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Contents

Editorial

Dr Christine Halse

The articles in *Pacific-Asian Education*, Vol. 11, No. 2 address three different curricula areas i.e., science education, English as a Second Language, and conflict resolution; in four different, Pacific-rim countries i.e., Korea, Singapore, Australia and Fiji. Despite the diversity across the substantive areas and their country of application, readers will be struck by the extent to which the issues the authors raise echo similar concerns in other locales, and it is anticipated that readers from around the world will find the current collection of articles of general interest and practical relevance to curriculum in their own countries.

Paul Glew, from the University of Western Sydney, is author of the first paper in this volume. Glew's paper is concerned with the design of English as a Second Language (ESL) curriculum. In a world characterised by increasing migration and a commensurate growth in the migrant populations in many countries, Glew raises an important educational and social question i.e., the effectiveness of national language curricula for non-native speakers, and the extent to which this curriculum meets the language needs of migrant students. Glew examines this problem through a 'case-study' of some of the issues that have arisen with the introduction of a new ESL curriculum for students in the post-compulsory years of schooling in New South Wales, Australia. He questions the implementation and content of the ESL course in the light of research on ESL classroom teaching and second language acquisition theory, with a particular focus on the role of verbal interaction, negotiation, feedback, gender and ethnicity. Based on his analysis, Glew is critical of practises that offer students exposure to English in the classroom but that do not include interaction and feedback involving the negotiation of language form and meaning. Whilst Glew concedes that current research on second language learning is limited and that more research is required, he argues that when ESL curricula is developed without due consideration of the existing research, it will result in language programs that are more suitable for native speakers than for ESL students.

The second paper in the current edition addresses an area of growing concern in schools and education systems around the world i.e., the affective development of students, particularly in terms of their attitudes, beliefs, values, and behaviour. Addressing these issues can occupy a substantial amount of teachers' time, and consume teachers' physical and emotional resources. Furthermore, an increasing number of school systems and governments are viewing the development of students as integral to the creation of an

informed and effective citizen. Countries around the Pacific Rim have been proactive in introducing curricula to address such issues and this is explicit through the introduction of civics, citizenship, moral and ethical education in schools. Part of such formal curricula has involved the development of the practical skills that students will need to be effective, active participants in society, including the capacity to work collaboratively and constructively with others, and to effectively manage situations of conflict or tension.

Bee Ling Soh and Barry Fields, from the University of Southern Queensland address such issues in their report of a study that examined a peer mediation program for conflict management in a Singaporean primary school. They argue that although there has been growing interest in conflict management amongst school administrators, the field lacks a strong empirical base of theory and research to inform practice. Whilst evaluations of the effectiveness of peer mediation for conflict analysis have been very positive, the authors point out that many of the more widely used programs have originated in the United States, and their transferability across cultural boundaries is "open to conjecture" given that existing research suggests that different cultures manage conflict in different ways. In their study, Soh and Fields explored the effectiveness of a peer mediation program (*A Generation of Peacemakers*) in helping a sample of Chinese primary school students (years 5 and 6) in Singapore to develop skills in conflict management and resolution. In contrast to existing research, Soh and Fields report that neither ethnicity or gender seemed to impede a student's ability to understand and utilise peer mediation processes to resolve situations of conflict. The authors warn that peer mediation training will not automatically or totally eliminate conflict, but their findings suggest that such programs may be a useful tool for fostering harmony in schools, and for providing students with a repertoire of conflict resolution skills that can be used throughout life.

Science education is the focus of the article by Yeon-A Son, Francis Pottenger, Moon-Nam Lee, and Wan-Ho Chung. The authors provide a critical analysis of the changes that have occurred in science curriculum in Korea during the twentieth century, and the issues that that recent curriculum initiatives raise for the twenty-first century. Many of the trends and conclusions presented by the authors will resonate with the experiences of educators and curriculum developers in other countries. A troubling pattern is that Korean students, like students in other parts of the world, appear to lose interest in science as their schooling progresses, and that their achievement in science declines accordingly. The authors identify five clusters of concerns about the present system for generating and supporting Korea's science curriculum that seem to contribute to downward trends in participation and performance, and suggests some possible solutions to these concerns. The authors' recommendations will be of interest to science educators and curriculum developers

generally, and many may find the proposals applicable to the development of science curriculum in their own countries.

The final paper in the current edition of *Pacific-Asian Education* is also concerned with science education, and reports on a study of Fijian and ethnic-India pre-service primary school teachers' perceptions of their preferred science learning environment. The study conducted by Neil Taylor and Richard Coll found that, despite the cultural differences between participants, there was a high degree of consensus about four aspects of the learning environment: the role of the teacher; the role of questioning; the role of the examination system; and the value of competitive versus co-operative classrooms. Moreover, the participants' preferred science learning environment tended to parallel a constructivist view of learning, and the participants seemed to be receptive to constructivist-based teaching strategies such as collaborative group work, interactive questioning, and elicitation of prior knowledge. Taylor and Coll conclude that these findings hold promise for science teaching in Fiji. The external examination system in Fiji is currently under review and there is discussion about the introduction of more school-based assessment. The authors' findings suggest that teachers may be willing to adapt to such a change and make more use of more constructivist teaching strategies if the pressure for recall-dominated summative examinations is reduced.

The final contribution to Vol. 11, No. 2 is a review essay by Margaret White of *Women of the Long March* (1999) co-authored by Lily Xiao Hong Lee and Sue Wiles. This powerful history documents the real-life experiences of a group of women who participated in China's Long March. The book is based on extensive interviews with the women themselves, as well as a rich range of primary sources. Margaret White's review essay provides an insight into the complexity of the history constructed by the authors, and its significance in modifying existing understandings of the origins of contemporary China. Such a book, concludes the reviewer, offers a valuable resource for Social Studies and Asian Studies curricula at both the upper secondary and tertiary level.

Science Curriculum Development in Korea: Lessons for the Twenty-First Century

Dr Yeon-A Son, University of Hawaii, Honolulu, Hawaii
Dr Francis M. Pottenger III, University of Hawaii, Honolulu, Hawaii
Dr Moon-Nam Lee, Dankook University, Seoul, Korea
Dr Wan-Ho Chung, Korea National University of Education, Chungbuk, Korea

Abstract

Over the past fifty-five years Korea has undergone a series of educational reforms each tuned to wider international educational movements. In science education these reforms have sought to simultaneously humanize, create an environmental and social conscience, and prepare a science-knowledgeable work force to support an ever more sophisticated technological society. Central to this attempt has been a persistent faith in integrated curriculum. Unfortunately, against this background of idealism, the past twenty years has seen a decline in students' expressed interest in and understanding of science. This article points out that over the years of the ministerial reform approach to curriculum major problems have evolved that may account for much of this decline. These can be gathered under a generalized concern for the growing gap between requirements of ministerial mandates and actual classroom practice and university teacher-training programs. The most urgent issue in carrying out a suggested agenda of solutions will be implementation of a program that recognizes that present deficiencies can be overcome only by a holistic, systematic, and concurrent effort.

Introduction

It is quality of curriculum and its use that determine the effectiveness of school education. Review of Korea's science curriculum over the last two centuries reveals that there have been dramatic changes, and these changes have been built around a relatively consistent and small number of goals. Over this period various configurations of the same goals have undergirded science curriculum in many countries (Bybee & Deboer, 1994). But sharing of these goals has not shielded Korea from curricular problems. Looking at its history and the current state of its science education, there evolves a collection of problems that need to be addressed if Korea is to fully contribute in the technological world of the next millennium.

This discussion of science curriculum development in Korea is divided into three sections. Section 1 provides a glimpse of the changes that have taken place in Korean

society and in science education during the 19th and 20th centuries. This leads to Section 2, which deals with contemporary trends in Korean science curriculum. Finally, Section 3 deals with problems that have emerged over time in Korea's science reform process and suggests modification for implementation and future formulation of reforms.

Section 1: Social Change and Influences on Science Education (1800 to the present)

As stated by George Sarton; "In order to go forward, we must look not only forward, but also backward." The backward view gives us confidence and helps us straighten our course (Klopfer & Champagne, 1990).

Influences on Korean Science Education

Korean science education has changed concurrently with the social, cultural, and political upheavals and the shifting vogue of educational philosophies that have impacted on it over the last two centuries (see Table 1).

From 1800 to 1909, the Chosun Dynasty period, there was no regular science curriculum in the public schools of Korea. Starting in 1883, physics was taught to secondary students as a regular subject at the private Wonsan School, which was the first modern school in Korea (Academy of Korean Studies, 1997, Vol. 16). During this time science education was strongly influenced by the thinking of intuitionalism of Comenius and the educational thought of Rousseau (Song, 1997).

From 1910 to 1945, Korea was occupied by Japan. During this time, the Japanese published the Decree of Chosun Education, and the content and methods of the Japanese system were applied to science education (Academy of Korean Studies, 1991, Vol. 20). After liberation a lecture syllabus was organized by a Korean Board of Education (Ministry of Education, 1994). However, the board could not develop a systematic curriculum because war disrupted the country from 1950 to 1953.

The first Korean-constructed curriculum published in 1955 was very much guided by the pragmatism of Dewey. A second curriculum, operating over the period 1963 to 1973, emphasized science and technology education to support economic growth (Song, 1997). Rapid improvements in the economy suggest a general effectiveness of this curriculum, which continued to look to the thought of Dewey for philosophical guidance.

Table 1. Science education: social change and international influences

Period	Societal status	Science education	International influence
Beginning period of science education (1800–1909)	•The period of Chosun Dynasty	•Absence of science curriculum •1883, Wonsan school: teaching physics as a regular subject	•17th century: Comenius – intuitionalism •18th century: Rousseau —Emil
Science education of pre-liberation (1910–45)	•Invasion of the Japanese (1910) •World War II (1939)	•1911, publication of 'the Decree of Chosun Education' by the Japanese	•Direct import of the education content and method from Japan
Transitional period of science education (1945–63)	•Liberation (1945) •Korea War (1950–53)	•1945, organizing Board of Education •Lecture syllabus (1945–55) •Publication of the first curriculum (1955–63)	•Dewey (pragmatism)
Reformative period of science education (1973–92)	•Sudden growth •Emphasis of science and technology education	•Publication of the second curriculum (1963–73)	•Dewey (pragmatism)
Adjusted period of science education (1973–92)	•Sudden economic growth •Training manpower of science and technology	•Publication of the third curriculum (1973–81) •Fourth curriculum (1981–87) •Fifth curriculum (1987–92)	•Bruner (Discipline-centered education) •Application of PSSC, CHEMS, BSCS, etc.
Re-adjusted period of science education (1992–2000)	•Democratization •Slowdown in the economy	•Publication of the sixth–2000) •Announcement of the seventh curriculum (1997)	•Kuhn (relativism) •Piaget (constructivism)
Science education of 21st century	•Emphasis – international competitiveness •Joining the ranks of advanced countries • Achievement of peaceful unification	•Activation of the seventh curriculum in 2000	•Kuhn (relativism) •Piaget, Vygotsky (constructivism)

From 1973 to 1992, Korea strengthened manpower training in science and technology, and during this time the country achieved great economic growth. The third, fourth and fifth curricula were published in 1973, 1981, and 1987, respectively (Ministry of Education, 1994). Bruner's discipline-centered ideas of education were emphasized as they were reflected in the American science programs such as Physical Science Study Curriculum (PSSC), Chemical Education Materials Study (CHEMS), Biological Sciences Curriculum Study (BSCS), and others.

From 1992 to 1997, Korea experienced political democratization but gradual economic decline. A sixth curriculum, published in 1992, was strongly influenced by the relativism of Kuhn and the constructivism of Piaget (Ministry of Education, 1994). From 1992 to the present, Korean national curriculum has emphasized the importance of international competitiveness as Korea has joined the ranks of the world's advanced countries. The seventh curriculum was announced in 1997 and will be operational in the year 2000. This curriculum continues to be influenced by the relativism of Kuhn as well as the constructivism of Piaget and Vygotsky.

