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Transforming Teaching and Learning in Asia and the Pacific

Case Studies from Seven Countries

Edited by Edmond Hau-Fai Law and Ushio Miura



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Foreword

In an era characterized by constant change and interdependence, education is no longer an issue confined within national boundaries. Increasingly, the common aspirations of countries for sustainable development and global peace drive their cooperation for education reforms, and issues of learning are repeatedly raised in various fora across Asia and the Pacific. Transforming teaching and learning has become a shared agenda among policy-makers and educators in the region.

At the High-Level Expert Meeting *Beyond 2015: Transforming Teaching and Learning in the Asia-Pacific Region*, convened by UNESCO in Bangkok on 16-18 October 2013, participants observed that, amidst the differences among countries in Asia and the Pacific, there are common experiences with regard to changes in approaches to education. Notably, the focus of attention is shifting from uniformity to diversity, from teacher-centred to learner-centred ones, and from examination-oriented learning to whole person development.

Inspired by the expert meeting, this publication provides evidence of the changing landscape in teaching and learning in Asia and the Pacific. It portrays the reform experiences and ambitions of seven countries – Fiji, Indonesia, Japan, Kyrgyzstan, Nepal, the Republic of Korea, and Viet Nam – to provide quality learning for all. It also illuminates the factors, including resource constraints, capacity gaps and a lack of shared understanding among stakeholders, that hinder the implementation of policy changes.

The contributors to this publication help to articulate the realities of education in the region. From the opportunities and challenges presented, the seven chapters allow readers to assess the situations in their own countries and envision the future of education in the region. As we move towards the next stage of global action for education, it is my hope that this publication will help the countries in Asia and the Pacific to define the kinds of teaching and learning they need in order to achieve the futures they desire.



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This publication grew out of the Third Regional High-Level Expert Meeting *Beyond 2015: Transforming Teaching and Learning in the Asia-Pacific Region*, held from 16 to 18 October 2013 in Bangkok, Thailand. At the meeting, over 40 experts from countries across Asia and the Pacific came together to exchange views on issues and challenges in teaching and learning and to reflect on pedagogical approaches for the future. The chapters in this publication originate from seven case studies presented at the meeting. The authors thank all the participants of the meeting for the valuable thoughts and comments they shared on that occasion.

Our sincere gratitude also goes to the following experts who contributed the outcomes of their research to the meeting: Mary George Cheriyan, Raffles Girls' School Centre for Pedagogical Research and Learning Lab, Singapore; Sunhee Paik, Seoul National University, Republic of Korea; Anjee Prakash and Deepika Sharma, Learning Links Foundation, India; Paitoon Sinlarat, Dhurakij Pundit University, Thailand; and Zailah Zainuddin and Noraini Kassim, Ministry of Education, Malaysia. Their analyses of the situations regarding teaching and learning in their respective countries enriched the debates at the meeting and supported the development of the chapters in this book.

The process of developing this publication was managed by the UNESCO Bangkok staff. The initial framework of the case studies project was conceived by Margaret Sachs-Israel (currently at UNESCO Paris) and Gwang-Chol Chang. Kar Hung Antony Tam (currently at the UNESCO Project Office in Myanmar) supported the development of the research design and the coordination of the publication process. Ace Victor Aceron provided assistance in the final stage. Sun Lei at UNESCO Hanoi, Toshiyuki Matsumoto at UNESCO Apia, Inna Melnikova at UNESCO Almaty, Tap Raj Pant at UNESCO Kathmandu and Nurhajati Sugianto at UNESCO Jakarta contributed to the selection of the chapter authors, and offered comments on the drafts. Aigul Khalafova of UNESCO Almaty, and Lay Cheng Tan and Min Bista of UNESCO Bangkok also provided valuable comments. Our appreciation goes to all those at UNESCO who provided ceaseless support throughout the process.

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Introduction

Edmond Hau-Fai Law and Ushio Miura

The question of what and how students should learn has been occupying a central place in debates on education in many countries in the Asia-Pacific region (UNESCO, 2014). In response to these debates, countries in the region are increasingly introducing various policy changes and curricula reforms. Such reforms recognize that existing curricula are not suitable for the needs of learners in the twenty-first century, and seek to introduce learning that will prepare people of the region to live peacefully and sustainably in a rapidly changing world (UNESCO, 2015).

