching. Michael Roth has shown early that his student teachers can learn from him and he can learn from them (Roth, 1998a, 1998b; Roth, Bowen, Boyd, & Boutonné, 1998; Roth, Masciotra, & Boyd, 1999). However, learning from Roth is not all that analogous to what might happen when we assign student teachers to the schools in West Philadelphia. Many of the teachers in these schools struggle as they enact the curriculum and endeavour to facilitate the learning of students with sporadic attendance, waning motivation to learn and, in some cases, tendencies to be extremely disruptive. The regular teachers endeavour to be successful as often as they can and it is very difficult indeed to identify teachers who attain success on a regular basis. Those who are successful usually call on all of their personal resources to attain the level of success that occurs. Must the supervising teacher be an expert or is it possible for learning to occur from less successful participants in the teaching profession?

The need to prepare teachers for urban settings is a challenge for us. Where should the student teachers do their student teaching? If we place them with a strong teacher who is able to teach effectively they will inherit a classroom that is functioning effectively and that can support a style of teaching that is similar to that of the regular teacher. For the most part the students will continue with their established roles and abide by the mores of the classroom culture. The influence of the classroom teacher will continue and, although students may put the student teacher to the test, the problem repertoire that is encountered is constrained by the established culture of the classroom. It is relatively easy to learn to teach in circumstances such as these and student teachers who are placed with effective cooperating teachers usually learn quickly to teach effectively in the situations they encounter. However, we are not sure that they can then teach in contexts in which a similar type of culture has not been established.

Discussion - Article 11

(pp.1179 - 1180)

Discussion

The results of this study are encouraging. The expectation that participation in an educational conservation programme might have some impact on an individual's values and preferences was supported for the chosen sample. After being involved in the described four-step approach, pupils showed statistically significant shifts in certain aspects of environmental perception: they intend to act more environmentally consciously ('Intent of Support') and they enjoy nature more fully. The education programme not only provided the pupils with opportunities to acquire knowledge, but also influenced them positively in their values, attitudes and self-reported commitment. This is especially important since these variables represent long-lasting values (see Bogner 1998). Therefore, to offer such a programme to a school certainly represents a realistic chance of bringing new challenges to environmental and conservational approaches within schools. However, the network of preferences is definitely far too complex to be covered by five singular subscales as it is the case in this study (see below). Nevertheless, the approach chosen employs an age-adjusted appropriate instrument by pasting together piece by piece the complex construct and introduces these scales into the 'real' educational world later on. In addition, the outcome will benefit the evaluation and improvement of existing educational programmes.

Research in the field of environmental attitude change resulting from an outdoor education programme has been limited and generally inconclusive (e.g. Leeming *et al.* 1993). Many of the studies reviewed by Leeming *et al.* dealt with outdoors activities such as hiking (e.g. Gillett *et al.* 1991), or camping (e.g. Shepard and Speelman 1986), or backpacking (e.g. Perdue and Warder 1986). Such pursuits are often seen as experiences of 'fighting nature' rather than becoming sensitized to the fragility of ecosystems or, as here, to the natural history of an endangered migrant bird such as the Swift. When outdoor environmental programmes were monitored, most authors of the 'early' studies (i.e. in the 1970s) implied that exposure to field trips alone had a positive effect on pupils' attitudes towards certain environmental concepts (Hendee 1972). Many educators automatically assume that wilderness and nature trips will bring individuals closer to nature and produce positive effects on an individual's ethics.

Despite these difficulties, the survey study of Bogner (1998) was able to build on a valid measurement instrument and provided conclusive results demonstrating positive shifts due to participation on week-long residential outdoor ecology programmes. As long as participation is of sufficient duration, such as a 5-day long programme, changes in certain key variables can be achieved. This observation is in line with previous qualitative studies, for instance, Crompton and Sellar (1981) concluded a similar positive learning stimulation through outdoor education experiences of sufficient duration. Here, the reader should recall the conclusion of the Fazio and Zanna (1981) study where attitudes were shown to be more stable if they were caused and initiated by immediate experience. Thus, adolescents' preferences towards the environment and nature usage may be influenced by extra-curricular educational approaches. It has already been shown (Bogner 1998) that for a sub-sample of the participants, such shifts remain even after 6 months. While such a finding is already encouraging for the 'strong' knowledge variable, it is even more gratifying that the complex construct of preservation preferences can be influenced.

Discussion - Article 12.

(pp. 244 - 245)

Understanding the reified nature of large culture is important in evaluating a currently influential essentialist discourse in applied linguistics—the centre-periphery paradigm relating to cultural imperialism. This paradigm suggests that English, representing Western centre (large) culture, is achieving global hegemony over developing world, periphery (large) cultures. Instrumental in this process is the (large) culturally Western methodology of language education, with its 'phonocentric' orientation (Pennycook 1994). This argument has been criticized as over-generalized (Holliday 1997a, 1999), especially as Western education is itself significantly culturally diverse (Bloor and Bloor 1991, Sharpe 1993, 1995). The general centre-periphery argument is also weakened if, through reification, the 'notion of a hegemonic global culture dispensing its products to the world's peripheries' is 'more often assumed than described' (Ahmed and Donnan 1994: 3). In contrast to the large culture approach, a non-essentialist small culture interpretation would support the view that:

Even though the same cultural 'message' may be received in different places, it is domesticated by being interpreted and incorporated according to local values [. . .] Cultural flows do not necessarily map directly on to economic and political relationships, which means that the flow of cultural traffic can often be in many directions simultaneously. (ibid., citing Parkin and Featherstone)

Another criticism of the large culture paradigm is that the world is becoming an increasingly cosmopolitan, multi-cultural place where cultures are less likely to appear as large coherent geographical entities. Late modern societies become 'notable for their lack of cultural coherence or "loose boundedness"' (Crane 1994: 3, citing Merelman).