Content Changes in Science Curriculum (1945 to the present)

In 1945, after liberation, Korea began organizing its lecture syllabus but this work did not provide a systematic framework for a science curriculum. However, in 1955, the first government-sponsored curriculum was established and from that time to the present, Korea has had seven different curriculum reforms based on evolving educational thought within the international community. Note of these world views is important in understanding how Korea's science curriculum has changed over time.

The time of beginning organization of the lecture syllabus was a period of transition for Korea's educational system. For the first time in almost 50 years Korea was able to organize a syllabus and science education independently. Structurally the lecture syllabus was a formal outline or summary of the main points of a lecture or course of study.

Influenced by the progressive educational methods of America, the government's first (1955–63) and second (1963–73) curricula emphasized a life-centered science program. This program focused on practical scientific problem solving and rational life attitudes. Theory grew out of the students' personal experience and stories about familiar things.

The third (1973–81) curriculum was discipline-centered and emphasized the inquiry process. As the reform of science education in America took place following the "Sputnik Shock" in 1957, Korea also organized a new curriculum and it was called

the “epochal science curriculum.” Like American science educators, Korean educators designed this new science curriculum on the assumption that it would stimulate and arouse students’ curiosity in science and that they would study science through the process of self-actuated inquiry. As part of this reform a new middle school program was created. The goal of this new curriculum was to offer Integrated Science Education (ISE) in a way that would develop understanding of scientific methods and attitudes and a love of inquiry.

Technological and economic pressures caused a change in direction in the development of the fourth (1981–87) and fifth (1987–92) curricula where the intent was to become more human-centered in expanding scientific content to include the contribution of technology and the impact of science and technology on society. Korean designers closely observed the American efforts to reverse a perceived decline in knowledge of science as reported in *A Nation at Risk*. The real substance of this American education reform appears in the sixth (1992–present) national curriculum which still retains a stress on human-centered science education. Of particular interest and influence was the formulation of National Science Education Standards (NSES) in America, which placed a new emphasis on Science, Technology and Society (STS) and environmental education. During this time, an integrated science curriculum was introduced in the high school.

In 1997 the Korean Ministry of Education announced the general content of the seventh curriculum reform package. This curriculum will be gradually applied to schools starting in the year 2000, and at this writing is still in preparation. There will be four major emphases in the science component: first, basic science concepts and their application in practical life; second, integrated learning; third, attitudes and the solving of practical problems of life; fourth, recognition of the relation of science to technology and society. This curriculum is an integrated curriculum, which brings together life-discipline and human-centered science (Ministry of Education, 1997).

Table 2. Changing features of science curricula since 1945 in Korea and the United States

Korean Science Curriculum 1945-present				**Science Education in the United States**
Curricula	**Times**	**Features**	**Trends**	**Features**
Lecture syllabus	1945–55	Period of lecture syllabus and transition	•Syllabus and subject centered education	Period of progressive education
The first curriculum	1955–63	Period of progressive education	•Subject and life centered education	Period of progressive education and criticism
The second curriculum	1963–73	Period of progressive education	•Life centered education	Period of knowledge & inquiry process
The third curriculum	1973–81	period of knowledge & inquiry process	•Discipline centered education •Starting ISE* in middle school	Period of emergence of environmental education
The fourth curriculum	1981–87	Period of knowledge & inquiry process	•Human centered education	Period of awakening to educational crisis
The fifth curriculum	1987–92	Period of knowledge & inquiry process	•Human centered education	Period of emergence of STS**
The sixth curriculum	1992–present	Period of knowledge & inquiry process	•Human centered education •Starting ISE* in high school	Period of emergence of national standards
The seventh curriculum	1997: announced by the Ministry of Education From 2000: gradual application	Period of integration of knowledge, & science, society, & technology	•Life-discipline and human centered education	Continuance of emphasis of curriculum standards

* ISE - Integrated Science Education

** STS - Science, Technology and Society

Section 2: Contemporary Trends in Science Curricula

This section reviews contemporary trends in Korean science curriculum centering on the sixth and seventh curricula. It covers the period from 1992 to the present with projections into the next century.

The Sixth Science Curriculum

The sixth science curriculum was announced in 1992 by the Ministry of Education. In contrast to the former curricula the framework involved drastic changes. Where prior curricula were detailed in their specification of what should be done in the classroom, the sixth curriculum specified only the elements of science that have to be included in textbooks and science classes. It has been the textbook writers' task to select and specify the particulars of content. As expected, a variety of textbooks were developed, and this achieved a stated goal of avoiding the uniformity and homogeneity found in past curricula. In these texts content was divided into two categories, knowledge and inquiry process, to ensure inquiry activity in the science classroom (KEDI, 1992).

In the elementary school, the focus was on student-oriented, real-life situations, and problem-solving. Open-ended inquiry was also focused on to complement cookbook-style classroom science activities.

In the middle school, the general guidelines for curriculum development were almost the same as the elementary school. Efforts were made to diminish the teaching and learning burden by reducing the number of concepts covered.

The most remarkable change in the sixth science curriculum was the introduction of integrated science in the high school. All high school students had to take eight credits of integrated science intended to be a single subject. The goal of this subject was to create citizens who can think scientifically and rationally and solve problems confronted in everyday life. So the students' own activities and learning became the focus in this subject. Application of scientific laws and principles to technology and relationships among science, technology, and society were also important topics in this subject.

Physics I, Chemistry I, Biology I, and Earth Science I, which stress scientific thinking, scientific attitudes, and basic concepts in science, were introduced as elective subjects for non-science-bound students in high school. Physics II, Chemistry II, Biology II, and Earth Science II were elective subjects for science-bound students as a preparatory course for college and university.

The Seventh Science Curriculum

The world of the 21st century seems heading toward becoming one of shared information and globalization. So, education that prepares students for this future must prepare them to create important values by themselves and this is the task set for the seventh curriculum, Science Curriculum 2000.

The most remarkable features of Science Curriculum 2000 are the practices of the National Common Curriculum and the Differentiated Curriculum. These curricula are not bound by knowledge domains of existing science but synthesize a new integrated science. As in earlier curricula, students are to develop the skills of science by applying inquiring methods and basic science concepts to resolve the problems of natural phenomena and everyday life.

According to the Ministry of Education (1997), the grand plan for the National Common Curriculum is as follows:

- Curriculum will be connected and sequential from grades 3 to 10;
- Content will be suitable for the cognitive development of individual students;
- Content scope will be reduced in texts;
- Inquiring learning will be emphasized; and
- Integrated science content will be supposed to be a single subject.

The Differentiated Curriculum includes various instructional methods that will reflect differences in learning abilities of individual students. Students at the same grade level need not learn the same content. Content will be adjusted in accordance with students' study levels. The subjects of the Differentiated Curriculum are Korean language, English, Mathematics, Society, and Science, and the curriculum will divide each subject into three different groups of subcourses comprising Basic Courses, Advanced Courses, and Supplementary Courses.

From grade 1 to grade 12, there will be four groups of science texts. The text title *Intelligent Life* will be for grades 1 and 2 and it will integrate the topics of nature and society; the text title *Science* will be for grades 3 to 9 and it integrates the subjects of physics, chemistry, biology, and earth science; and the text title *Integrated Science* will be for grade 10 and it integrates the subjects of science, technology, and society as a single subject. Breaking the pattern, students in grades 11 and 12 study the advanced subjects of Physics, Chemistry, Biology, and Earth Science, respectively, for university entrance examinations.

Section III: Concerns and Recommendations for the Korean Science Curriculum

Many reports show that Korean students not only lose interest in science, but their achievement in science diminishes as they go from elementary to middle and finally high school. Korean elementary school students routinely achieve high rank in the International Association for the Evaluation of Educational Achievement (IAEA) in science, but middle school and high school students get progressively lower ranks on the test. (Rosier & Keeves, 1991; KEDI, 1992; Educational Information from Foreign, 1998).

In the space that remains discussion will focus on five clusters of concerns about the present system of generating and supporting Korea's science curriculum that seem to contribute to current trends in declining performance and threaten to affect the new reform curriculum. Also offered are some possible solutions.

Concern 1. Reform Procedures

A first and most basic concern involves procedures used by the Ministry of Education in instituting curriculum reforms. Because curriculum reform plans have been undertaken and completed within brief time periods there has been little opportunity for discussion in the larger educational community. Between reforms there has been no program of ongoing research on alternative approaches or on the impact of the implemented reform program.

In initiating reforms the Ministry of Education establishes curriculum policy and then commissions curriculum design work to designated universities or research groups. Reform documents that are produced are intended to serve as guides for text writers. As a consequence there has been little influence from teacher practitioners. When not included in either the planning or the development of the reforms, teachers as promoters of education have not fully understood the logic of the reforms. As a consequence they have not been able to adequately translate the reforms into instruction (Son, 1997). This has resulted in an ever growing separation between intent of policy documents outlining the structure of the reforms and actual teaching practices in schools.

Recommendations: It is argued that Korea's curriculum development procedures should change from a pure top-down process initiated by the Ministry of Education to one that includes and accommodates bottom-up input from teachers. Without inclusion of a teacher perspective in both policy making and development of guides and texts, there is a high probability of a continued widening of the gap between teaching practises in schools and the ministry's policies and expressed intent of commissioned

guides and texts. Further, it is suggested that in the time between reforms curriculum research be initiated to test the effects of innovations. To facilitate this some group of schools could be designated as research-laboratory schools or sites where such studies can be carried out.

Concern 2. Integrated Science

A second concern is failure of definition of the program of integrated science education called for in all reform policy statements since 1973. From that time to the present the Ministry of Education has mandated that Integrated Science Education (ISE), science taught as a single subject, be instituted in the secondary school. But, to the present it is hard to say there is an ISE program that has been incorporated in either the writing of science textbooks or in the operation of the classrooms. Simply, the goal of science reform to create a program of integrated science in which science is taught as a single subject has never been achieved (Lee,1986; Lee, Son, Noh, & Song, 1996; Lee, Kim, Noh, & Song, 1996; Son, 1997; Son & Lee, 1999).

Recommendations: If ISE is to be successful, Lee and Son's works suggest four operational steps that must be undertaken. First, the intent or purpose of ISE must be articulated so that teachers and the public understand why integration in the form of a single subject is a compelling organizer of secondary science curriculum. Single subject integration must be shown to adequately replace or supplement the present interpretation of an integrated program as one of delivering several separate sciences in sequence.

Second, if a single subject integrated approach is to be successful, a foundational curriculum theory for such a curriculum must be identified or invented, written into textbooks, and shaped to guide teachers in classroom practice.

Third, to support any single subject integrated curriculum an instructional model based on instruction theory must be designed, and this must be available to teachers.

Finally, preservice training of teachers must include experience in teaching single subject integrated science. The present practise of training education majors only in the individual disciplines of physics, chemistry, biology, and earth science, must be reconsidered.

Concern 3. Textbooks

A third concern is the instructional character of the textbooks derived from reform guidelines and here there are a series of subordinate problems. First, the cognitive

level addressed in present textbooks is adjudged by teachers and others as being too high for the average developmental levels of students for whom they are intended. Second, despite the intent of the sixth reform, the volume of content is too extensive for reasonable coverage over a year's course. Third, because of the volume of content, it is almost impossible for teachers to use the required inquiry methods in their teaching. Fourth, the contents to be taught are too abstract and far removed from the everyday life of the students; they lose interest, and the content is quickly forgotten.

Recommendations: It is obvious that there must be a reduction of intensity in the quantitative and qualitative reach of content. The Differentiated Curriculum proposed in the seventh reform is intended to address the problems of quantity and differences in learning abilities of individual students; however, without previous successful models in implementing new approaches the achievement of this goal seems problematic. A program of research and an ongoing system for modification of the products of the reform would seem to be essential.

Inclusion of instructional content related to students' experiences in everyday-life situations will take greater imagination because of the topical nature of personal experience. This part of the curriculum may have to wait for school web access and the creation of an updatable information system for the classroom.

Concern 4. Teacher Support Materials

The fourth concern is the insufficiency of instructional guidance for teachers. In Korea, the curriculum has been mandated by the Ministry of Education to provide system uniformity. Teachers have been able to use only the text and teachers' guides approved by the ministry. These guides have not included alternative reference to appropriate teaching–learning methods.