Similar reforms have been seen elsewhere in the world. This worldwide trend began in the 1960s, focusing on curriculum renewal and pedagogical innovations in teaching and learning initially (Hargreaves, 2009; Laferriere, Law and Montané, 2012; Law, 2014). These changes in pedagogical practices have their traditions in Dewey and Piaget's progressive approaches to organizing learning activities. In these approaches, learners are placed at the centre of the process of learning, and learners, not teachers, are in control of the learning process. Learners are also seen as the producers of knowledge. Knowledge is understood not as a set of fixed and static information to be transmitted from one to another, but as the accumulation of reflective experiences that take place as learners interact with the world around them. With such an approach, learners are understood to construct and gain knowledge as they go through learning tasks and solve practical and social problems in daily life. For example, in the process of working in teams, learners become autonomous individuals with social awareness and a sense of responsibility.

Reforms in curricula and in pedagogical practices have broadened in scope and magnitude in recent decades by integrating social dimension into the teaching of science, mathematics and technology (Olson et al., 1999). In addition, pedagogical innovations have been explored using information and communication technology at the school level (Harris, 2002; Janicki and Liegle, 2001; Martinez-Garcia et al., 2012; Hargis, 2001; Mioduser et al., 2003; Wu et al., 2008; Law, 2006). Reforms of pedagogy have also been driven by theories of progressivism and human learning and development, such as socio-cultural models of human learning, as well as by theories about pedagogical content

knowledge in the design of learning activities and community practices (John and La Velle, 2004; Ferdig, 2006; Goodyear and Casey, 2015). Reforms have also had an effect on teacher education (Peers et al., 2003; Koh et al., 2013; Laferriere et al., 2006; Michalova et al., 2002; Moon et al., 2003).

This book presents some snapshots of efforts to transform teaching and learning in schools in seven countries in the Asia-Pacific region: Fiji, Indonesia, Japan, Kyrgyzstan, Nepal, the Republic of Korea and Viet Nam. These seven countries represent the diversity of the region. They differ greatly in their historical experiences, cultural heritage, political and economic systems, geography, ecology and religious and social beliefs. These differences have significantly affected their national development and education systems, and impacted educators' and learners' beliefs and practices at the school level.

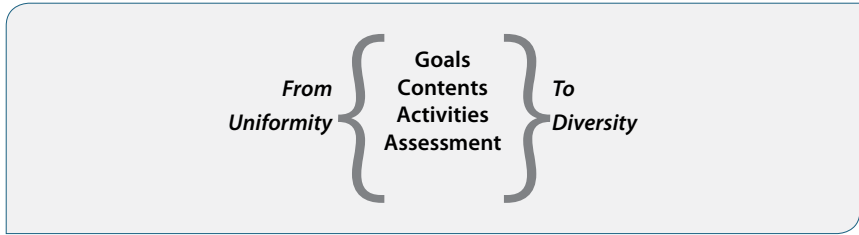
Despite the considerable differences between them, the seven countries have made similar pedagogical reform efforts. The governments of all of these countries have recognized the necessity of ushering in changes in teaching and learning practices in schools, in view of the need to improve the quality of education for all. All of the countries have demonstrated awareness of the global shift taking place in approaches to teaching and learning, moving from the conventional, teacher-centred transmission approach towards a learner-centred, participatory one. Furthermore, there is recognition in all of these countries that assessment formats should shift from summative functions towards performance-based and formative functions, so as to enhance learning.

The changing view of education can be seen not only in policy documents but also among teachers in the seven countries. Interviews with teachers suggest that many educators share a common repertoire of pedagogical activities that are considered 'learner-centred'. The most commonly cited are project-based activities, problem- and theme-based integrated learning, experiential learning, and activities that involve action research, debate, teamwork, group discussions and presentations.

Diagram 1 illustrates the changes taking place in pedagogical approaches in the Asia-Pacific region, including changes in the goals and content of learning, changes in learning activities, and changes in assessment formats and functions.¹

1 'Pedagogy' and 'pedagogical' here refer simply to 'teaching and learning' rather than a broader conception of the words (Dysthe and Webler, 2010).