Whether or not the centre-periphery argument is based on reified large cultures is perhaps immaterial, as such large cultures are perhaps as real in our socially constructed society as any other perception. If this notion of a composite, homogeneous ethnic, national or international large culture is indeed constructed for us by nationalistic governments, then the centre-periphery discourse, in attempting to reveal one cultural hegemony, is falling foul of another one. It is not therefore succeeding in seeing as critically as it claims. Indeed, the centre-periphery paradigm, because of its essentialism, may be serving to reduce rather than liberate the so-called periphery.

Discussion - Article 13

(pp 141 - 142)

Although the assumptions made in a framework document are critical to the project's success, they may be beyond the control of those working on it. They can be a weak link, since they depend on the officer in post being able to make adjustments to the original objectives as the local situation becomes clearer, and changes occur. As I will argue below, sustainability may well be neglected if these assumptions are not given sufficient consideration.

Implementation and appraisal take place within the time limits laid down in the project document. Monitoring takes place on a regular basis under this model, although a full evaluation is supposed to take place after the project is over. Indicators of achievement and value may not always be objective, however, since qualitative factors must also be taken into account. The assessment of educational development projects will clearly be different from those in civil engineering or agriculture, for instance, whose outcome is more readily quantifiable. Recent revisions

of the framework document used by donors have included wider consideration of a project's overall impact on a society over a longer period of time, but again, this is harder to measure for educational developments.

The project framework has been praised for providing an efficient, centralized means of monitoring projects, which allows those responsible for them to be held accountable. It proposes and evaluates a rational, measurable framework. In some ways, however, it could be described as hyper-rational, and not operating in the real world. It is put together after discussion with the host institution, and follows the institution's official line—what is *supposed* to happen within agreed time and other limits—but runs a strong risk of ignoring the realities of the situation on which success depends. In their rush to satisfy the demands of donor bureaucracy in their home countries, western agencies may well attempt to impose cultural values on the systems of developing countries which ignore the realities of local situations.

Discussion - Article 15 (pp. 342 - 344)

The adoption in June 1998 of the Protocol to the African Charter on Human and Peoples' Rights on the Establishment of an African Court on Human and Peoples' Rights (African Human Rights Court)¹ by the Assembly of Heads of State and Government of the Organization of African Unity (OAU) is potentially an important step in the protection of human rights in the African continental system.² The African Human Rights Court would complement³ the African Commission on Human and Peoples' Rights (African Commission), the body that has exercised continental oversight over human rights since 1987.⁴ The Protocol suggests that the African Human Rights Court will make the promotion and the protection of human rights within the regional system more effective.⁵ However the mere addition of a court, although a significant development, is unlikely by itself to address sufficiently the normative and structural weaknesses that have plagued the African human rights system since its inception.

The modern African state, which in many respects is colonial to its core, has been such an egregious human rights violator that skepticism about its ability to create an effective regional human rights system is appropriate.⁶ Although the African Charter makes a significant contribution to the human rights corpus, it creates an ineffectual enforcement system. Its most notable contributions are the codification of the three "generations" of rights, including the innovative concept of peoples' rights,⁷ and the imposition of duties on individuals.⁸ But many commentators have focused on the

Discussion - Article 17 (p. 240)

— In one of the humanistically focused books that comes in for Gadd's criticism, *Learner-Based Teaching* (1992), Campbell and Kryszewska actually refer to a great variety of situations in their students' socio-cultural context which lead to a wide range of registers. Humanistic language teachers, concerned with the whole person, should have no difficulty accommodating many areas of experience and learning in their classrooms, including the different registers and varied genres that Gadd proposes³, whereas with his suggestions, one has the sense of exclusion and narrowness. Dealing with types of communicative events and their common patterns, genre studies do, indeed, offer interesting insights for language teachers; merely learning words and structures in isolation from the framework necessary to put them to effective use is not empowering learners to be able to function successfully in the language. But Swales (1990: 58) affirms that 'it is not the case that all communicative events are considered instances of genres'. He considers that normal conversation falls outside genre, and so, since it is estimated that 90 per cent of the use one makes of language has to do with conversation, one might be hard pressed to justify doing as Gadd suggests, and using the other 10 per cent (genre) as the focus for English language teaching. The incorporation of elements of humanistic language teaching, with their emphasis on interpersonal communication, would, however, seem highly justifiable on this account.

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Discussion - Article 18

(pp. 80 - 81)

The difference in business cycles between developed and developing countries provide developed countries' firms valuable opportunities to reduce their risk through diversification. Developed countries' firms that invest in developing countries are generally believed to have ownership advantages. They will select those foreign locations where they can exploit their ownership advantages. *A priori*, international diversification into developing countries enables the use of firm-specific know-how to penetrate these prospective markets in a firm's main lines of business.

Based on an analysis of the performance of *Fortune 500* firms over the period 1981-92, we arrived at the following conclusions.

U.S. firms that invest in the East Asia and Pacific region have performed better than U.S. firms that invest in the domestic market and other developed economies in both risk and return measures.

We can therefore conclude that U.S. firms investing in developing countries, especially in the East Asia and Pacific region, have greater opportunities for earning excess risk-adjusted returns. Since FDI in this region helps to diversify risks, investors (existing and potential) expect a more stable rate of return. If this expectation is incorporated in the market price of shares of the firm, its value will be raised, thus benefiting shareholders.

However, the results do not necessarily mean that a firm, by increasing the extent of foreign involvement in developing countries (e.g. East Asia and the Pacific), can achieve the highest rates of return possible and the lowest risk possible. From a theoretical point of view, there should be an optimal level of internationalization (Daniels and Bracker 1989). The advantages of 'more is better' should hold only until a firm reaches some optimum combination of developed countries' (including the domestic) to developing countries' operations. Firms which exceed this optimum would be expected to show declining performance and a probable resultant downturn in their portion of developing countries' to total operations.