Recommendations: Since teachers' delivery of the substance of the reform in classroom instruction is the most important factor for students' scholastic achievement, the ministry must commission, design, and develop functional guides for teachers. These guides and other teacher-support materials should be based on research and include various teaching models and approaches from which teachers can select according to need.

Concern 5. Teacher Training

A fifth concern is the insufficiency of Korea's teacher training program. To ensure successful instruction the teachers' role is critical. From the present view of instruction methods endorsed by the ministry, the teacher is not a distributor of

knowledge but a mentor helping students learn the art of problem solving and how to gain knowledge on their own. Teachers must be introduced to these ideas in preservice and inservice instructional settings.

Preservice training is presently in the hands of colleges of education where student teachers gain insight about classroom teaching in external cooperative schools. However, practice teaching is currently limited to only one month. This practice is not sufficient for teachers to learn about new trends or instructional methods. Further, though a strong program of inservice training might overcome this deficiency, Korea has little or no program for professional inservice training.

Recommendations: It is argued that Korea ought to develop a systematic preservice teacher training program that gives student teachers time to acquire the skills needed to carry out the mandates of reforms. Additionally, a system for inservice training must be designed and implemented to ensure that any reform curriculum is delivered in the classroom with an acceptable degree of authenticity. Such a system will require a dedicated professional staff charged with inservice training and reform maintenance. This kind of system will need the research best provided by a network of dedicated research-laboratory schools.

Commentary

The problems outlined here have aggregated over time and must now be considered as a whole. A linear approach to solving problems one at a time may be too complicated and costly since each successive solution will require readjustments of work in place. It is suggested that a holistic planning approach be undertaken by the ministry. Once completed this plan should be followed by allocation of resources to begin the reconfiguration of the entire science education system. Embedded in this commentary is an appeal to create a specially designated network of research-laboratory schools to test programs in schools and provide the insights for future curricular generation.

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The Science Learning Environment: Some Views from Fiji Pre-service Primary School Teachers

Dr Neil Taylor, University of Leicester, England
Dr Richard K. Coll, The University of Waikato, New Zealand

Abstract

Fijian and ethnic-Indian pre-service primary school teachers' perceptions of their preferred science learning environment have been investigated using semi-structured clinical interviews. The interview protocol was developed from a learning environment instrument: the Constructivist Learning Environment in Science (CLES) instrument developed by Taylor, Fraser and White (1994). Data analysis has revealed that despite wide cultural differences amongst participants, there is commonality of views about four aspects of the learning environment: the role of the teacher; the role of questioning; the role of the examination system; and the value of competitive versus co-operative classrooms. Fiji pre-service teachers' views of their preferred learning environment are dichotomous, and appear to represent a combination of traditional views along with innovative thinking. Perceptions of the preferred learning environment are broadly consistent with a constructivist view of learning, and may mean that planned changes to the Fiji school curriculum and examination system will prove less problematic than anticipated.

Introduction

International research efforts have established classroom environment as a thriving field of study (Fraser, 1994, 1998; Fraser & Walberg, 1991). Previous studies of learning environments at the elementary and secondary school levels have found that there are often differences between students' perceptions of their preferred and actual learning environments. Differences have also been observed between students' and teachers' perceptions of the same learning environment (Fraser, 1991, 1994, 1995). One of the benefits to come from research into learning environments, is that it has been shown that improvements in students' learning environments can lead to improved performance in the classroom (Doran, Fraser, & Giddings, 1995; Fraser, 1991, 1994, 1995; Fraser & Fisher, 1983a, 1983b). In a meta-analysis which examined 823 classes in eight subject areas and representing the perceptions of 17,805 students in four nations, Haertel, Walberg, and Haertel (1981) found enhanced student achievement in classes which students felt had greater cohesiveness, satisfaction, and

goal direction and less disorganization and friction. Other literature reviews since then have supported the existence of associations between classroom environment variables and student outcomes (Fraser, 1998). Interestingly, although research interest in learning environments has been considerable, there are relatively few reports in the science education literature of studies involving developing countries (Fraser, 1998; Fraser, Giddlings, & McRobbie, 1992; Marcelo, 1988).

The learning environment achieved in classrooms in Fiji, like other countries, is influenced by the education system (Taylor & Coll, in press). Education in Fiji is dominated by a series of national summative examinations. Students sit for these in Years 6, 8, 10, 12 and 13 of their schooling. In this, Fiji is typical of many developing countries for which, according to Vulliamy (1988), the content and style of national examinations tend to be important determinants of the content and pedagogy. Vulliamy goes on to point out that the vast majority of questions asked in school examinations in developing countries test factual recall rather than comprehension or application skills. Such a situation encourages rote learning of factual information and promotes a formalistic, didactic style of teaching. Unfortunately, this places a low premium on the relevance of teaching and learning to students' own lives. Ingle and Turner (1981) point out that this situation is exacerbated by the intense pressure for university places and jobs in many developing countries, which puts a premium on examination success:

In these circumstances, rote-learning appears to pay dividends, and the pupil expects the teacher to be the 'transmitter of knowledge.' Thus, even if the aims of the curriculum state otherwise, in the absence of teachers that are able to adjust to the demands of the curriculum, the new program can easily become sterile. (p. 361)

Whitehead (1986) observed that an examination-driven curriculum also prevails in Fiji:

The teaching of science in many schools in Fiji is still very bookish rather than based on experiments and discovery techniques . . . . To most people in Fiji, education is still equated with passing examinations as a means to future employment, and school committees and teachers alike are as firmly wedded as ever to examination pass rates as a measure of their success. (p. 19)

Muralidhar's (1989) study of 289 lessons of the Junior Secondary Basic Science Course confirmed Whitehead's findings, and Muralidhar concluded that students were rarely actively involved in what was intended to be an activity-based science program. The fact that such a situation prevails in Fiji where science examinations tend to concentrate on testing lower level cognitive skills such as recall is a major

contributing factor to a formalistic, teacher-centered style of science delivery (Taylor, 1991; Taylor & Macpherson, 1992a). However, it seems that this teaching approach is at odds with some of the aims and objectives of the science courses developed for Fiji schools (Muralidhar, 1989; Taylor & Macpherson, 1992b). For example, the Fiji Basic Science Course Objectives state that "Students should be able to; relate the processes of evaporation and condensation to natural events" and "discuss the importance of expansion and contraction in the World today" (Fiji Ministry of Education, 1982). It seems unlikely that the highly traditional teaching modes typically employed in Fiji schools could achieve success for such objectives.

Teaching in Fiji is further complicated by cultural factors (Taylor & Coll, in press). In Fiji, as in other Melanesian countries (e.g. Waldrip & Giddings, 1993), it is deemed important that teachers maintain tight control over their classes lest they lose face by admitting to a lack of knowledge. Thus discussion or questioning on the part of students is typically discouraged, particularly when teachers are uncertain of their own scientific knowledge. Teachers fear their lack of understanding being exposed before the class, and tend to adopt strategies which will minimise this occurrence (Taylor & Coll, in press).

Waldrip and Giddings (1993) point out that a similar situation exists in schools in Papua New Guinea (PNG), another Melanesian country in the South Pacific region:

In Papua New Guinea society, the elders are the source of knowledge and often younger members are perceived to be full of foolish ideas. Directions emanate from the elders and so in teaching, the teacher likewise directs the class. (p. 12)

Unobtrusive observation of science classrooms by Waldrip & Giddings (1993) and Apelis (1980) found that PNG teachers like to impose a teacher-dominated classroom environment in order to maintain control. Interestingly, Waldrip and Giddings discovered that science teachers in PNG appeared to be receptive to new ideas since, during school visits, many teachers informally requested impromptu lesson demonstrations.

The research reported in the present work examines the perceptions of Fiji pre-service primary teachers about their preferred science learning environment. The purpose of this research was to determine the extent to which Fiji pre-service teachers; views had been moulded by the learning environment they had experienced. It was also intended to provide some insight as to how receptive these student teachers might be to planned new approaches for the teaching of science.

Methodology

A total of 24 pre-service primary teachers from a Fiji government teachers' college were interviewed for this study. The subjects, all volunteers, were selected purpose so as to be representative of the intake cohort for the teacher training college: namely, Fijians and Indians; males and females; urban and rural backgrounds; and individuals with differing backgrounds in science. The target group for the inquiry comprised students taking their second, that is, final year at the college. Intake into the college is based on students' performance in the Fiji Form Seven (Year 13) examination along with an interview. However, the college also operates a quota system, which ensures, as far as possible, racial and gender parity in the intake. Consequently, the sample comprised 12 Fijian and 12 Indian participants, with equal numbers of males and females for each ethnic group.

Interviews were typically of one hour duration and covered a number of issues in science, including the participants' views on the science learning environment. The interviews were semi-structured with the interview protocol based on the Constructivist Learning Environment in Science (CLES) instrument developed by Taylor et al. (1994). The questions were intended to elicit the students' views about their preferred learning environment rather than the actual environment they experienced during their own schooling. All interviews were audio-taped and fully transcribed.

Examination of interview transcripts resulted in the identification of four categories for the learning environment. The categories identified were*: the role of the teacher; the role of questioning; the role of the examination system; and competitive versus co-operative classes.* Excerpts from transcripts are provided in the description of the research findings to illustrate views held by participants regarding their preferred science learning environment.

Research Findings

In spite of wide cultural differences, there was considerable commonality of views about preferred learning environment of science classrooms for the pre-service primary teachers involved in this inquiry, with both ethnic Indian and Fijian students sharing a number of views. The research findings are discussed under the categories described for the data analysis above.

The role of the teacher in Fiji primary schools is commonly a highly dominant one. However, most participants (21 out of 24) felt that such a didactic mode of science

teaching in which the teacher employed an expository approach is inappropriate. Rather, they believed that science teaching should involve a significant practical component in which students are actively involved in their own learning (R = researcher, S = subject):

R: When you think about teaching science, is it a good idea for the teacher to stand up and tell the children everything?
S: I don't think so . . . they have to make things for themselves . . . to find things out for themselves . . . whether it is true or not . . . whether the experiment is successful or not. (Fijian male)

Consistent with this view, participants also argued that the teacher's role should be that of a facilitator rather than a director of science lessons:

R: What are your feelings about how the teacher should conduct a science lesson? I mean do you think the teacher should be like a policeman controlling everything, or do you have a different view of how science should be taught?
S: Science in school should be activity-based where the children are involved in the activity, because that would give them the chance to actually participate and see for themselves what is actually taking place rather than the teacher telling. Because we believe that whatever children do and see themselves they tend to remember for a longer period of time compared to what they are told.
R: Do you think the teacher should demonstrate activities first before the children carry them out?
S: The teacher should guide the children if necessary, but not demonstrate, because if the teacher has already demonstrated to them, then the children won't take that interest to do the activity for themselves because they've already seen what was taking place. (Indian female)
R: The teacher . . . do you think a science teacher, should they be like a policeman, controlling everything . . . how do you think the teacher should behave?
S: No they should be more like a guide and help the children to do the experiment on their own. (Indian male)

However, this view was not universally held, and a few students considered that the teacher's role in practical science should be more directive. The data suggest that this latter view is based more on a desire to ensure that students were able to perform practical activities appropriately, rather than a perception that students require instruction in order to get "correct results":

S: The teacher should be active and should tell the children what actually had to be done step by step, and should show the experiment to them. The teacher should

first do the experiment, show it to the class and then let the class do the experiment.

R: Why do you think the teacher should show the class the experiment first?

S: Because the children don't really know what to do so they can follow the steps easily. (Indian male)

This view may be a result of the pre-service teachers' own learning experiences; it being common for teachers to demonstrate practical activities before allowing students to perform them (Muralidhar, 1989).

There was full consensus regarding the value of questioning, with all participants reporting that they felt the use of questioning was particularly appropriate for science instruction:

S: Once the teacher asks the question to the children it should not be just a yes or no answer question. It should be a question in a form where the children have to give their views, their reasoning and not just yes no.

R: Do you think the questioning should be both ways?

S: It should be both ways . . . then the teaching and learning would be more effective. (Indian female)

In commenting about the use of questioning, one participant specifically recommended the elicitation of students' prior knowledge:

R: Do you think it's good for the teacher in a science lesson to ask questions?