Diagram 1: Shifts in pedagogical approaches in the Asia-Pacific region



The left side of the diagram refers to the conventional approach to teaching and learning, which puts an emphasis on uniformity of learning objectives, contents, activities and assessment formats, regardless of the interests and needs of children. This approach is linked with the reproduction model of knowledge transmission, which was considered the key to producing a workforce for the industrial sector.

The right side of the diagram refers to an approach that recognizes that children have diverse learning needs and which engages learners in a series of problem- or issue-based learning experiences to enable them to gain the skills and values required for lifelong learning.

The former is a dependent model of education, whereas the latter is a model of education for autonomy and independence. In the latter model, learning processes provide learners with opportunities to develop their potentials, and learning activities enable students to gain both cognitive and non-cognitive competencies. Furthermore, under the latter, assessment functions empower learners to conduct self-directed learning activities, and assessment formats cover a wide range of skills and achievements.

While it is apparent from the experiences in the seven countries that there is widespread awareness of the need for changes in teaching and learning practices, the seven chapters also highlight the fact that pedagogical transformation is difficult to implement. They note the insufficient capacity of teachers to implement change effectively, and draw attention to the need for reforming pre- and in-service teacher training and development. Emphasizing teachers as the key to transforming pedagogy in schools and classrooms, some chapters suggest improving the working conditions of teachers, and others point out the need to provide teachers with systematic support.

The chapters on Fiji and the Republic of Korea point to national examinations as factors that discourage innovation and change in pedagogical practices

at the school level. The chapters on Japan, the Republic of Korea and Viet Nam emphasize the need for – and difficulty in – involving parents and communities in learning processes, while the chapter on Kyrgyzstan suggests that the lack of national ownership of the pedagogical reforms introduced by external donor agencies may be hindering sustained transformation in teaching and learning practices in the country. These experiences provide lessons regarding the necessary conditions for change.

Although various obstacles and challenges stand in the way of pedagogical reforms, and much more needs to be done, the experiences of these countries provide evidence that teaching and learning practices are changing at the school and classroom levels. Such changes have often taken place thanks to the innovations and efforts of committed individual educators. In the chapter on Japan, we read about schools whose teachers succeed in linking learning to daily life experiences by closely collaborating with parents and the community. In Indonesia, a movement is underway towards using active learning methods in various subjects and, notably, a scientist is promoting this method for learning mathematics and science. In Fiji, several teachers came together and created an association to collaborate on developing resources that facilitate holistic learning through art. In Viet Nam, a teacher managed to create a learning environment conducive to active learning and to support her students in constructing knowledge on their own. Likewise, in Nepal, teachers who had been trained in innovative learning activities were actually using these methods in their classrooms. In the Republic of Korea, teachers in some schools were beginning to use multiple means of assessing learning, going beyond conventional paper and pencil tests. It is the initiatives of teachers that generate pedagogical changes, and such teachers must be systematically supported if countries are to transform teaching and learning.

The experiences of the seven countries make it clear that their governments and educators are dedicated to transforming teaching and learning, with the aim of meeting the diverse learning needs within each country and preparing future generations to effectively contribute to building a peaceful and sustainable world. Through sharing these countries' experiences widely, this book seeks to support such aspirations in the Asia-Pacific region. The editors hope that it will stimulate policy-makers, educators, parents and community members across the region to reflect on emerging changes in teaching and learning, while also encouraging further discussions and actions towards transforming teaching and learning.

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Transforming Teaching and Learning in Japan

Shinobu Yume Yamaguchi and Akina Ueno

Introduction

This study focuses on the educational principle of ‘Zest for Living’ announced by the Ministry of Education, Culture, Science and Technology of Japan (MEXT) in 1996. This principle underlines the importance of problem-solving and decision-making skills, and promotes the *chi-toku-tai* (knowledge, morals and body) philosophy, which seeks to achieve a balance between academic knowledge, morality and physical and mental strength. The Zest for Living education principle was reflected in the 2008 New Courses of Study, the national guidelines for developing a curriculum at the school level. In analysing these guidelines, this study highlights two key characteristics: verbal-activity enhancement and non-academic special activities. The study also discusses the changes in curricula, teaching and learning practices and assessment that have taken place as a result of the new policy.