It should be acknowledged, however, that there may be several weaknesses in the methodology and possible biases in the test results because of subjective classification and data pooling. The use of accounting data is, for example, subject to manipulation and firm level differences in practice. Also, there is no industry-wise breakdown of FDI (we lack this data). Since the industry environment is given great importance as a factor determining a firm's profitability and risk (Bettis and Hall 1982; Daniels and Bracker 1989), aggregate comparisons may obscure industry-by-industry differences in different world regions. Despite these limitations, the results lend empirical credence to the findings reported in previous studies and provide additional insights.

Discussion - Article 19 (p. 681)

Research on corporate environmental strategy, such as Hoffman's (1997) study of the U.S. oil and gas industry, has shown that companies within a common industry context tend to adopt similar strategies in response to the institutional forces they experience. However, other studies have shown variability in the environmental strategies of companies operating in similar social, regulatory, and public policy contexts (Aragón-Correa, 1998; Hart & Ahuja, 1996; Russo & Fouts, 1997), as well as within the same industry (Sharma & Vredenburg, 1998). Sharma and Vredenburg (1998) found variability ranging from reactivity to proactivity in environmental strategies among 99 companies subject to strong normative societal expectations, public policies, coercive regulations, media and nongovernmental organization (NGO) pressures, and mimetic adoption of common industry practices (DiMaggio & Powell, 1983).

Indeed, advocates of the institutional approach acknowledge the importance of organizational and managerial factors in influencing a company's choice of environmental strategy. Institutional forces define "the range of organizational reality" and limit "the repertoire of possible options" (Hoffman, 1997: 148) while allowing for differences in strategies among individual companies. Jennings and Zandbergen acknowledged the influence of managerial interpretations on organizational environmental strategies: "In ecology, there is a large role for individual interpretation and innovation (the role of an individual actor), which institutional theorists may need to incorporate to some extent" (1995: 1041).

Discussion - Article 20 (pp. 185 - 186)

Usability inspection methods were developed to provide a lower cost alternative to traditional usability testing. The goal was to save both time and money. Inspection methods can save time, in part, because the inspection process often can be completed more quickly than a usability test (e.g., Karat, Campbell, & Fiegel, 1992). Additional time can be saved because it is not necessary to recruit users to participate in the evaluation. Rather than including representative users, inspection-based methods typically involve usability experts or system developers evaluating the usability

of a system based on one or more criteria. Research has suggested that such inspections can result in identifying numerous potential usability problems (e.g., Nielsen, 1992).

Further, the cost associated with inspection methods is typically lower than that for usability testing. The fact that inspection methods do not require the participation of users alleviates the need to pay for test participants. In addition, the costs associated with infrastructure are negligible for inspection-based methods compared to usability testing. Thus, usability inspection methods have been suggested as an effective alternative to usability testing (e.g., Nielsen, 1994b).

Although the time and cost benefits associated with inspection methods may seem clear, the primary issue is whether these techniques uncover an appropriate collection of usability problems given the investment. Some techniques result in numerous items being identified as potential problems that are ultimately determined not to be important enough to warrant further attention. This adds noise that must be filtered from the results of the evaluation before developers can decide those issues to address. Further, research has suggested that some inspection-based techniques identify numerous issues that correspond to minor problems that may also need to be filtered because there is rarely sufficient time to correct all of the problems that are identified. Finally, some techniques may identify one type of usability problem (e.g., poor feedback) and miss others (e.g., lack of appropriate error correction mechanisms). Thus, to justify the investment in inspection-based techniques, several questions must be asked. In particular, it is necessary to determine whether these techniques identify problems that correspond to those users would encounter, how many problems are missed, and whether the most serious usability problems are identified.

In an effort to answer these questions, researchers continue to evaluate and refine existing techniques as well as develop new ones. This article reports on an evaluation of the impact of a recent refinement to the cognitive walkthrough technique. Specifically, the study compared the effect of providing evaluators with either detailed step-by-step task descriptions, as the most recent version of the technique suggests, or shorter task descriptions, such as those often used in usability testing sessions. Finally, the study focused on how this change affected the results obtained by evaluators that were learning to apply the technique rather than those experienced with the technique. Important implications for both researchers

Recount - Article 1 (p. 968)

Procedure. Infants were tested individually. They sat on their parents' laps in one corner of the sound-attenuating booth, facing an assistant. Infants were assigned randomly to one of the two conditions: major or equal step. The standard version of the sequence (major or equal step) repeated in transposition throughout the entire test session, with 1,600 ms between presentations. Transpositions were selected in a "random-walk" pattern, such that consecutive presentations were at an adjacent (next higher or lower) pitch level. Each condition had 12 change trials and 12 no-change trials in pseudorandom order, with the constraint that there would be no more than two consecutive no-change trials. On change trials, the comparison sequence replaced the standard (background) sequence. No-change trials consisted of another repetition of the standard sequence and were therefore indistinguishable from the repeating background.

The assistant used hand-held toys to attract the infant's attention. When the infant was facing directly forward, the assistant called for a trial by pressing a button on the buttonbox. Any time the infant turned toward the loudspeaker (45° or more), the assistant pressed another button. The computer recorded head turns during a response window that began with the onset of the third (potentially changed) tone and ended 4 s later (with the onset of the third tone of the subsequent sequence). Correct responses—head turns on change trials within the 4-s response window—were reinforced by the illumination and activation of a mechanical toy for 3 s. No-change trials provided an estimate of false alarms, or turning toward the loudspeaker in the absence of a change. Head turns during no-change trials or at other times had no consequence for the infant. Although the number of repeating standard sequences between trials could vary from trial to trial, the minimum was two. During testing, the parent and experimenter listened to masking music on headphones so that they were unaware of the type of trial being presented.