S: I think it's good to for the teachers when they conduct their science lessons to listen to the views of the children . . . first of all how they think, what they think is going to happen and what has happened and why. (Fijian male)

Perhaps one of the most interesting aspects of the participants' views regarding their preferred learning environment was their universal belief that it was appropriate for students to actually challenge the views of the teacher. This result is quite unexpected, as for both Fijians and ethnic-Indians, it is generally considered culturally taboo to question the statements of elders. However, the participants argued that the modern school and traditional village environments are different, and claimed that their societies were slowly changing in such a manner as to accommodate more critical attitudes in the classroom at least:

R: Do you feel that it is OK to challenge the ideas of the teacher?

S: I mean provided the student is able to prove what the teacher is saying is wrong, I mean not always the teachers are correct too.

R: What about in your culture . . . is it OK to challenge your elders?
S: No it's not.
R: So why is it different in the classroom because the teacher will be your elder?
S: . . . maybe because the home situation or village situation is different . . . we are not given those classroom teachings and other things . . . but in school we are learning something extra apart from what we have learnt in the village, so the feeling is there that whatever we are learning it should be correct. (Indian female)
R: If the teacher says something which you don't agree with do you think it is OK to challenge views of the teacher?
S: Yes I think that's OK.
R: What about challenging your elders?
S: Oh in our culture . . . that's different . . . if elders say something you have to follow even if . . . you can't challenge them.
R: But you see school as different?
S: Schooling is different. Take for example if the teacher is talking about something and you think that he or she is not true, you can stand up and say . . . as long as you've got some evidence. (Fijian male)

One Fijian participant commented that parents were becoming more educated and thus encouraging their children to ask more questions. However, another Fijian participant said that, although she felt that it was appropriate to challenge the views of the teacher on some occasions, it was unlikely to happen in Fijian society since, in most cases, the students still believed that whatever the teacher said was correct. In spite of the views expressed here, it is important to note that only one of the students interviewed claimed to have questioned what a teacher had said.

The atmosphere in Fiji classrooms is typically highly competitive. Of the participants in this inquiry, all but two ethnic-Indian students felt that a competitive atmosphere was desirable in the science classroom. The principal reason offered for this was that competition between students was viewed as healthy because it led to increased motivation:

R: Would you think it was good to have a competitive spirit in the classroom . . . a competitive atmosphere.
S: Em . . .
R: Do you know what I mean by that?
S: Yes, competition in the classroom.
R: Well a competitive atmosphere.
S: Yes I think it's good.
R: Why do you think that it's good?

S: I think a competitive atmosphere . . . it motivates the children towards achieving things faster and they know better about things . . . they are all the time aware of what they are doing, they are not lazy. (Indian male)

S: Yes we should create such an atmosphere where the students are very competitive amongst themselves because that would make the students work harder and then it would be . . . the teacher himself or herself would be proud to see the end result, because if everybody is competitive they will work hard and the end result will be excellent.

R: Are you suggesting that it motivates students?

S: Yes it motivates students. (Indian female)

S: A classroom where there is a lot of competition, I think that's a good classroom because it'll add or it'll give some sense of spirit of competition they will be eager to stand up for themselves and see who is first, who'll come top of the class. (Fijian male)

Whilst almost all of the participants viewed competition in a positive light, one Fijian female student thought that motivation might result from a more negative aspect of competition:

R: So you think competition is good for motivation?

S: Yeah.

R: Why do you think that?

S: Because you don't want to be the one at the back.

R: You mean the bottom of the class?

S: Yes. (Fijian female)

The notion that competition serves as motivating force was also carried over into the participants' views of the examination system in Fiji, with 19 participants expressing the view that the current system is desirable:

R: You know that there are a lot of national exams in Fiji, do you think it's good to have those exams?

S: Yes I think it's good.

R: Why do you think those exams are good?

S: Because it will make them (the students) reach out for more . . . for their education. (Fijian male)

R: And the exams in Fiji, here you have a lot of national exams, how do you feel about the exam system?

S: That is a good thing because through examinations we are able to assess the children and the teacher as well. It's not only assessment of the children but the

assessment of the teacher, she would find out for herself how effective her teaching was. (Indian female)

In fact one participant thought that there were not enough national examinations, decrying the abolition of the Form 5 (Year 11) national examination:

S: Those exams . . . I feel all the exams are good, but only if they can install the Form 5 exam again. They should still have that Form 5 exam.
R: Why do you think the exams are a good thing?
S: There are other good ways, but still here in Fiji, only examinations can tell whether you are a bright student. (Fijian male)

However, the view that examinations are beneficial was not universally shared, with four ethnic-Indian students and one Fijian expressing the view such a system is potentially damaging for teaching practice:

R: You know there are a lot of national exams in Fiji, what do you think about that?
S: I feel that's too much . . . just too much because speaking from the teachers' point of view . . . if they get an exam class they just drill on the students. Here they teach us art, and craft and PE, even music, none of that is in the schools. I can say that because I've been through teaching practice and I've seen them how they do things like that...there is nothing of that just the exam subjects . . . they just drill you, drill you so the children they don't have any moral enrichment, they don't get much in music, they don't have their artist development...what they get is just cramming, cramming, rote learning . . . there are so many exams to do, five of them, that's too much. (Indian male)

Despite the general perception that competition was a good thing in the classroom, all bar one Fijian student believed that collaborative group work was a good thing:

R: And what about students working in groups?
S: I'm in favor of that.
R: Why do you favor that?
S: Because if one person is working alone he won't come up with so many suggestions. If different minds work together then they will come with suggestions as to why it is happening or how to do it and what to do and what not to do. (Indian male)
R: What do you think about students working in groups?
S: It's good.
R: Why do you think it's good?

S: Because they'll all get to share their ideas and when they work in groups it's more effective. (Fijian female)

When it was pointed out to students that there may be a conflict between their views on a competitive classroom and the use of group work, a number were confused and could not resolve this. However, others believed that these two notions were not necessarily incompatible:

S: I think it's possible to work in groups and still compete.
R: How is that?
S: Yes we did that in school we were competing against other groups . . . whenever we did experiments in science we were eager to know our results first. (Indian male)

It is interesting to note that one Fijian participant specifically related the use of group work in the learning environment to his cultural background. However, this student was the only one to make an explicit connection between pedagogy and culture:

R: Do you like the idea of group work or not?
S: I think so.
R: Why is that?
S: Like in England . . . the children are working in groups, so they've gone away from that old schooling system where . . . like we are doing now in Fiji here . . . in Fiji where we just learn things by ourselves.
R: Is that a problem?
S: In Fiji, in our Fijian culture, we did things in groups so that's why we find it difficult for us to, you know, compete with the Indians here . . . . Because most of the time you see the Indians are on top and us at the bottom . . . the Fijians . . . that is the reason . . . . because we Fijians, we can't work well individually, we always work in groups (Fijian male).

Summary and Implications for Teaching

The views expressed here about the learning environment appear to be a mixture of preferred and actual learning environments, with a combination of relatively innovative and strongly traditional thinking. For example, while on one hand most participants advocated the use of questions and group work in teaching, competition and a rigid regime of examinations were also favoured by many. The participants involved in this inquiry represent individuals who have succeeded in a highly individualistic and competitive system in which they encountered many national

summative examinations. However, the participants had been exposed to a certain amount of theory on the teaching of science during their first year at the teachers' college, for example the benefits of group work. It is likely that this exposure to theory has promoted some of the more innovative ideas, and these differing experiences may have produced the dichotomous views about their preferred learning environment revealed in this inquiry. The participants appear to be receptive to constructivist-based teaching strategies; viz., the role of a teacher as facilitator, elicitation of prior knowledge, collaborative group work, and interactive questioning which presently are rarely employed in Fiji schools. This suggests that they may respond favorably to such teaching strategies, and thus provide more effective learning in science. In this regard the findings reported here are similar to those of Waldrip and Giddings's (1993) study in Papua New Guinea. It is our view that this represents an encouraging sign for the future of science teaching in Fiji. The external examination system in Fiji is currently under review. If, as is planned, there is a move towards more school-based assessment and the culture of factual recall-dominated summative examinations is reduced, then the results of this research suggest that teachers may be willing to adopt teaching strategies that promote more effective learning in science.

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Peer Mediation for Conflict Management: A Singaporean Case Study

Bee Ling Soh, University of Southern Queensland, Australia
Dr Barry Fields, University of Southern Queensland, Australia

Abstract

The burgeoning interest in conflict and its management has recently begun to impact on schools and school systems worldwide. Motivated by a concern for increasing levels of violence in schools and student–student conflict, many school administrators are looking at conflict management programs as a means of dealing with the problem. Most of the more widely used programs have their origins in the United States; their appropriateness and effectiveness in other countries and cultures is, at best, unknown, and in some respects open to conjecture. In this paper the cultural appropriateness of a peer mediation program in a primary school in Singapore is the subject of investigation. The study also addresses, in an exploratory manner, the effectiveness of peer mediation as a mechanism for student–student conflict management.

Introduction

The study of conflict management is a burgeoning area of interest attracting individuals from such diverse fields as international relations, political science, industrial relations, counseling and education. While progress in the area has been hampered by a dearth of rigorous research, and, until very recently by a lack of theory to direct and support conflict management practices (Burton, 1990; Johnson & Johnson, 1996), two consistent themes have emerged from the extant literature. First, we know that conflict is inevitable, and this applies equally to disputes between individuals as it does to conflict between nations. Second, conflict itself is not necessarily a bad thing, as the successful resolution of differences can lead to greatly enhanced relationships and a greater tolerance of and capacity to accommodate different viewpoints (Hocker & Wilmot, 1995). We are told repeatedly that it is how conflict is managed which determines whether the outcome is positive or negative.

Schools are not immune to conflict, and the dramatic increase in diversity in the student population in many countries has exacerbated tensions between students whose behavior and values have been differentially shaped by the forces of social class, the unequal distribution of wealth, and differences in culture, religion, and race. The personal and social cost of poorly managed conflict between students has prompted

many school systems throughout the world to introduce conflict management training for students as a means of alleviating the problem. Of concern, too, is the inordinate amount of time and energy expended by teachers in managing interpersonal problems in the classroom and in the playground (Amsler & Sadalla, 1987).

While conflict management in schools can take many forms, the most widely used approach is peer mediation (Johnson & Johnson, 1996). In this approach all students, or selected students, are taught about the nature of conflict, and are trained in the skills of negotiation and how to act as a mediator in disputes between students. The emphasis in these programs is typically on resolving "conflicts of interests," where the actions of one person attempting to achieve his or her goals are impeded by the actions of another person pursuing a different, seemingly incompatible goal. The general aim of peer mediation is to achieve what is called an "integrated solution," sometimes referred to as a "win-win" outcome, where the gains to both parties are maximised. Peer mediators seek to engage the disputing parties in a collaborative problem–solving process, leading to a mutually satisfying negotiated solution. Such procedures are thought to be appropriate in social contexts like schools where relationships are on-going and where there is a strong need to keep these relationships as positive and constructive as possible.

Researchers have noted that how individuals deal with conflict is determined by a range of variables including situational factors such as goals or issues (Ohbuchi & Baba, 1988; Rule, Bisanz, & Kohn, 1985); personal factors such as gender (Falbo & Peplau, 1980; Howard, Blumstein, & Schwartz, 1986; Instone, Major, & Bunker, 1983); developmental level (Cowan, Drinkard, & MacGavin, 1984; Ohbuchi & Yamamoto, 1990); and individual style (Chanin & Schneer, 1984; Layva & Furth, 1986; Sternberg & Soriano, 1984). It has been found, for example, that individuals often have a preference for one of several styles of conflict management, e.g. competing, collaborating, compromising, avoiding, and accommodating (Thomas & Kilmann, 1978).

Cultural Differences in Conflict Management

Recently, attention has shifted to cultural differences in reactions to conflict. While there is very little research available on this question as it pertains to the school context, it is assumed that cultural differences in conflict management approaches exist and that such differences can make, for example, intercultural conflict difficult to resolve (Hofstede, 1980; Ohbuchi & Takahashi, 1994).