Background

Japan, an island country located in East Asia, has a population of over 120 million. Japan was the first Asian country to experience rapid economic growth during the 1960s and 1970s and has achieved a high education standard, providing equitable education opportunities to all (OECD, 2012). The country has recently faced various multifaceted issues, however, including demographic changes that have resulted in a sharp decline in the number of children. In 2011, 64 per cent of the population were aged between 15 and 64, and Japan had the highest percentage in the world of people aged 65 years old and over (23 per cent) (Statistics Bureau of Japan, 2011). Japan was shocked by the Great East Japan Earthquake that struck in March 2011. This unprecedented catastrophe awakened Japan to the need to create a sustainable society for current and future generations. Given this context, it is essential that Japan develops human resources that are able to cope with diverse issues and who can revitalize the country.

The education policy established by MEXT does not lay out a national standardized curriculum. Instead, the document, *Gakushu Shidou Youryou* (Courses of Study), provides guidelines for curriculum development and annual lesson plans, reflecting current education policy. These guidelines define the standards and objectives of each subject to be covered at the primary, lower secondary, and upper secondary levels of education.

All schools, both public and private, are expected to design their own curricula based on the guidelines, integrating the nature and characteristics of local environment, and within the range of lesson hours stated in the School Education Act. The guidelines determine not only the teaching content but also 'how to teach'. The guidelines are reviewed and revised every 10 years in order to meet changing social needs (MEXT, 2011).

In 1996, MEXT announced a new education principle, called 'Zest for Living' (*ikiru chikara*) in its sixth revision of the Courses of Study guidelines. Since then, Zest for Living has been a foundation of education objectives.

In 2006, the Basic Act on Education was amended for the first time in 60 years. Article 2, paragraph 1 states the goal of education as follows: 'To foster an attitude of acquiring wide-ranging knowledge and culture, and to seek the truth, cultivate a rich sensibility and sense of morality, while developing a healthy body' (MEXT, 2006, p. 2).

Under this amended law, the 2008 New Courses of Study set three goals: nurturing solid academic capabilities; fostering a society that is rich in humanity; and encouraging healthy minds and bodies. New learning activities were introduced and lesson times were increased by 10 per cent to reflect this revision (MEXT, 2010).

Competency-based goal setting in policies is also seen in other sectors, such as 'the basic skills for employability' of the Ministry of Health, Labour and Welfare. The importance of nurturing twenty-first century skills is also highlighted in their newly established policies.

Description of the study

Objectives and questions

The main objective of this study is to identify and critically analyse, based on evidence, how educational practices to promote twenty-first century skills are set out in the government's policies and how they are implemented

in schools. This study investigates the features of prevailing pedagogical approaches and introduces innovative practices that respond to the changing learning requirements. The two specific research questions are as follows:

R1: What are the pedagogical changes that respond to the Zest for Living policy?

R2: Are there any difficulties in implementing the policy changes? If so, what are they and how are they dealt with?

The research team conducted a survey, interviews and lesson observations at three schools. The survey questionnaires were administered to 47 respondents, including professors, researchers, government officials and teachers at public schools. Interviews were conducted with 18 education experts and government officials in charge of basic education curricula.

In addition, the researchers undertook an analysis of documents published by MEXT and the National Institute for Educational Policy Research (NIER), as well as related books, education journals, conference presentations and the notes of discussions with research participants.

Schools included in the study

The research team made school visits in two prefectures (a prefecture is an administrative district): Niigata and Akita. The schools visited were Otemachi Primary School in Joetsu, Niigata Prefecture, and Yuzawa Higashi Primary School and Yuzawa Kita Junior High School in Yuzawa, Akita Prefecture.

Primary school in Niigata Prefecture

Otemachi Primary School in Joetsu, Niigata Prefecture, as one of the MEXT pilot schools, has participated in research and development relating to creating their own curriculum. The school fosters six types of skills and competencies: the ability to inquire, the ability to utilize information, communication skills, creativity, self-determination, and ability to live together. These skills are considered as necessary in enabling young people to respond to the diverse social situations. Furthermore, the skill of 'reflective thinking' is promoted as the basis for the other six skills and competencies. The school's curriculum aims at nurturing these skills and competencies, which are integrated into six fields: Life/General Education; Mathematics and Science; Languages; Creativity and Communication; Health Education; and Human Relationships. Health Education was added to the curriculum in 2012, and aims to cultivate a sense of self-management. Additionally, lessons reflecting individual students'

learning activities (Learning Time) assist students to review their own learning progress.