The test phase was preceded by a training phase designed to familiarize infants with the procedure. The training phase was identical to the test phase except for the following details: All trials were change trials, the to-be-detected change was more substantial (see the *Stimuli* section), and the intensity of the first two trials was 5 dB greater than the intensity of the repeating standard sequence. The intensity of subsequent training trials was equivalent to the intensity of the standard sequence unless the infant failed to respond on two successive trials, at which time the intensity was increased by 5 dB (to a maximum of 10 dB greater than the standard sequence). Correct responding resulted in 5-dB reductions in intensity until the intensity of the comparison stimuli matched that of the standard stimuli. Infants proceeded to the test phase after achieving four consecutive correct responses with standard and comparison sequences at an equivalent intensity. Infants who failed to meet the training criterion within 20 trials were excluded from the test phase.

Recount - Article 2.

1 2222



Jim Martin's chapter addressed a very crucial problem in the reading of the story, *The Weapon*¹ which was, basically, how to do it in a socially and institutionally empowering way. As Martin recounted, this story was problematised by the inability of one group of junior secondary students to produce the reading he has described for you. The class teacher had presented the class with the story, *The Weapon*, and asked the students to read and then discuss the story in groups. The aim, as she put it, was that students should try to discover 'what the story is about'. This is a very conventional way of teaching English: students collaborate on a reading which they then expand, explicate and/or modify after input from the teacher. The teacher was very disturbed in this instance to find that the class did not produce a reading which in any way resembled her expected reading; furthermore, she found that the reading they did make was totally inexplicable by reference to the text. After a similar experience with another text (students were again unable to produce the conventional, institutionally approved reading) the teacher enlisted the help of a literacy consultant employed by the State Department of Education. The literacy consultant also found the students' reading difficult to account for and so, in turn, enlisted my help as a literary theorist and tertiary teacher to explicate the reading that these students had produced. The students' reading was basically as follows: it is better to be dead than to be intellectually impaired. The environmentalist gave the boy the gun so that he could kill himself; it was a kindly act by the environmentalist.

¹ The aim of this chapter is to explore how and why the students

Recount - Article 3
(p. 172)

DURING THE 1980s, A GREAT DEAL OF EMPHASIS WAS PLACED ON PRODUCTIVITY IMPROVEMENTS. NEW TECHNOLOGIES WERE CLAIMED TO GIVE "ORDERS OF MAGNITUDE" IMPROVEMENTS. NOW THE EMPHASIS HAS SWUNG TO SOFTWARE QUALITY IMPROVEMENTS. RESEARCHERS HAVE EXPLORED AND ADVOCATED TO GIVE SIMILAR

Yet there is little evidence of dramatic change in either the productivity of software developers, or the quality of the products they produce. A recent study by Ed Yourdon and Howard Rubin reports, in fact, a 13% *decline* in productivity in recent years, and a quality increase of a substantial (but not dramatic) 75% for the 12 years since 1985. What happened to these projected improvements?

Recount - Article 4 (p. 74)

Soon after the Trust was founded, Bean and Melville published *Lost Children of the Empire*¹⁴ about emigrants to Australia, including their recollections, which are blunter than the Canadians'. It emphasizes the lifelong emotional damage caused to these children by their insensitive treatment.

A television documentary with the same title (1989) was followed by a television mini-series called *The Leaving of Liverpool* (1993), about a fictional group of emigrants, which includes many actual incidents recounted in Bean and Melville's book, especially what occurred in Christian Brothers institutions which took in immigrants. By now the public outcry had become so loud in Australia, with lawsuits being filed against the Christian Brothers for sexual abuse, that they issued a public apology to anybody who had suffered in their institutions.

Two children's novels published in the U.K. follow Bean and Melville's documentation closely in telling stories of children sent to Australia. Both are entitled *Sent Away*, a title marking a shift of point of view away from the idea that the children had voluntarily emigrated.

John Goodwin's book (1991)¹⁵ is a thin little story designed to convey facts and a message. It is a school reader with a controlled vocabulary, very didactic in its presentation. The preface acknowledges the assistance of the Child Migrants Trust, which features in the story, and says that the story is "based on fact":

Few people knew the truth about what was happening to these children. They did not know that brothers and sisters were deliberately kept apart, and that children were given very little help in finding out about their backgrounds or families. This "export" of children was finally stopped because it was wrong. (p. 3)

The second *Sent Away*, by Jonathan Croall (1992),¹⁶ is similar to its namesake and *The Tin-lined Trunk* in being a short book, written in a flat, clichéd style, concentrating on the incidents of the story, most of which are taken almost verbatim from firsthand accounts. In it actual voices from Bean and Melville are echoed: staff at the farm school tell the children they are "from the gutter"; and the girls in a convent discover a report from the sisters to the emigration society which describes them in derogatory terms. The society which brings the brother and sister out is called the "Fairlane Society", which is obviously a disguised reference to the Fairbridge Society, founded by the South African, Kingsley Fairbridge, a major figure in child emigration in the twentieth century, whose farm schools housed immigrants in Australia and Canada.¹⁷

Like its counterpart, the story is framed by peritextual material to emphasize its authenticity. An "Author's Note" explains:

While Joe and Ellen are fictitious characters, their story is typical of what happened to many boys and girls of their age during these years. Some of the children had an easier time of it; others, unfortunately, suffered much greater hardship, in ways that affected them for the rest of their lives.