Also of concern is the cultural appropriateness of different conflict management approaches and strategies. Peer mediation programs have been promoted widely, but have not been tested for their appropriateness in different cultural contexts. Such programs have their origins in the United States (Burton, 1990; Johnson & Johnson, 1996), a culture described as "individualistic" in nature, where the attainment of personal goals is given high priority, and where assertive behavior and competitive stances in interpersonal relations, while not necessarily encouraged, are often viewed as appropriate responses (Triandis, 1989a, 1989b).

Just as individualism is dominant in the United States and other Western countries, "collectivism" is dominant among many Asian nations. In collectivistic cultures group goals are viewed as more important than personal goals, group norms and integrity are highly valued, and interpersonal relationships are characterised by hierarchy and interdependence (Triandis, 1989a, 1989b). This view of cultures has been tested in several recent studies comparing Japanese and Chinese students with American students and their response to conflict. Chinese students were found to prefer nonadverserial conflict management procedures such as avoidance and compromise, in the belief that such practices were likely to reduce animosity between the disputing parties (Leung, 1987). The findings for Japanese students were similar, with the Japanese subjects preferring to avoid confrontation in interpersonal conflicts and, in particular, where the dispute was seen as a threat to on-going relationships (Barnlund, 1975; Ohbuchi & Takahashi, 1994).

Johnson & Johnson's (1996) review of the effectiveness of peer mediation programs in United States schools found that such programs (a) are effective in teaching students integrative negotiation skills and mediation strategies, (b) are effective in achieving the application of conflict management skills beyond the training environment, and that such applications often lead to successful outcomes, and (c) in schools where mediation programs operate students are more successful in resolving conflicts and this leads to fewer student–student conflicts being referred to teachers. There is virtually no research on the use or effectiveness of peer mediation in Asian schools, and aspects of the peer mediation process raise some doubts about the ease with which such programs could be introduced into cultural settings which may be very different from the American context.

A feature of most peer mediation programs is that disputants must acknowledge that conflict exists and must be willing to engage in a collaborative problem–solving process to help resolve the conflict. As an integrated solution is the goal of peer mediation, it is critical that both parties clearly state their needs and interests. There is no place in the process for solutions based on avoidance, and accommodation, where it is called for, would represent one part, and typically a temporary one at that, in the

resolution process. In other words peer mediation is premised to a large extent on the disputing parties being assertive in the expression of their goals, needs, and interests and in the process of achieving a negotiated solution. These are behaviors which might be considered natural to students in individualistic cultures, but uncomfortably foreign in collectivistic cultures where such assertiveness is far less intrinsic in personal relations.

Given our knowledge of the preferred conflict management styles of Chinese and Japanese students, where there is a greater tendency to avoid conflict and/or to acquiesce to the needs of others (particularly superiors), it is possible that Asian students may find peer mediation difficult to adjust to and even more difficult to apply in day to day situations where interpersonal conflict may be encountered.

The question of the appropriateness of peer mediation in Asian schools was the stimulus for the study reported here. Exploratory in nature, the study evaluated training in peer mediation for Chinese students in a primary school in Singapore. Attention was focused on the ease with which the students adapted to the approach, and their initial perceptions of its success in resolving student–student conflict.

Methodology

Subjects

Twenty Grade 5 and 6 students (ages 9–11 years) from a private denominational girls' school in Singapore were the subjects used in this investigation. The students were all volunteers and their involvement in the study was with the consent of their parents.

The school has an enrolment of approximately 1,400 students most of whom (94%) are of Chinese background and from relatively wealthy families where schooling is valued and supported. The school management had noted the increasing public concern over escalating discipline problems in schools in Singapore, and, while discipline was not considered a major problem at the school, a survey of teachers at the school revealed that many students were experiencing difficulties in interpersonal relations. The survey found that a significant number of students did not know how to respond appropriately to situations where they encountered teasing, acts of mild aggression, inappropriate and unwanted touching by others, the taking of personal possessions, and complaints made by others about them. It was decided that a conflict management program based on peer mediation would be trialed in the school[i].

Peer Mediation Training

The 20 students involved in the program received a total of 10 hours of training in peer mediation over an 8 week period (approximately 75 minutes per week). Training was conducted by the senior author. The program, called *A Generation of Peacemakers* (hereafter referred to as the *Peacemaker Program*), was based on principles and practices devised by Johnson & Johnson (1989) and Deutsch (1973), and emphasised the following conflict management strategy:

1. Jointly define the conflict (State the problem).
2. Exchange positions and interests (Identify wants and feelings).
3. Reverse perspectives (Paraphrase what has been expressed).
4. Invent optional agreements for mutual gain (Collaborative problem solving).
5. Reach an integrative agreement (Agree to a solution).

During the training sessions a number of teaching strategies were employed to help the students acquire the skills of problem identification, perspective taking, negotiation etc. These included:

[1] A full description of the training program can be obtained from the first author through the following email address: sohbeeling@pacific.net.sg

1. Modeling. Key behaviors and responses were modeled by the trainer, and, where appropriate, by selected students.
2. Brainstorming. Students, working in small groups, practiced generating creative solutions to interpersonal problems presented by the trainer.
3. Role-Play. Opportunities were provided for each student to practice all the stages of the peer mediation process both as a mediator and as a participant in a conflict.
4. Practice. Peer mediation skills were practiced repeatedly to assist in the achievement of mastery.
5. Positive Feedback. The students received praise for both effort and appropriate responses.
6. Asking and Answering Questions. Frequent teacher questioning was used to guide discussion and workshop activities. Student questions were encouraged to facilitate involvement and to aid understanding.

Instrumentation

The success of the training program was assessed by surveying student perceptions of their (1) self-esteem, (2) communication skills (with an emphasis on cooperation and

assertiveness), (3) interpersonal problem–solving ability, (4) conflict management, (5) responsibility taking, and (6) the availability of role models for problem solving. The questionnaire, which was administered prior to training and a short time after the completion of the training program, consisted of 19 forced-choice items covering the six categories outlined above. Students responded on a four-point Likert scale from 1 ("Always") to 4 ("Never"). In analysing the results of the survey, items marked 1 ("Always") and 2 ("Often") were combined as were responses 3 ("Sometimes") and 4 ("Never") to give a broad indication of changes in student perceptions following training in peer mediation. Items related to the first four categories above were considered most critical to the evaluation of the training program and were the focus of this report.

In addition to the student survey, the students involved in the training program were asked to evaluate the success of the program by completing a six-item evaluation form several weeks after the conclusion of training (see Table 2).

Results

Pre and Post-Training Survey

The results of the pre and post-training survey provide a broad picture of the effect of peer mediation training on the 20 subjects. These results are summarised in Table 1.

The *Peacemaker Program* was premised, in part, on the view that children needed to feel good about themselves and confident in their interactions with other students to be able to engage successfully in the process of conflict management. Two items focused on student self-esteem. The findings indicate a substantial increase in positive feelings about self following training, although about half of the subjects continued to report difficulties in this respect.

Skill in interpersonal communication is critical to the success of peer mediation. Several survey items dealt with communication skills. Improvements in the students' ability to explain things to others, to pay attention to what others are saying, to convey difficult messages, and in perspective taking were noted. The ability of students to know how others are feeling is a key factor in perspective taking and in the capacity of students to appreciate the needs and interests of others, including those they may be in conflict with. At the conclusion of training, just 12% of the students indicated that they found perspective taking difficult.

Items related to problem solving and to conflict management directly bear on the question of the success of the training program. The results indicate fewer children saw fighting as the major option available when faced with a conflict; and fewer

children expressed difficulty in knowing what to do when angry with another student. The number of students reporting that teachers were spending a lot of time disciplining students halved following peer mediation training. Slightly more students at the post-training stage felt that they could solve their own problems without adult help, as compared to the view expressed prior to training in conflict management.

Table 1 Pre and Post-Training Survey Results

Category/survey item	Pre-training % (n = 20)	Post-training % (n = 20)
Self-Esteem		
1. Most children would like to have me as a friend.	32.0*	47.00
2. Most of the time I feel good about myself.	41.0	51.0
Communication Skills		
3. It's easy for me to explain things to people.	32.0	42.0
4. When people talk I have a hard time paying attention.	30.0	Nil
5. I find it hard to tell others I can't help them.	64.0	53.0
6. It is hard to figure out how others are feeling.	32.0	12.0
Problem Solving		
7. Sometimes a person does not have any choice but to fight.	57.0	43.0
8. It's hard to know what to do when I get mad at someone.	20.0	3.0
Conflict Management		
9. Teachers spend a lot of time disciplining students.	46.0	23.0
10. Students cannot really solve their own problems at school.	20.0	15.0

* Rounded percentages

Program Evaluation

The students who completed the peer mediation program were asked to evaluate its success. The results of this evaluation are summarised in Table 2.

The students in the study reported that their knowledge of the peer mediation process was significantly enhanced through participation in the trial program.

Forty-one percent of the participants reported using peer mediation outside the training setting; a further 35% indicating some use of mediation skills. Just over half of the students who had used peer mediation following training reported that their efforts were successful; a further 30% reported partial success in the use of mediation. An overwhelming 82% of students rated their experience with peer mediation as successful; and 88% of students responded that they would recommend peer mediation as a way of managing and solving student–student interpersonal disputes.

Table 2 Student Evaluation

Item	Yes (%)	Somewhat (%)	No (%)
1. Do you feel you know more about the peace-making process now than you did at the beginning of the school term?	82.0	18.0	Nil
2. Have you used peer mediation to help you solve conflicts?	41.0	35.0	24.0
3. Do you think all the solutions in mediation are fair?	65.0	35.0	Nil
4. Would you recommend mediation to someone who has a problem?	88.0	12.0	Nil
5. Do you think that peer mediation made a difference in the way you and other students got along?	53.0	30.0	17.0
6. On the whole, would you rate your experiences with peer mediation as successful?	82.0	9.0	9.00

Discussion

In this paper the cultural appropriateness of a peer mediation program in a Singaporean primary school was the focus of investigation. In addition, the study sought to investigate whether Chinese students would adapt to the processes of conflict management incorporated into a peer mediation program, and whether they would be able to apply these successfully in day to day situations where interpersonal conflict was encountered.

While it was noted earlier in this paper that there is some evidence that Chinese students may experience difficulties in adapting to and using largely Western-based approaches to conflict management, this study found little support for this proposition. Indeed, the great majority of students in the study reported little difficulty in understanding the nature of the peer mediation process. In addition, a substantial number of students reported that they were able to apply the skills of peer mediation in school, and many found that their efforts in this regard were successful. Further, the students who completed the training program overwhelmingly responded that their experience with peer mediation was a positive one, and almost 90% reported that they would recommend its use to other students.

A further encouraging sign from this investigation was that these results were achieved with female subjects. The literature on the impact of gender in conflict management clearly indicates that females often use avoidance, accommodation, and compromise in dealing with interpersonal disputes, and are reticent to express their needs and interests (Valentine, 1995). It has been found that females frequently turn their feelings inward. Such responses are generally unproductive and often lead to stress, low morale, or depression. As noted earlier in this report, assertiveness is important in the achievement of conflict resolution where an integrated solution (a win-win outcome) is the goal. Neither avoidance nor accommodation are conducive to the kinds of outcomes most authorities like to see in interpersonal conflict. For many Asian females there are additional cultural pressures to avoid conflict. It was considered by the authors of this report that the combination of culture and gender may inhibit the students' acceptance of peer mediation and the ease with which they would be able to apply peer mediation strategies in the school environment. This view was not borne out in the investigation, with the girls in the study adapting to peer mediation easily and seemingly with enthusiasm.

It needs to be acknowledged that this was an exploratory study only, involving a small sample of students and without corroborating evidence that the students did indeed apply the skills of peer mediation outside the training setting. Nevertheless, all indications are that young Chinese Singaporean students adapt well to the strategy of

peer mediation and, in general, view the processes of conflict management that are involved in the strategy as useful in helping resolve difficult interpersonal problems.