Focusing on the six fields listed above, the school's education goal is to develop 'children with good knowledge and the ability to find means of living; having strong minds, the ability to build good human relationships and the mental and physical strength to overcome difficulties'. The school's developmental goal is to produce 'children with the ability to learn independently and enjoy living together' (Otemachi Primary School, 2013). The school also emphasizes the wider ties between the school, families and the community.

Schools in Akita Prefecture

Akita Prefecture has gained nationwide attention because of its unique education approach and for gaining the highest score in the national achievement examination for six consecutive years (2009–2014). The national achievement examination is composed of two types of questions covering two subjects: mathematics and Japanese. Type A questions measure academic knowledge while Type B questions aim to measure skills in the application of academic knowledge. When answering Type B questions, students require problem-solving skills and the ability to apply knowledge to practical questions. In 2009, Akita Prefecture was ranked the top prefecture for primary schools in Type B questions (NIER, 2009). According to the analysis report of the national achievement examination results of 2009, there were only small differences in the scores of the schools, indicating that most primary schools in Akita Prefecture scored above average. Akita's advantage is that it organizes a unique prefectural examination, and data are made available for teachers to be used for group studies with colleagues.

Findings

Objectives of the education policy under the principle of Zest for Living

The Basic Act on Education amended in 2006, specifies the importance of developing a balance between knowledge, morality and health. The aim is to ensure each student achieves solid academic prowess, a well-rounded character and a healthy body. Balancing these three interdependent elements serves as a basis for learning.

In accordance with the Basic Act on Education, the objectives under the Zest for Living principle are: 1) to promote an ability to think, make decisions and express opinions independently for problem-solving, while using acquired basic knowledge and skills; 2) to foster well-rounded characters, so that students learn to cooperate with others and have consideration for other people's needs while exercising self-control; and 3) to encourage people to have healthy bodies and active lives (MEXT, 2010).

Curriculum

MEXT seeks to introduce diverse verbal activities among children from an early age, based on the belief that language is the basis of communication, sensibility and emotional development (MEXT, 2008a). This principle is reflected in the subjects promoted in the 2008 New Course of Study, which states, that 'verbal activities should be employed with a consideration of children's developmental stages' (MEXT, 2008a, p. 13). The guidelines also note that when designing lesson plans, 'verbal activities should be enhanced by way of preparing a solid linguistic environment necessary to deepen the students' understanding of, and interest in, language, in order to effectively develop their linguistic abilities' (MEXT, 2008a, p. 16).

Together with the tradition in Japanese education of fostering hands-on experience, the new focus on verbal activities is expected to contribute to improving the quality of learning. Indeed, the process of verbal activities entails features of reflective learning. First, students review what they have experienced, then they internalize what they have acquired by expressing their opinions in words and sentences (MEXT, 2013a).

Another new aspect is the focus on practical experiences through 'special activities', which in this context refer to educational activities that aim at developing students' independence, social skills and individual characteristics. The special activities are non-academic, and include homeroom meetings, students' councils, classroom duties, daily cleaning activities and school lunches. Although these are not academic subjects, they are considered important in terms of enabling students to reach their educational goals. The idea is that the combination of academic learning with non-academic activities will provide students with a well-balanced and comprehensive education (MEXT, 2013b). The special activities are often conducted in groups, because the Japanese believe that group activities enable students to foster the necessary attitudes to become responsible citizens.

The education specialists, policy-makers and teachers who were surveyed cited 'rapid social changes' and improving 'children's ability to deal with new issues' as the main motivations for including twenty-first century skills among the educational goals. The respondents believed that the most important skills and competencies to learn were problem-solving skills, creativity, a sense of cooperation and reflective thinking skills.