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While the details of the treatment of the emigrants to Australia that appear

In 1986 when the traditional source countries preference was removed it was considered to be unlikely that New Zealand would be open to or welcome substantial Asian immigration (Trlin, 1987:223). When unforeseen and unprecedented numbers of immigrants from non-English speaking backgrounds, particularly Chinese from various sources, arrived under the Business Immigration Policy in the late 1980s and (especially) the General Category points system during the first half of the 1990s, serious deficiencies in New Zealand's immigration policy were exposed. Not only were many skilled immigrants unable to secure employment and thereby contribute to the economy but they were seen as placing demands on precious resources, including ESOL provisions in schools. The most obvious factors to blame for the failure of such migrants to resettle quickly and effectively were the new arrivals' lack of suitable professional training, work experience and English language proficiency.

However, while English language ability was seen as "a key to successful settlement" (NZIS, 1995b:10), there were no clearly defined criteria for assessing what constituted "adequate English language skills" (Burke, 1986:16), "a minimum level of English language ability" (NZIS, 1991), or "a reasonable command of English" (NZIS, 1992:7-G-

22). Nor were existing language assessment mechanisms applied consistently across or within categories. The prerequisite of an adequate level of English, for example, was imposed only on "targeted" immigrants and then only inconsistently as demonstrated in the investigation of approved General Category PAs from five source countries. Researchers on immigration from non-English speaking sources since 1986 (including Trlin and Kang, 1992; Department of Internal Affairs, 1996; Ho *et al.*, 1996; Lidgard, 1996; Friesen and Ip, 1997) have uncovered a mosaic of English language ability ranging from fluent to no English.

The introduction of the IELTS Band 5 prerequisite provided a clear yardstick for measuring "a modest level of English", but the requirement was again less than universally (and somewhat reactively and arbitrarily) imposed, to the extent that it came under review. The language requirements introduced in October 1995, which at least in part contributed to the massive fall-off in "targeted" immigrants from Asia over the next two years, were effected through Cabinet-approved policy changes for the Minister of Immigration, who has the power to "publish the policy of the Government relating to the rules and criteria under which eligibility for the issue or grant of visas and permits is to be determined" (Immigration Amendment Act 1991, Section 13A). Such executive powers are important in that they allow for substantive reviews and changes to immigration selection criteria outside of the legislative process. However, while this enables timely fine-tuning and adjustments to be made, it also removes such processes from the wider forum of Parliament and the people, where more questions regarding decisions might be raised, and allows for potentially ill-founded decision making.

In December 1997 in newspaper statements signalling imminent changes to immigration policy, Jenny Shipley (the new Prime Minister) and Max Bradford (Minister of Immigration) both indicated their dissatisfaction with a policy that has a history of "over-correcting and then under-correcting" and of changing targets "up and down and sideways" (Bain, 1997; Bell, 1997). As Fawcett and Carino (1987:7) have noted, however, changing immigration policies remain both a cause and a reflection of national attitudes to immigration and ethnicity. In these terms, it is hard to see the December 1997 changes to the language requirements as anything more than simply tinkering to ensure that the economy keeps growing and investments flow in, without regard to the issue of pre- and post-migration English language requirements that

Recount -
Article 5
(pp. 38-40)

ould unlock the skills, ideas and vitality of new immigrants. A proper policy - one that is part of a broader, well integrated, institutional structure of immigration that includes an immigration policy, a post-arrival immigrant policy and an ethnic relations policy (see Trlin, 1993) - is yet to come.

Recount - Article 6

(p.466)

Young (1988, 1993) used a multivariate procedure known as VARBRUL to investigate how various factors impacted on the presence or absence of (s) as a marker of plurality on nouns in Chinese, Czech, and Slovak learners of English. He found clear evidence of systematicity and no evidence of free variation. In a later study (Young 1996), however, he did find evidence of random overuse of 'the' by a group of low-proficiency Czech and Slovak learners, thus replicating Huebner's findings. Young investigated a large number of external and internal factors in this study. Again, he found systematic variability. For example, his subjects were influenced by discourse context, being more likely to use an indefinite article in an NP coded as minus hearer-knowledge. However, in this study Young also found evidence of free variation in the use of the definite article. In the lower-proficiency learners there was no evidence of any form-function relation in the use of 'the'. Young concluded that free variation does occur in interlanguage. However, he suggested that it arises only under certain specific conditions:

- The L2 form does not have a corresponding form in the L1.
- The L2 form is perceptually salient.
- There is no clear form-function relation between the L2 form and meaning.
- Free variation in the L2 form consists of initial overuse of the form with systematic use of the form beginning when the form disappears from some environments.

E (c+d)

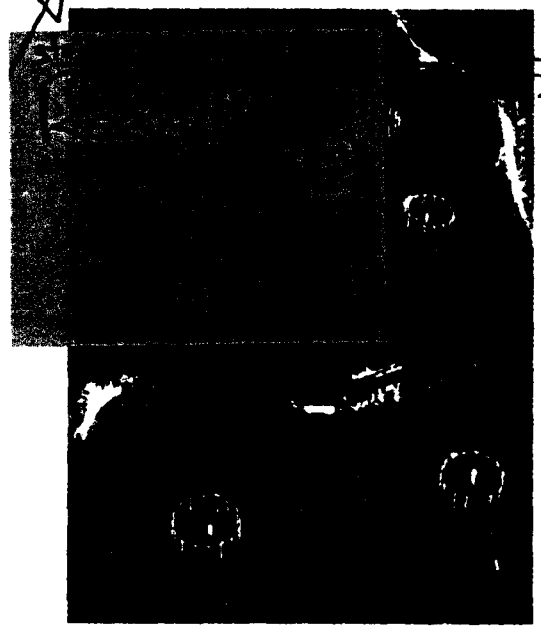
Re (c+d)

REPORTS

but without the addition of CO₂ (10). Unlike closed growth chambers or open-top chambers, the FACE system controls atmospheric [CO₂] without changing other variables. Moreover, its size permits the experimental manipulation of an entire forest ecosystem, including vegetation and soil components. The injection of CO₂ was initiated on 27 August 1996.