It would be wrong to assume that peer mediation is the perfect solution for student–student conflict. As evidenced by the survey and evaluation results, aggression is still a significant option for many students when faced with conflict. One measure of the success of any conflict management program is the extent to which response options are expanded. It would appear that in peer mediation training more attention needs to be directed to helping students search out more creative and more prosocial options when faced with conflict. In addition, as with all programs where training is undertaken in relative isolation from the social environment in which participants must function, transfer of skills and generalisation to other situations and settings can be a problem. With less than half of the students in this study reporting that they were able to use peer mediation to help resolve student–student conflict, training is not complete without a mechanism for on-going support to students in their day to day interactions with peers.

Despite these limitations, on balance there is much to recommend the adoption of peer mediation as a conflict management tool based on this Singaporean case study. Other Asian countries may well see parallels in their school systems and might be motivated to undertake similar trials.

With conflict escalating in many countries due to economic inequalities, and political and social differences, schools will be seen more and more as venues for teaching students understanding and tolerance for human diversity. The social harmony which exists within and between nations will be influenced to a great extent by how successful schools are in this regard.

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The New South Wales Preliminary and Higher School Certificate English (ESL) Courses: Developing Curricula and Pedagogy for Instructing Second Language Learners in Secondary School Classrooms

Paul J. Glew, University of Western Sydney, Australia

Abstract

This article discusses the introduction of the English as a Second Language (ESL) courses to post-compulsory secondary education in New South Wales. It raises issues concerning course implementation and addresses aspects of the English syllabus in the light of research on teaching ESL in classroom contexts and second language acquisition theory. Through the discussion on instructed second language learning, the paper examines the roles of verbal interaction, negotiation, feedback, gender, and ethnicity. The investigation reveals that exposure to English in the classroom context, without interaction and feedback involving the negotiation of language form and meaning to aid in second language comprehension and use, may be insufficient for successful second language learning. The paper also explores how the gender, ethnicity, and individual characteristics of ESL learners may influence their participation in classroom communication. Finally, the discussion offers some focus for the development of ESL instruction in Australian secondary schools.

Setting the Scene

Today, about 80 per cent of students in New South Wales (NSW) undertake further secondary schooling to complete the Preliminary Year 11 course and the Higher School Certificate (HSC) in Year 12. The retention rate for students in these post-compulsory senior school years, which follow four years of mandatory secondary schooling from Year 7 to Year 10, has risen dramatically since the 1960s and has resulted in a diverse group of returning students (Hemmings, 1996). Given the significant increase in students undertaking Year 11 and Year 12 post-compulsory schooling, the NSW government introduced legislation in 1997 to establish curricula for secondary school students for the 21st century that would certify student achievement and meet the needs of the Australian community (Board of Studies NSW, 1999c). The revitalised curricula aim to address the purpose, appropriateness, assessment methods and content of the HSC. "The Government's vision for the Higher School Certificate is that it be founded on rigour, fairness and relevance to the

needs of all secondary school students" (Board of Studies NSW, 1997, paragraph 5). This includes valid and fair assessments of knowledge and ability, a marking system that is not biased against particular HSC candidates and education that provides the knowledge and skills appropriate for vocational training and future learning. Moreover, the HSC is to not only promote the intellectual development of students but also foster a respect for cultural diversity. In accordance with the Government's vision for the HSC, there are the Year 11 and Year 12 English as a Second Language (ESL) courses for students who genuinely need assistance in English as their second language. The introduction of the English (ESL) courses increases the recognition of the second language learning needs of ESL students in NSW secondary schools (Department of Training and Education Co-ordination New South Wales, 1997a, 1997b). The Preliminary English (ESL) course is undertaken in Year 11 and the HSC English (ESL) course is completed in Year 12 to meet the requirements for the study of English. The students who are eligible for entry to the English (ESL) courses need to have been educated "using English as the language of instruction for five years or less prior to the beginning of the Preliminary year of study" (Board of Studies NSW, 1999d, p. 58).

The theoretical and empirical support for second language instruction provide a rationale for the introduction of the English (ESL) courses to secondary schooling in New South Wales. However, to implement the vision for the HSC of rigor, fairness and relevance to ESL students, the English (ESL) courses require the development of educators in ESL teaching and the implementation of effective second language instruction for ESL learners as they develop their language proficiency in content-based classrooms. To have effective ESL curriculums for secondary school students in the 21st century, we, as educators, need to evaluate the purpose, appropriateness, assessment methods, prescribed content and anticipated outcomes of the English (ESL) courses as well as assess our professional development requirements. This paper explores issues concerning the introduction and implementation of the English (ESL) courses in NSW secondary schools and addresses the English syllabus in the light of second language acquisition theory and research on ESL learning and teaching in classroom contexts. The discussion also focuses on the role of instruction in ESL learning and raises the issues of verbal interaction, negotiation, feedback, gender and ethnicity as they relate to classroom praxis and second language learning contexts.

An ESL Curriculum Perspective

New South Wales is not alone in introducing an ESL option for English studies in post-compulsory secondary education. The Victorian Certificate of Education (VCE) offers the subject English-ESL. Brown (1997) claims that "public credibility is . . . high with VCE English-ESL being accepted as equivalent to VCE English at all

levels" (p. 5). It meets the requirements for the common compulsory English Field of Study for entry to tertiary institution courses. Enrolment into the English-ESL course is based on the ESL status of the students. Nevertheless, Brown points out that "the English-ESL course is not based on a deficit view of the students enrolled in it and this would quickly become the case if entry to the subject depended on a low level of competence in English" (p. 3). A review of the assessment criteria developed by the Board of Studies Victoria (1999) for the English course and the English-ESL course reveals many similarities. The assessment criteria used for the English-ESL course reflect the meaning and character of those used for the English course. Even though VCE English-ESL meets the criteria for compulsory English study, Brown questions the validity and reliability of the English-ESL assessment tasks, the nature of what is being assessed and the understanding of language learning which underpin the tasks.

Questions similar to those posited by Brown (1997) could also be applied to the NSW Preliminary and HSC English (ESL) courses. Firstly, what are the understandings about language and the nature of second language learning that underpin the English (ESL) courses? Secondly, how do these understandings relate to second language acquisition theory as well as empirical research on English second language learning, teaching and classroom praxis? Finally, how can we as teachers meet the language instruction needs of our ESL students in a classroom context? These interconnected questions are addressed throughout the following discussion and provide focus for the issues and theories that are raised although not expounded at length within the limits of this paper.

The English (ESL) Courses

Having undergone an extensive revision process, the English syllabus for the Preliminary and HSC courses has been developed in stages from the draft writing briefs and draft syllabus to the final syllabus document. Throughout this process, the documentation has offered some understandings about language instruction and the nature of second language learning that underpin the English (ESL) courses and overall English syllabus. The English draft writing briefs claim to include a range of perspectives on the nature of the study of English. These are contended to take into account developments in linguistic, cultural and literary theories to guide the English syllabus. Moreover, the draft writing briefs suggest that teachers can blend and use a variety of approaches, perspectives and theoretical understandings in implementing the English courses. Nonetheless, the draft writing briefs, draft syllabus and final syllabus key terms in the nature of the study of English for the English (ESL) courses are the same as for the mainstream Standard and Advanced English courses (Board of Studies NSW, 1998b, 1999a, 1999d).

The key terms used in the English syllabus to address the nature of the study of English include: responding, composing, texts, context, language modes, language forms and features, and the structures of texts. These key terms and accompanying explanations are assumed to be broad enough to include students who study English as their first or their second language. In the syllabus, meaning is stated to be the central issue in the study of English. “Meaning is achieved though responding and composing, which are typically interdependent and ongoing processes” (Board of Studies NSW, 1999d, p. 7). The assumptions underpinning responding include decoding, critically analysing and evaluating texts. Underlying composing is the assumption that the students have the knowledge of English structures and forms to produce texts. In these ways, responding and composing include active language comprehension and production skills.

The draft writing briefs, draft syllabus and final English syllabus address the content of the English (ESL) courses with regard to the development of the English comprehension and production skills that ESL learners need to acquire. The area of language study in the Preliminary English (ESL) course includes the study of text structure and design which involves the study of textual linguistic conventions, grammatical features, vocabulary, audience, context, and purpose (Board of Studies NSW, 1998a). This area of language study was revised for the draft syllabus and final English syllabus so that sixty-percent of the English (ESL) course content could include the study of language by emphasising the development and acquisition of specific ESL skills (Board of Studies NSW, 1999a, 1999d). These areas of study allow teachers to design the English (ESL) courses using material for instructed second language learning. Nevertheless, teachers are still required to design the curricula to meet the prescribed syllabus content and objectives and to assist ESL students to achieve the prescribed learning outcomes. Furthermore, although the Preliminary English (ESL) course does not require the students to engage in a close study of literary genres through prescribed texts or electives, the HSC English (ESL) course does require students to use prescribed texts and to select from predetermined electives. Apart from the addition of some specific language study, the syllabus for HSC English (ESL) course is essentially the same as for the Standard English course (Board of Studies NSW, 1998a, 1999a, 1999d).

In view of these points, one might question how adequately the English (ESL) courses address the essential issues involved in learning English as a second language. In 1969, Schwab stated that “the problems posed by the current drives towards ethnicity in education find curriculum specialists . . . massively oblivious and unprepared” (p. 5). Moreover, we need to be aware that even the content of the texts used in our curricula are likely to be culturally and politically biased in favor of the native English speaker. Apple (1992, p. 7) argues that “textbooks are really a form of cultural politics. They

involve the very nature of the connections between culture and differential power". Provided instructed second language learning is our goal, it is important that we as educational practitioners do not develop curricula for ESL instruction that remain predominantly structured for native English speakers. To investigate some of these concerns, the discussion that follows addresses the role of instructed second language learning as it relates to the English (ESL) courses, language acquisition theory and research on classroom praxis.

Issues in ESL Instruction

The prescribed objectives, outcomes and content in the English syllabus direct the instruction and language learning for ESL students. These set out the language knowledge, understandings and skills that students in the Preliminary and HSC English (ESL) courses should acquire and be able to demonstrate. The objectives and outcomes for the courses require ESL students to understand and use texts and contexts, connections between text purpose and structure, and "key language patterns and structural features" (Board of Studies NSW, 1999a, p. 83). Moreover, ESL students need to understand cultural references in texts, develop critical thinking and collaborative learning skills, and also acquire a range of specific second language skills in listening, speaking, reading and writing through the content of the courses (Board of Studies NSW, 1999d). Learning these skills is in accordance with the recommendations that the outcomes for the courses incorporate the development of communication skills that ESL learners require for their studies and future vocations (Board of Studies NSW, 1998, March 7–8). Given the prescribed objectives, outcomes and content, the role of instructed second language learning in the classroom context is vital for the English (ESL) courses.

Research indicates that instruction is beneficial for the second language learner (Long, 1983a). Second language instruction can "simplify the learning task, alter the process and sequence of acquisition, speed up the rate of acquisition" (Larsen-Freeman & Long, 1991, p. 304) and improve the level and quality of ultimate attainment in a second language. The empirical evidence and theoretical constructs supporting instructed second language acquisition (SLA) provide a rationale for the implementation of the English (ESL) courses in secondary schools. In view of this, it is important that as teachers of ESL learners in secondary education we are familiar with how ESL instruction in classroom contexts promotes and facilitates second language learning. Given the unfamiliar territory that ESL instruction may present to secondary school teachers, the remainder of this discussion addresses various aspects of instructed second language learning that may impact on the implementation of the English (ESL) courses. The discussion focuses on the role of instruction as it relates to

ESL learning and teaching in classroom contexts, empirical research and second language acquisition theories. The research that is referred to raises the issues of verbal interaction, negotiation, feedback, gender and ethnicity in second language learning and provides a context in which to address issues for classroom praxis.

Interaction, Negotiation and Feedback

Lange (1990) argues that the language curricula needs to provide "the occasions for the student and teacher to find the discourse needed to negotiate both the expression and comprehension of meaning" (p. 79). An important aspect of discourse in ESL learning and teaching is verbal interaction. Schulz (1991) states: "As for the importance of interaction, we need to examine the amount and type of practice we . . . provide" (p. 23). Studies in public school classrooms on teachers with non-native speakers of English in their classes suggest that the quality and quantity of interaction that teachers have with ESL learners may, in fact, be limited (Schinkle-Llano, 1983). Nevertheless, interaction in the classroom may be vital to the ESL learner's acquisition of the second language.