The curricula based on the 2008 New Courses of Study have been implemented in primary schools since 2011, and teachers and other educators are already able to see some of the impacts. According to the results of the questionnaire, most teachers have observed positive changes following the introduction of the new curricula. They noted, in particular, that students had improved their ability to express themselves, to collect and analyse information, and to discuss subjects with others. When asked about changes in pedagogy as a result of the new guidelines, teachers responded that their lesson plans had become more student-centred and more focused on skill-based activities. The majority of respondents agreed that school-based lesson reviews and discussions with colleagues were effective tools when implementing the new curriculum.

When asked about issues they faced, teachers responded that they found it challenging to effectively link skill-based activities to lesson objectives when developing lesson plans. They noted that although discussion sessions and group work were effective in building multiple skills among students, this kind of activity required teachers to act as facilitators and to be prepared for unexpected responses from students. Some teachers felt they were not adequately trained for this. In this regard, the policy-makers who were surveyed emphasized that teacher training needs to be strengthened by local governments.

Regarding the 2008 New Courses of Study's clarity in defining twenty-first century skills and the necessary elements, between 70 and 80 per cent of teachers felt that both are clearly defined. Furthermore, about 70 per cent of the teachers felt that the learning objectives for promoting twenty-first century skills are stated clearly enough to be reflected in their lesson plans. Policy-makers who participated in the survey observed that teachers have been paying special attention to the newly introduced policy, promoting verbal activities in all subjects.

Teaching and learning methods and practices

The common pedagogical approaches and characteristics identified from the case studies conducted in Niigata and Akita are as follows: 1) introducing diverse verbal activities; 2) using group work effectively; 3) creating lessons with students' participation and using positive reinforcement; and 4) strengthening the commitment of the local community.

Introducing diverse verbal activities

Students in the observed classes were engaged in various verbal activities. For example, every student participated in creating a summary of individual opinions in a notebook, sharing ideas with other students in small groups, discussing the subject to reach consensus, presenting in front of the class, and producing 'reflection notebooks'. Other types of verbal activities that the research team observed included group exercises, explaining the results of an experiment, and discussing the findings.

Another example of verbal activities was observed in the primary school in Akita, where a teacher introduced a set of expressions to formulate statements in logical manner. To summarize the results of their science experiments, the students practiced using the sentence, 'my prediction was XX, the result was YY, and therefore the findings were ZZ'. By repeating the sentence and listening to others, the students developed a logical way of making a statement. It was evident that the students were confident when presenting in front of others, freely sharing their opinions. Observers noted that students were accustomed to praising each others' presentations, and were open to different opinions.

During an observation at Otemachi Primary School in Niigata, the teacher repeatedly asked the students to compare their results with others. This method of 'compare and discuss' was used strategically, requiring interactive communication by the students, critical thinking and a willingness to understand others. This kind of activity was even seen in mathematics lessons. Instead of reciting and calculating during the lessons, the students were active in explaining how they reached the answers. The teacher incorporated the results of the students' discussions when concluding the lesson.

The research team found from the lesson observations that open-ended questions were employed effectively by teachers, so that students naturally responded using their own reasoning. Teachers often encouraged students to use logic by asking 'why?', 'how do you explain?' and 'what do you think?'

The pedagogies applied in the lessons focused more on developing the thinking processes of students rather than on ensuring students knew the correct answers. Such methods encourage students to explain and share their opinions with other students in class, and thus make students reflect on how they reached a conclusion.

Written exercises are also used by teachers, but in new ways. In a science lesson in Akita, the teacher asked students to write down their hypotheses on the experiment in individual notebooks. Keeping records of their own opinions and thoughts, and regularly reviewing what they learned, was observed to enable students to engage in reflective learning. Summarizing the learning content in the notebook at the end of each lesson assisted students to review their lessons and prepare for the next class.

Using group work effectively

Teachers employed group work in various subjects. In a career development lesson in the secondary school, for instance, classes were divided into groups and the students in each group participated in summarizing the similarities and differences of their individual work experiences in the local community. Through this group activity, they reached a consensus on the values of working in society. In such exercises, local community members also participated, by introducing their particular work experiences and relating school lessons to the real-life environment.

In a Grade 2 mathematics lesson observed at Otemachi Primary School, the teacher asked the students to explain to each other their ways of solving a multiplication problem, working in small groups. Then, several students were asked to make individual presentations in front of the class. Following these activities, the teacher encouraged students to discuss different ways of explaining the solution of the problem set with other students. The combination of individual work with interactive activities assisted students to develop skills in how to effectively explain their thoughts as well as how to listen carefully to others' opinions.