1996 we measured the diameter of 203 canopy pine trees distributed across the ambient and elevated plots (11). In 1997 and 1998 we made additional measurements of 112 sub-canopy hardwood trees. Before the fumigation was initiated, the seasonal increase in basal area was similar for canopy trees in the ambient and elevated plots (Fig. 2). The basal area increment began to diverge soon after the fumigation started in August 1996, and by 1997 and 1998 the average basal areas for trees in the elevated plots were ~2.6 and 4.5% larger, respectively, than those in the ambient plots.

At monthly intervals beginning in March



Recount -
Article 7
(p. 1178)

Fig. 1. Free-air CO₂ enrichment (FACE) rings in a pine plantation in North Carolina, USA. Each ring is 30 m in diameter and circumscribes about 100 trees. The distance from the single ring in the southwest (top right) to the two rings in the north (bottom) is ~500 m. The single ring in the background is a prototype. There are six experimental rings; three rings receive ambient air and three receive ambient plus 200 μl liter⁻¹ CO₂ (photo: Will Owens).

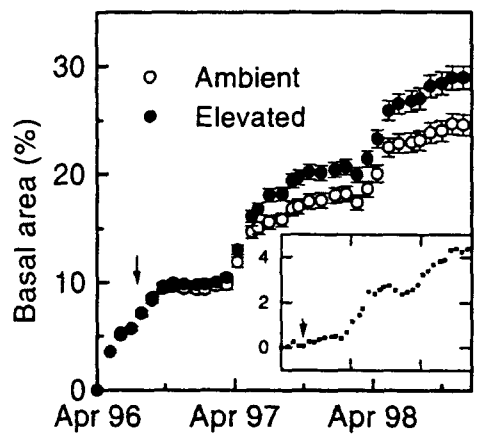


Fig. 2. Average basal area (± 1 SE) for loblolly pine trees growing in ambient ($N = 102$) and elevated ($N = 101$) CO₂. Values are expressed as the percentage of the initial basal area. The insert shows the absolute difference between the basal area of elevated and ambient trees, and the arrows indicate when the CO₂ fumigation was initiated.

Recount - Article 9

(p. 11.)

- My original focus on "writing" shifted to reflect the realities of professional management education, which often includes oral communication; so oral communication requirements are also noted. To further examine the 50 percent rule, I recorded the institutional home of the business communication courses and related that to lower-division (often in the liberal arts) and upper-division courses.

Official Web sites of the 52 institutions provided the information for my study, with follow-up verification by e-mail. While Web sites are not always up to date, they provided an excellent starting point for gathering policies as well as course listings and syllabi. I often had to work my way through much contradictory information. Some universities did not include current catalogues, usually the most reliable source for current standards, at all; some of those that did used infuriatingly slow formats that could not be downloaded or copied. Some schools designed their sites more for promotional and marketing purposes than as workplaces for students, faculty, and staff to gain and verify important information about major and degree requirements. Despite its problems, the Web was a much more reliable and efficient source than a print survey for answering specific research questions,

Recount - Article 10

(pp. 75-76)

Method

The study commenced in the Fall of 1998 when Mackenzie (Mac) was assigned to CHS to undertake his year-long field experience as a component of a master of science in education degree that would lead to certification to teach science. Ken, his methods lecturer, and Gale, a doctoral student in science education and an experienced urban science teacher, visited Mac and each of the science education students to investigate how they were teaching. Our concern was that the methods course and the field should support one another seamlessly to enhance the learning of how to teach science. A critical focus of the study was to probe the roles of the methods instructor, cooperating teacher, supervisor and student teacher in relation to the goal of learning to teach science.

The data sources for the study were field notes, narratives written after our experiences in the field, digital photographs in interviews of student teachers, cooperating teachers and supervisors and artefacts collected from the field. A computer application, *Connecting Communities of Learners* (CCL, Tobin, 1998b) was used in the methods course by all of the science education students. The CCL allowed all students to write about their experiences in their student teaching, methods course and other courses. The CCL provided a space in which students could interact publicly or privately. All of these written comments were available to inform our learning and the writing of this paper.

In the spring semester Ken decided to co-teach in Opportunity, where Mac was doing his student teaching. Our reason for selecting Opportunity was because of the extreme difficulty Mac was experiencing in attaining his goals as a learner and the relative inexperience of his cooperating teacher. Ken was well aware that teaching in circumstances like those in which Mac was learning to teach involved some danger. In all likelihood what was happening in the methods course would be of little or no relevance to what Mac and others needed to know in order to be successful teachers. Ken's dilemma was what to add in place of the present activities.

When the co-teaching commenced the variety of data sources available to inform the study mushroomed. Ken and Mac were at the school daily, Mac all day and Ken for three hours (first and fourth periods). Gale came to the school several times a week and usually stayed for at least the first two periods. On occasion we videotaped lessons and interviewed students to obtain their perspectives on teaching and learning science, being in Opportunity and the extent to which the home and community supported learning. During the spring semester a student from Opportunity joined the research team and his insights were of considerable value in assisting us to understand what was happening in our various experiences as teacher-researchers.