Communicative interaction may involve the conversational function of negotiation to assist the second language learner to overcome communication problems and establish understanding. "When learners interact with native speakers or other learners, they often experience considerable difficulty in communicating. This leads to substantial efforts by the conversational partners to secure mutual understanding. This is often called the negotiation of meaning" (Ellis, 1985, p. 301). Second language learners may use this type of negotiation to repeat, clarify and modify utterances they do not comprehend (Pica, 1994a, 1994b; Pica, Young, & Doughty, 1987). "The result of the negotiation of meaning is that particular types of input and interaction result. In particular, it has been hypothesised that negotiation makes input comprehensible" (Ellis, 1985, p. 142). Long (1983b) describes the process of interactional modifications as "the negotiation of comprehensible input" (p. 131). This may occur when interlocutors and second language learners achieve comprehensibility by "repeating a message verbatim, adjusting its syntax, changing its words, or modifying its form and meaning in a host of other ways" (Pica, 1994b, p. 494). The interactional modifications that native speakers (NS) may use involve avoiding conversational trouble through conversational strategies and repairing conversation when trouble occurs through discourse repair tactics. These strategies and tactics include stressing key words, slowing the pace of speech and repeating utterances (Long, 1983b). Moreover, "negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (Long 1996, pp. 451–452). Long and Robinson (1998) argue that "negotiation work

also elicits negative feedback, including recasts, that is, corrective reformulations of…utterances that preserve the learner's intended meaning. Such feedback draws learners' attention to mismatches between input and output, that is, causes them to focus on form" (p. 23). Overall, interaction that involves negotiation may assist language learning as it can draw the second language (L2) learner's attention to language form as well as meaning. This "twofold potential of negotiation – to assist L2 comprehension and draw attention to L2 form – affords it a . . . powerful role in L2 learning" (Pica, 1994b, p. 508).

Teachers can manage and modify verbal interaction and negotiation in the classroom through the use of feedback. Second language learning requires opportunities for ESL students to receive comprehensible input and produce comprehensible output as well as for them to obtain feedback (Ellis, 1985; Krashen, 1980, 1981, 1982, 1985; Swain, 1985). Lyster and Ranta (1997) argue that "producing comprehensible output entails the provision of useful and consistent feedback from teachers and peers" (p. 41). Feedback that occurs during interactions can highlight relevant language forms and therefore make them more salient for the ESL learner. Consequently, feedback can provide opportunities for learner uptake. This can involve the repair of errors as well as an awareness of utterances that need to be repaired. The learner's awareness of language form and attention to form may be critical to second language learning (Pica 1994b).

The negotiation of language form that occurs in the sequence of feedback followed by learner uptake may be an important interaction form for ESL learners in the classroom context. Negotiation may assist in second language learning as it can require the learner to produce comprehensible output (Pica, Holliday, Lewis, & Morgenthaler, 1989). Lyster and Ranta (1997) suggest that "the negotiation of form involves corrective feedback that employs either elicitation, metalinguistic feedback, clarification requests, or teacher repetition of error, followed by uptake in the form of peer- or self-repair, or student utterances still in need of repair that allow for additional feedback" (p. 58). This didactic function of negotiation may involve the negotiation of language form and provision of corrective feedback for the learner. Moreover, the instructive role of negotiation raises some important questions for teachers of ESL learners about the types of learning tasks we use in our secondary school classrooms and how we implement content-based curriculum. Firstly, what types of interactive tasks may promote negotiation and feedback opportunities for ESL learners in our classroom? Secondly, how and when should we provide feedback and promote negotiation about lesson content with our ESL learners? Foster (1998) highlights learning tasks that may influence interaction and negotiation between ESL learners and teachers in the classroom. She questions the validity of tasks that focus on the negotiation of meaning and argues that teachers need to develop and implement

tasks that require ESL learners to produce language and reflect on its structure so they are negotiating the form of their output. By focusing on language form the second language learner may be pushed "beyond communicatively effective language toward target-like second language ability" (Doughty & Williams, 1998a, p. 2). Nonetheless, Doughty & Varela (1998) contend that focusing on form "must occur in conjunction with – but not interrupt – communicative interaction" (p. 114).

As comprehensible input and output can result from feedback and the negotiation of language form and meaning, exposure to English in the classroom context without interaction involving negotiation to aid in the comprehension and use of language might not be sufficient for successful second language learning. Long (1996) supports this view with the argument that "environmental contributions to acquisition are mediated by selective attention and the learner's developing L2 processing capacity, and that these resources are brought together most usefully, although not exclusively, during negotiation for meaning" (p. 414). Indeed, the negotiation of language form and meaning that occurs in content-based classroom interaction may be essential components in learning a second language (Musumeci, 1996). Doughty and Williams (1998b) suggest it is of the utmost importance for teachers to question "how to integrate attention to form and meaning . . . throughout the curriculum"(p. 261). It is certainly arguable that ESL learners in secondary school classroom contexts may benefit from learning and teaching innovations that promote the use of the target language through feedback, negotiation and the production of comprehensible input and output (Glew, 1995, 1998). Swain (1985) contends that competence in the target language is developed when there are sufficient opportunities to use the target language and for second language learners to be pushed in their negotiation to produce comprehensible output. In view of these theoretical aspects of instructed second language learning, understanding the roles of interaction, negotiation and feedback may be vital for teachers of the English (ESL) courses and also for any teacher who instructs ESL learners because teachers are an invaluable source of language instruction in the classroom.

Gender and Ethnicity

The connections between interaction and the gender and ethnicity of ESL learners are ones which teachers of ESL learners in secondary education could explore in the classroom context. A study by Pica et al. (1989) revealed a relationship between the production of comprehensible output and the gender of ESL learners. The findings from their research on information-gap discussion tasks indicated that Japanese male ESL learners demonstrated more control of discussion topics with native English speakers than Japanese female ESL learners. Not only did the male ESL learners introduce new and relevant topics to their interaction with native English speakers but

they also brought past learning experiences into the conversations. Overall, this enabled the Japanese male ESL learners to control the discourse. Moreover, it also meant that the native English speakers did not always comprehend what the Japanese males were saying. Consequently, the native English speakers had to indicate their need for clarification during the interaction and this provided opportunities for negotiation. In contrast to this, there was an absence of negotiation in the interaction between the native English speakers and the Japanese female ESL learners as these female learners tended to adhere to the discussion topics that were given to them. Additionally, other research has revealed that "men . . . dominate in conversations with women in ways that provided opportunities for producing comprehensible output" (Gass and Varonis, 1986, pp. 349–350).

Gender is only one of many factors that may impact on the participation of language learners in verbal interaction. Santoro (1997) points out that "there are a number of related factors which may, individually or in combination, prevent students from actively participating in verbal communication. These factors may include a mismatch between students' cognitive and linguistic development and the demands of the task, receptivity to the teacher, and their teaching styles, receptivity to fellow learners, course content and materials, lack of motivation and anxiety" (p.14). In addition to these factors, there are other characteristics of ESL students which may influence their communication and learning in the classroom. These can include the learner's ethnicity, personality characteristics, intelligence, aptitude, attitude and age.

A study by Sato (1990) on ethnic styles in classroom discourse provides insight into a potentially important influence on ESL learner interaction in the classroom. Sato's findings suggest that there is a relationship between verbal interaction and the ethnicity of ESL learners. The ethnicity of the ESL learners in Sato's study was indicated as being Asian or non-Asian and the verbal interaction was assessed by the speaking turns that the students took with their teachers. Overall, the non-Asian ESL learners in the study took more speaking turns with the teachers than the Asian ESL learners. Furthermore, the non-Asian ESL learners self-selected speaking turns more often than the Asian ESL learners and the teachers also directed more speaking turns to the non-Asian ESL learners. In view of these findings, Sato (1990) contends that "the role of interethnic differences . . . . and interaction with native speakers remains an issue of fundamental importance" (p. 117).

Given the factors that may influence the participation of ESL learners in verbal interaction, it may be beneficial for teachers of ESL students in secondary schools to investigate how instructional interaction is distributed in their classrooms. Moreover, we need to carefully examine the verbal interaction in our classrooms and consider how it influences ESL learning. This could provide us with more ways of matching

what and how we teach with the language learning needs of ESL students. Glew (1998) argues that "it is essential that further consideration be given to ways in which mainstream secondary school subject curriculum and teachers provide ESL students with opportunities to engage in verbal interaction that has the potential to promote second language development" (p. 92). How then can we promote opportunities for interaction through ESL learning and teaching in our secondary school classrooms? One way in which classroom practitioners may facilitate the distribution of interaction while implementing their curricula is to ensure that there are opportunities for male and female ESL students of different ethnicity to receive second language instruction and engage in verbal interaction in the learning environment. Moreover, we may need to develop a greater awareness of the individual learning needs of our ESL students. Lightbown and Spada (1998) suggest that a "teacher, who takes learners' individual personalities and learning styles into account, can create a learning environment in which virtually all learners can be successful in learning a second language" (p. 50).

Implications for Implementing the English (ESL) Courses

Although the introduction of the English (ESL) courses to NSW secondary education may raise questions about who is qualified or suitable to teach the courses, the increased recognition of the language learning needs of ESL students in our schools presents all teachers of ESL learners with an important pedagogical challenge. As teachers of ESL learners we may need to make adjustments to our teaching, lesson content and interaction styles to meet the language learning needs of ESL students in our classroom. This highlights one of the implications of introducing the English (ESL) courses and also raises the issue of how to appropriately develop teachers to instruct ESL learners. Grossman and Anderson (1998) provide several practical suggestions for the development of teacher competence in a new subject that may be applied to the implementation of the English (ESL) courses and even to teaching ESL learners in other curriculum areas. Firstly, teachers need to be reflective and aware of the implications of their curriculum and instruction decisions. Secondly, teachers need to be developed through the use of case studies and experience in the field. Grossman and Anderson (1998) argue that "if we are to break new ground, we will have to have exemplary models of practice" (p. 58).

One model of practice for instructing ESL learners in secondary school classrooms may be drawn from the success of language immersion programs. Dobrenov-Major (1998) points out that "the strength of the immersion-mode of language teaching lies in the fact that it is meaning-focused and curriculum content-based" (p. 9). This view, however, should be balanced with the increasing body of evidence that "when instruction focuses on meaning to the virtual exclusion of formal aspects of language,

learners may fail to reach high levels of linguistic knowledge" (White, 1998, p. 85). Another model of practice for instructing ESL learners involves the use of interactive learning tasks that require second language learners to work in pairs and small groups. Classroom-based research on the value of using pair work and group work with secondary school ESL learners offers some insight into useful pedagogy for teachers who instruct ESL students. A review by Mishra and Oliver (1998) of the psycholinguistic and pedagogical benefits of using dyadic interaction tasks with ESL learners suggests that in implementing their curricula classroom practitioners should consider incorporating interaction tasks with pair work and small group work.

A careful examination of research on instructive second language environments could also provide secondary school teachers with greater insight into how to meet the language learning needs of ESL students. Through their review of second language learning contexts, Lightbown and Spada (1998) explore the value of communicative instruction environments in which "the style of instruction places the emphasis on interaction, conversation, and language use" (p. 70). Their overall findings not only promote communicative programs but also support the view that instruction that focuses on second language form and feedback may be effective in learning a second language in the context of communicative classrooms. As much of this research on ESL learning and teaching in real classroom contexts remains inconclusive, there is ample scope for further investigations into what actually transpires between ESL students and teachers in secondary school classrooms. Foster (1998) presents the challenge that further research on second language acquisition should be conducted in real or intact classroom environments that are not exclusively organized for experimental purposes. This may provide greater insight into the contextual features of second language classrooms and the discourse that facilitates the language acquisition of ESL learners. With regard to discourse, Millar (1997) proposes that language research needs to focus on classroom contexts that include "what is said, . . . how and why it is said that way, what is not said, how the hearer hears what is said, and what the consequences of hearing that way may be" (p. 50). In view of requiring further insight into the nature of instructive second language environments, classroom interaction and the language learning needs of ESL students, the introduction of English (ESL) courses may be well accompanied by a vigorous movement of second language acquisition research into our secondary school classrooms.