Creating lessons with students' participation and using positive reinforcement

The research team found that the 45-minute lessons they observed were well-prepared and organized. The blackboard was used effectively both by teachers and students. In a science class, the teacher first laid out the steps of

the lesson on the blackboard, listing the sub-topics to be covered. As the lesson progressed, the students contributed by filling-in the experiment results. The teacher concluded the lesson by summarizing the activities, incorporating students' opinions. This enabled the students to see the progress of the lesson and to connect the various activities they were engaged in. The lesson was conducted with students' active participation, and was organized in the manner that students' contributions were part of the process.

Furthermore, the researchers observed that the teachers, recognizing that creating a positive environment is vital in promoting effective learning, communicated with their students using polite expressions, instead of in an instructive manner. The students also employed positive expressions, encouraging and respecting others. The teachers thus served as models on how to speak to others.

The teachers' survey results revealed that in the 2008 New Courses of Study more interactive teaching methods are required, supporting current trends towards students-centred teaching and learning, moving away from teacher-centred teaching and learning. This reflects the change in thinking regarding the teachers' role in the classroom. Today, it is expected that the role of the teacher is to be a facilitator to bring out the students' talents, rather than an instructor providing information.

Strengthening commitment of the local community

The 2008 New Courses of Study promotes close collaboration with local communities. The Community School system, which began in 2005, has played an important role in school management by reflecting the voices of community members (local people and parents). Through the school board of governors, parents and community representatives participate in planning, implementing and evaluating school policies and activities. A school management committee consists of the school principal, parents, representatives from the community and the board of education. They mainly discuss policies for school management and appointments of teachers. The system enables parents and the community to have their voices heard with regard to school management. Although parents and community members do not have direct influence on teaching methods, they can contribute to improving the learning environment. For example, parents have been involved in introducing after-school reading sessions, supporting the introduction of information and communication technology (ICT) in classes, and strengthening the community's disaster-prevention activities.

Thus, parents are part of school development and contribute to creating a favourable learning environment for the students.

In Niigata, parents and local community representatives are involved in planning annual school activities and participating in various school events. In Akita, local enterprises and shops regularly support student internships and work experience programmes. They also participate in students' discussions, in which students describe their work experience. Students are treated as members of the community, naturally teaching them to respect senior members and others.

The special activities, mentioned above, require careful and close collaboration with the local community. In both prefectures, formal and informal activities by students in the community mean that children are educated not only in schools, but also in the community. Such community involvement, managed by liaison teachers, creates a strong bond between groups of parents, community representatives and schools (MEXT, 2008b). Such activities also promote closer communication among stakeholders who support schools, as well as collaboration among schools within the community.

Curricula and plans that enable students to interact with people in their community provide community members with opportunities to understand how younger generations think and learn, and cultivate public awareness and interest in education. Acknowledging this synergy effect, the Japanese government encourages community involvement and special activities that actively employ local resources for primary education.

Assessment

Skills and competencies required in the twenty-first century include creativity, cooperation and a long-term perspective. Assessments of skills and competencies need to monitor how learners' develop such skills.

A study by the National Institute of Education Policy Research identified several possible assessment methods: 1) formative assessment with clear goal-setting and monitoring of learning achievement; 2) assessment using multiple sources of information and data in addition to paper examinations; and 3) the standard assessment method to increase objective aspects of the assessment (NIER, 2013).

The assessment system of Otemachi Primary School involves a tripartite review of student development, with the participation of three stakeholders: teachers, parents and students; thus gaining multiple perspectives. Detailed criteria for the assessment items are defined for each grade and are shared with parents at the beginning of the school year. This enables teachers, students and parents to understand what is expected and how the students will be assessed in each subject. Furthermore, sharing the assessment system with students and parents helps to reduce the sense of unfairness some feel exists when teachers evaluate students' achievement.

Overall, the research team found that the assessment systems in the observed schools were at a developmental stage. Establishing an effective assessment system, which also incorporates twenty-first century skills, is vital to promote the required skills and competencies. The current examination system needs to be carefully revisited to identify how to incorporate ways of assessing twenty-first century skills.