The analysis and interpretation was continuous over the duration of the study. The writing of this paper began with several earlier papers written by Tobin (1999 a, b) and Seiler (1999). In these papers we had identified the most salient issues pertaining to science teacher education in the urban settings in which our prospective teachers were being prepared to teach. The three authors met and decided that we would each write some comments pertaining to the methods course and the roles of the cooperating teacher and supervisor respectively. Two weeks later when we were due to meet to discuss these perspectives we decided to begin with Mac's perspectives and engage in a three-way professional conversation about those. Our goals were to develop a discourse from which we could learn, identify salient theoretical issues, and initiate a variety of possibilities as foci for change. The approach had been used with success in research undertaken by Ken with Wolff-Michael Roth and Steve Ritchie (Roth, Tobin, & Ritchie, 1998) and with Peter Taylor and Penny Gilmer (Taylor, Gilmer, & Tobin, 1998). In a forthcoming book (Roth, Tobin, & Ritchie, 1999), Roth described metalogue in the following way:

Recount - Article 12

(p. 243)

The notion of large culture supports various spheres of political interest. One such is the building of the concept of the material nation. European justifications of colonization through simplistic cultural definitions of subject peoples is well catalogued (Morawska and Spohn 1994; Comaroff and Comaroff 1992; Asad 1973; Nzimiro 1979; Sarangi 1995). 'Conventional anthropology allowed "the power of topography to conceal successfully the topography of power"' (Schudson 1994: 37, citing Gupta and Ferguson). This has continued in a post-colonialist era with 'unequal narratives' creating an 'unreciprocal interpretation of other [. . .] non-Western cultures' (Sarangi 1995 citing Asad and Said). Equating nation with homogeneous ideas of large culture also supported the conceptual development of European nations themselves. It may be true that 'most sociologists and historians do not take culture to be the central integrative mechanism for national societies' (Schudson 1994: 23). Nevertheless, a 'methodological nationalist' sociology can be seen as a product of nineteenth-century nationalism (ibid.: 21). This creation of 'national-level "imagined communities"' and attaching 'culture' to nation can also be considered as part of a process of 'modernity' (Dobbin 1994: 124³) and to have continued and 'flourished during the conservative era of Thatcherism and Reaganism' (Keesing 1994: 307). In particular, Sakamoto notes how 'Chicago school Japanologist scholars [. . .] argue that "Japan" or "the Japanese" are a social imaginary' constructed through discursive activities (1996: 113, citing Haratoonian and Sakai).

Recount - Article 13

(pp. 140 - 141)

This was not always the case—until the mid-1980s, ELT provision under overseas aid projects was provided by supplying teachers at the request of foreign governments to fill gaps in the country's own provision. British Council Key English Language Teachers (KELTs), later English Language Teaching Officers (ELTOs) were also provided to higher education institutions or ministries to write textbooks and other teaching materials, and to provide advice, inspection, and training. Provision was often quite open-ended, and officers were expected to adapt and plan what they would do 'on the job'. Much adjustment and flexibility was needed, as situations in some developing countries were not easily predictable, and officers often found themselves in situations that were very different to those described before they set out from their home country. This so-called 'suck it and see' approach has much to commend it—although it does assume the recruitment of officers with sufficient experience, training, and adaptability.

In the UK, pressure to obtain value for money from overseas aid spending developed as part of a more general political movement in the 1980s. This required a move towards market economics—a move that called for accountability, and evidence that value for money was being obtained. Changing attitudes also began to reveal the need to transfer skills to local counterparts, and to set clear objectives leading to a handover to local personnel within a fixed time period. Nowadays, in the preparation phase for the project, a draft 'project framework' or 'project memorandum' (see Table 1) is prepared, which offers a description of the proposed programme and how it fits into the host government's development plan. The project framework identifies a broad range of objectives, together with details of the 'input' needed, in terms of staff and resources, and the expected 'output'—how the situation, personnel, quality, resources, etc., have changed as a result of the donor country's support.

Recount - Article 14

(pp. 169 - 170)

A. *FTC Action Against Intel*

On June 8, 1998, the Federal Trade Commission issued a complaint against Intel.³⁰ The FTC complaint alleged that Intel had monopoly power over general-purpose microprocessors.³¹

Intel was alleged to have entrenched its monopoly power by refusing to continue to deal with certain customers as a means of coercing intellectual property licenses relating to potentially competitive microprocessor technology.³² Three particular instances of such abuses were alleged relating to dealings with Digital Equipment Corporation, Intergraph Corporation, and Compaq.

On May 12, 1997, Digital had sued Intel for patent infringement, claiming that the Pentium Pro microprocessor infringed Digital patents relating to its Alpha microprocessor. The FTC complaint alleged that Intel responded to the Digital lawsuit by cutting Digital off from access to relevant information relating to Pentium microprocessors.³³ In similar fashion, according to the FTC complaint, Intel demanded a royalty-free license for Intergraph's Clipper microprocessor technology as a condition of its willingness to continue disseminating technical information and advance chips to Intergraph.³⁴ At this time, Intergraph was a leading seller of Intel-based Windows NT workstations. Intel's refusal to distribute information to Intergraph was followed by a substantial decline in Intergraph's business.³⁵ Finally, in November, 1994, Compaq sued computer manufacturer Packard Bell, alleging that Packard Bell's systems infringed Compaq's patented technology. The parts in question had been supplied by Intel to Packard Bell, and therefore Intel intervened in the lawsuit. Again, according to the FTC complaint, Intel stopped sending Compaq technical information in an effort to pressure Compaq to resolve its lawsuit against Packard Bell.³⁶

In the FTC's view, these refusals to deal entrenched Intel's monopoly in general-purpose microprocessors. Intel "willfully maintained its monopoly power in the general-purpose

Recount - Article 15 (p. 352)

In the past several years, the gradualist view has given way to the proponents of a human rights court. It had become clear by the mid-1990s, even to pro-establishment figures, that the African system was a disappointment, if not an embarrassment for the continent. In 1994, the conservative OAU Assembly of Heads of State and Government asked its Secretary General to call a meeting of government experts to "ponder in conjunction with the African Commission on Human and Peoples' Rights over the means to enhance the efficiency of the Commission in considering particularly the establishment of an African Court on Human and Peoples' Rights."⁶⁸

Events moved speedily in the next several years. In September 1995, a draft document on an African human rights court was produced by a meeting of experts organized in Cape Town, South Africa by the OAU Secretariat in collaboration with the African Commission and the International Commission of Jurists.⁶⁹ Later that month, an OAU meeting of governmental legal experts produced the Cape Town Draft of the draft protocol for a human rights court.⁷⁰ After several rounds of meetings and more drafts, the Draft Protocol was adopted by the conference of OAU Ministers of Justice/Attorneys General in December 1997. The OAU Council of Ministers adopted the Draft Protocol in February 1998,⁷¹ and the OAU Assembly gave its final blessing in June 1998,⁷² opening the Protocol for signature by OAU member states.