Conclusion

The introduction of the English (ESL) courses provide an opportunity for classroom practitioners to further the investigations into the issues in instructed ESL learning and the implementation of ESL curriculums in schools as well as to contribute to the

development of ESL teaching in the context of Australian secondary schooling. We should continue to explore how to effectively implement the syllabus for the English (ESL) courses and address the issues involved in teaching English as a second language in secondary school contexts. Continued classroom-based investigation on the roles of verbal interaction, negotiation, feedback, gender and ethnicity in second language learning may prove to be vital to our classroom praxis and ultimately the success of our ESL students in acquiring their target language. Moreover, by expanding our understanding of second language acquisition theory and empirical research on ESL learning, teaching and classroom praxis we should be able to enhance how we design teaching materials for the prescribed content of the English (ESL) courses and implement the content to achieve the course outcomes. As the English (ESL) courses are for students who genuinely need assistance in English as their second language, we need to draw on and further the work of ESL research while implementing the ESL curricula to ensure our students receive genuine ESL instruction.

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Book Review: *Women of the Long March*

Reviewed by Margaret White, University of Western Sydney, Nepean

Lily Xiao Hong Lee and Sue Wiles (1999). *Women of the Long March,* St. Leonards, Sydney: Allen and Unwin. 1999. xix. 308 pp. maps 2, preface, chronology, list of names of the thirty women in the biographies, plates, appendix, notes, bibliography, index, paperback.

Women of the Long March is an important and moving book that provides critical new knowledge and a profoundly different perspective on the Long March that initiated the revolution that made the development of modern China possible. The nature of the new knowledge introduced, carefully pieced together from a variety of sources, informs both the intellect and emotions, and reaches across cultural and national barriers to inform western values about the idealism of thirty women who risked their lives to be involved in this great experiment in social engineering. Their commitment was lifelong, even though some were disappointed or betrayed.

Through this book, the reader gains new insights into the physical and emotional toll these women endured during the Long March to bring social justice to the peasants and to contribute to the modernisation of China. The economic and political rights, and social freedoms that women in mainland China have gained over the last 50 years can be attributed to a significant degree to these dedicated revolutionaries. Their simple strength and character is revealed through the terrifying episodes they experienced.

Lily Xiao Hong Lee and Sue Wiles' common interest in China and in Women's Studies changes the stance of the enquiry into the Long March and subsequent developments in Chinese society by providing a wealth of new knowledge, drawn from published and unpublished sources. The book rectifies a serious omission in the official histories of the Communist Revolution which have venerated the men of the Long March but neglected the contribution of women.

In presenting their narrative, the authors concentrate on the political and psychological pressures experienced by the women who were prepared to subordinate everything for the liberation of China. The story of these women has never been told before in English.

The authors explicitly outline their central focus and the political and ideological assumptions used to construct and deliver the story. Their research introduces a new view of history that embraces the heroism and sadness of the lives of many of the thirty courageous young women who marched in the First Front Red Army. The focus of the research has been to document the physical and emotional hardship, exhaustion and tragedy of the women, and this strategy enables the reader to empathise and understand the suffering they endured to eradicate entrenched injustice in China. Most of the group were young (ranging in age from 19 to 34) and illiterate. As their individual contributions and experiences are revealed, the reader enters the social gravity of the women, bonds with them, admires their heroism and comes to understand that what Westerners have often perceived as propaganda was a message of hope to these women.

The book is divided into three time-frames: The Long March, 1934-35; The Battle for China, 1937-1949; and Reality Bites: After 1949. A short Prologue is provided at the start of each section to outline the events of the period. To fully understand the story, the reader needs to be familiar with the terrain of the route along which the Long March moved, although the maps do not provide adequate geographical data and visual imagery for the reader to conceptualise of the huge, inhospitable terrain - nor are they marked to scale, a matter of grave concern of geographers.

Because the structure of the book frequently departs from its chronological sequence, the Chronology from 1905 to 1996 on pages xv-xix, is an important reference point. Chinese names can be notoriously difficult for Westerners but as a portrait begins to emerge of each of the participants, particularly the three key subjects, reference can be made to the Appendix which provides biographical details of all women. The photographs also provide a valuable tool for helping the reader to conceptualise a complex story.

Commencing in 1934, the Long March crossed twelve provinces. The marchers covered 9600 kilometres in one year and covered 26 kilometres per day as they struggled through snow-covered freezing mountain passes and over trackless swamplands to bring the message of communism and the hope of liberation to hundreds of millions of peasants.

Mao, charming, powerful, manipulative and destructive, demanded absolute loyalty. *Women of the Long March* provides insights into Mao's intimate relations with at least five women, and his lack of humanity towards them. The dreadful choices and the moral dilemmas confronting the women who fell pregnant on the Long March - either to stay behind, often in hostile territory, or to abandon their babies immediately after birth - reveal the degree of emotional strain under which they conducted their work,

and the strength that the group drew from each other. For some, the Long March was a challenge and adventure that shaped significant careers. Some women rose to prominent positions but became victims of the Cultural Revolution. Several were betrayed. Others were persecuted to death.

The stories of three particular women summarise the loyalty and emotional strain under which women carried out their work: He Zizhen, Mao's second wife; Kang Keqing, who married the Commander in Chief of the People's Liberation Army; and Wang Quanyuan, who lacked connections.

He Zizhen bore all her children under extraordinarily difficult conditions. She was physically and emotionally crushed after six births and four miscarriages during her ten year marriage to Mao. Having already abandoned three babies, she was severely wounded on the Long March and forced to abandon her fourth baby. She never recovered from her experiences and, as Mao's ex-wife, she was later exiled from any position of privilege.

Kang Keqing's life provides scope for interpretation and analysis of the Chinese Revolution and her contribution to gender reform. Born into an impoverished family, she was given away at birth. Kang joined the Long March as an illiterate peasant girl, became an official of high rank as the wife of Zhu De, Commander in Chief of the People's Liberation Army, and rose to the top of the Chinese political pyramid. Although childless, she was the head of the Women's Movement. Through her work in the Women's Federation, a clause was placed in the 1982 Chinese Constitution which enabled the enactment of the 1985 Inheritance Law that gave women the right to possess, inherit and bequeath property.

Wang Quanyuan, plagued by gynaecological problems during the Long March, remained infertile through her life. Cut off from the First Army, she was assigned to the Fourth Front Red Army and placed in charge of the Women's Vangard Regiment in 1936. Her party membership was cancelled after she was imprisoned by an anti-Communist Moslem cavalry because she was considered a traitor for having survived capture by the Moslems. Consequently, in later life, she had no one to support her and she was ostracised for many years.

Women of the Long March should be recognized as a critical contribution to mainstream scholarship and research. It assimilates new knowledge, and expands and modifies current understandings of the history of the Chinese Cultural Revolution. The book would be appropriate for use in senior secondary social studies courses, and a valuable base for tertiary courses related to the theory of knowledge, intercultural studies, Chinese studies, the study of Asia and Women's Studies. General readers may

find the style and structure of the book challenging, but the subject matter absorbing. *Women of the Long March* is a example of wonderful research presented as highly engaging book.

About the Authors

Dr. Wan-Ho Chung is Professor of science education at the Korea National University of Education, Korea. His current research interests include Learner's Neuro-Cognitive Variables, Science Curriculum, and Quality Science Teacher Education.

Contact: Korea National University of Education, Department of Biology Education, The Third College, Chungbuk, 363-761, Korea.
Telephone: (0431) 230-3727
Fax: (0431) 231-7224
Email: whchung@cc.knue.ac.kr

Dr. Richard Coll completed his PhD degree from the University of Canterbury, New Zealand. He was a postdoctoral fellow at Massey University and taught in the Pacific and Caribbean as well as being lecturer in Chemistry and Associate Dean at the University of Waikato. Having just completed a Doctor of Science Education at Curtin University, his research interests include learners mental models of abstract chemical conceptions and improving teaching and learning.

Dr. Richard Coll
School of Science & Technology
The University of Waikato
Private Bag 3105, Hamilton, New Zealand.
Ph: (07) 838 4100 (direct line) or (025) 426 112
Fax: (07) 838 4218
Email: r.coll@waikato.ac.nz

Dr. Barry Fields is a Senior Lecturer in Education, Faculty of Education, University of Southern Queensland, Australia.

Contact address: University of Southern Queensland, PO Darling Heights, Toowoomba, Australia, 4350.
Phone: (617) 46 312345.
Fax: (617) 46 312828.
Email: fields@usq.edu.au

Paul Glew is a doctoral student at the University of Western Sydney Nepean and is the International Coordinator for Coverdale Christian School. His research interests include curriculum development for the teaching and learning of English as a second language.

Contact: Coverdale Christian School, PO Box 267, Riverstone, NSW, 2765, Australia.
Telephone: 61 2 9627 4144.
Fax: 61 2 9627 4637.
E-mail: coviec@tpgi.com.au

Dr. Moon-Nam Lee is a professor of science education in Dankook University, Seoul, Korea. His current research interests include Philosophical Aspects of Science Education and Quality Science Teacher Education.

Contact: Dankook University, Department of Science Education,
Yongsan-gu, 140-714, Seoul, Korea.
Telephone: (02) 709-2652 .
Fax: (02) 796-2857.
Email: mn627r@ns.dankook.ac.kr

Dr. Yeon-A Son is a former lecturer in science education at the Dankook University, Seoul Korea and is currently a postdoctoral fellow with the Curriculum Research and Development Group (CRDG) at University of Hawaii. Dr Son's current research interests include Integrated Science Education (ISE).
Contact: Curriculum Research & Development Group,
University of Hawaii at Manoa, 1776 University Ave., Honolulu, Hawaii 96822.
Telephone: (808) 956-4926.
Fax: (808) 956-9486.
Email: yeona@hawaii.edu

Dr. Francis M. Pottenger is Director of Science Projects at the Curriculum Research and Development Group, University of Hawaii. He is the principal writer of DASH, Developmental Approaches in Science, Health & Technology, and is currently heading a team of researchers/educators in the update to "Change Over Time", FAST 3, Foundational Approaches in Science Teaching.

Contact: University of Hawaii,

CRDG, UHS2-202, Honolulu, HI 96822, USA
Telephone: (808) 956-6918
Fax:(808) 956-4933
E-mail: frankp@hawaii.edu

Bee Ling Soh was a graduate student in the Faculty of Education, University of Southern Queensland, Australia, at the time the study reported in this edition of Pacific-Asian Education was completed. She is currently working in the "Youth with a Mission" program in Singapore.

Contact: c/- Dr Barry Fields, University of Southern Queensland,
Darling Heights, Toowoomba, Australia, 4350.
Phone: (617) 46 312345.
Fax: (617) 46 312828.
Email: fields@usq.edu.au

Dr. Neil Taylor is a lecturer in primary education (science) at the University of Leicester in England. Prior to that he worked at the University of the South Pacific in Fiji where he was the project officer for a regional primary science education project funded by New Zealand ODA through the UNESCO Office for the Pacific.

Contact: School of Education, University of Leicester, University Road, Leicester LE1 7RH, England
Phone: (0116) 252 2439
Fax: (0116) 252 5140
Email: nt21@leicester.ac.uk

The Pacific Circle Consortium for Education

The Pacific Circle Consortium is an organization dedicated to the improvement of teaching about peoples and nations within and around the Pacific Ocean.

The Consortium was established in 1977 as an official program for the Centre for Educational Research and Innovation of the Organisation for Economic Cooperation and Development (OECD/CERI).

The purposes of the Pacific Circle Consortium are to:

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- promote internationally co-operative research and development in education; and
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John Gore, NSW Department of education, Australia
Geoffrey Mills, Southern Oregon University, USA

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6 (3), 321–337.

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Dr. Christine Halse,
General Editor, *Pacific-Asian Education*
University of Western Sydney,
PO Box 10,
Kingswood, 2747
AUSTRALIA
email: c.halse@uws.edu.au

Mrs Nicolette Pearson
Editorial Assistant
University of Western Sydney,
PO Box 10,
Kingswood, 2747
AUSTRALIA
email: n.pearson@uws.edu.