The consensus among government officials, NGOs, and academics on the need for a human rights court in the African regional system has steadily

Recount - Article 16

(p.973)

Σ SUMMARY

The problem of index configuration is an important topic for database system performance and has been extensively investigated for relational Database Management Systems (DBMS). By contrast, the problem of index allocation for Object-Oriented DBMS (OODBMS) has been considered only from a theoretical point of view and no practical development of any tool for commercial OODBMS has been reported. In this paper, we investigate the problem of index configuration in the framework of a commercially available OODBMS. We first identify the features that characterize such OODBMS and we develop two cost models: the first extends the generic cost model presented by Gardarin *et al.* (Proceedings of the 22nd International Conference on Very Large Data Bases, 1996; 378-389), the second is an analytical cost model tailored to the OODBMS at hand. Both cost models have been validated by comparing the estimated costs and the actual costs observed from the system. The comparison has shown that both models are quite accurate. Using the proposed cost models, we have also developed an algorithm for the efficient index allocation on a given path, given a workload specified in terms of operation frequencies. Even though our algorithm has been developed for a specific OODBMS, we believe that it can be easily tailored to other OODBMS and persistent programming languages. Copyright © 2000 John Wiley & Sons, Ltd.

Recount - Article 18 (p. 67)

There has been a dramatic change in the pattern of foreign direct investment (FDI) in recent years. The outstanding feature of that pattern has been the rapid growth of FDI in developing countries, culminating in inflows of US\$33.7 billion in 1990 and an estimated US\$99.7 billion in 1993 (The United Nations 1995). The share of developing countries in FDI inflows has continued to increase since the end of the 1980s and reached the peak of 39% in 1994.¹ More significantly, East Asia and the Pacific have become the most important destinations for FDI due to their rapid economic growth over the last few decades.

Recount - Article 19

(p. 686)

Data Collection

I administered a questionnaire survey to the total population of Canadian oil and gas companies with annual sales revenues in excess of \$20 million listed in the Compact Disclosures database. Smaller companies, which were revealed in exploratory research to have neither the resources nor the motivation to go beyond minimum regulatory compliance, were excluded. I contacted companies by phone to obtain the names of potential respondents and to eliminate those ineligible for the study either because they had merged with another company or were merely service or equipment providers. After exclusions, 110 Canadian oil and gas companies were eligible for the survey. These accounted for approximately 80 percent of the total annual sales revenues in the Canadian oil and gas sector.

I mailed questionnaires to between three and five persons identified through telephone contact for each company. These included the CEO or a member of the top management team, a staff specialist (usually the environment, health, and safety manager), and a line or operating manager. Confidentiality was assured, and serial numbers on questionnaires were used to match informants in each company. Telephone calls followed up on the mailings. The company response rate was 90 percent; that is, 99 out of 110 companies returned one or more questionnaires, with a total of 181 questionnaires being returned out of 345 sent, for an overall response rate of 52.5 percent. Sixty-four companies (65%) provided multiple respondents, so I could study corporate environmental strategy from different perspectives in the organizations achieving "triangulation" (Mintzberg, 1978).²

A comparison of differences in the mean values of the responding and nonresponding companies

Recount - Article 20

(pp. 190 - 191)

4.1. Participants

Seventeen computer science, information systems, and human-computer interaction students evaluated SPSS TextSmart 1.0 (SPSS Inc., 1997), a product used by survey researchers to analyze and categorize responses to open-ended survey questions. The participants were completing a course on methods for evaluating user interfaces and had previously completed between zero and two courses on issues related to human-computer interaction.

4.2. Procedure

Prior to the study, participants received formal training in the cognitive walkthrough technique. This formal training consisted of approximately 4 hr of explanation of how to perform the technique, hands-on experience applying the technique, and discussions of related research.

In addition to this training, participants were given a 10-min overview of the software product they would be evaluating. The overview included a description of the product domain, the tasks users would typically be solving, and the focus of the product within that domain. Participants were briefed on the level of expertise of the system users, including their level of familiarity with the operating system on which the application ran.

Participants were provided with a list of 10 representative tasks for which the system would be used. Each evaluator received one of two sets of task descriptions. One set contained general instructions, and the other contained detailed step-by-step instructions. General instructions defined a task but did not provide any details as to how the task could be completed (e.g., "Create an alias that includes the words: car, truck, and automobile"). Detailed instructions contained the same information plus a step-by-step solution for each task (e.g., "Create an alias that includes the words: car, truck, and automobile; Select car, truck, and automobile in the word list and then select Insert | Alias | Include Selected Terms from the menu"). Eight participants received the general task descriptions and nine received the detailed task descriptions.

To guide their evaluations, participants were given a list of four questions derived from those originally proposed for the cognitive walkthrough (Wharton et al., 1994):

- Will the user try to achieve the right effect?
- Will the user notice the correct action is available?
- Will the user associate the correct action with the effect trying to be achieved?
- If the correct action is performed, will the user see that progress is being made toward solution of the task?

The participants were given 1 hr 15 min to evaluate the system. All participants completed the evaluation individually and were instructed to write down any usability problems they identified. All participants completed the evaluation within the time provided.

valuations were completed, all of the problems noted by the partici-