Challenges

The study identified a number of issues relating to the implementation of the 2008 New Courses of Study. These included lack of understanding of the policy goals and insufficient teaching capacity and teacher trainings.

The new policy lacks cross-curricular perspectives

According to the National Institute of Education Policy Research, although the 2008 New Courses of Study indicates the importance of development of abilities and competencies in each subject (NIER, 2013), discussions of cross-curricular perspectives and activities, which promote the development of twenty-first century skills, are inadequate.

The goals of a cross-curricular perspective are: to shift the emphasis from what learners should 'know' to what they can 'do', and to encourage improvement of content and teaching methods. Some concrete improvements include using more open-ended questions and reflecting real-life issues when asking students questions.

Pedagogy on discussion activity is not well-understood by teachers

Experts are concerned that relevant pedagogy to promote twenty-first century skills may not be sufficiently understood and shared among teachers. The current teaching methods employed in most Japanese schools are not

particularly strong in fostering such skills and competencies, possibly because few teachers know how to integrate interactive activities, including discussion and group work, into daily lessons. In Japan, discussion and debate are often seen as competition or conflict, rather than as a tool for consensus building. Some experts explain that teachers are not trained sufficiently to be able to teach students how to express their opinions effectively. For example, not enough time is spent on practicing making statements as an individual, or presenting a group consensus. Furthermore, students often have problems in giving and receiving criticism in a constructive manner (MEXT, 2013b). In addition, teachers already have a demanding workload and do not have much time for professional skills development, which is a concern given the new topics to be covered in subject teaching that were introduced in 2008 (MEXT, 2010).

Teachers' support is vital for developing pedagogy for twenty-first century skills

The majority of the teachers interviewed in the study agreed that the definition of twenty-first century skills and the necessary elements are clearly stated in the 2008 New Courses of Study, but they suggested that there may not be sufficient support for teachers. The survey found that teachers want more support from the local government for the effective implementation of the new curriculum, including better teaching-learning materials and financial support. In particular, both policy-makers and teachers emphasized the importance of classroom-level support, especially for introducing new teaching methods and enhancing teachers' skills. The findings of the interviews with principals indicate that frequent evaluations of teachers' lesson plans and teaching methods increase teacher motivation and confidence, especially when teachers are trying to meet the new policy guidelines. A wide range of support is vital, including school-based teacher training, which is a necessity given that teachers lack the time to participate in formal regional training.

Conclusions

In concluding this study of pedagogical practices in selected schools in Japan, this section summarizes the four key aspects of teaching and learning discussed above.

- 1) The 2008 New Courses of Study places an emphasis on diverse verbal activities and non-academic special activities. Introducing practical

experience into teaching, combined with individual and group activities is believed to have positive influence on reflective learning. While major impacts have not yet been seen, teachers have observed improved abilities among students, especially in communication skills, creative thinking and analytical skills. To further promote the development of skills and competencies among students, a study by the National Institute of Educational Policy Research suggests that a comprehensive cross-curricular approach should be implemented rather than an individual subject approach. This NIER study also found that the participation of local communities is necessary for implementing a good quality curriculum.

- 2) In Japan, both academic and non-academic activities in schools involve various types of collaborative learning. Students experience working in groups from a young age and efforts are made to build group consensus rather than promote individual achievement. The 2008 New Courses of Study requires a school curriculum to be developed that encourages both individual creative thinking as well as teamwork. For this to be achieved, teachers are expected to include diverse activities in their lesson plans. When teachers introduce skills-oriented activities in classroom teaching, teaching methods become more student-centred, requiring teachers to act as facilitators. Our survey revealed that teachers face difficulty in planning effective lessons that will develop the required skills and competencies. Both teachers and education experts suggest that governments, especially local governments, create more teacher-training opportunities.
- 3) Establishing an assessment system that evaluates twenty-first century skills is vital to promote those skills. The current examination system in Japan focuses mainly on measuring academic skills. An assessment system for non-academic skills and competencies is yet to be established. Unless the assessment system evolves to measure non-academic skills as well as core academic skills, the teaching methods, which are teacher-centred and focus on memorization, may not change. The current examination system needs to be carefully revisited in order to identify ways to incorporate innovative modes of evaluation. The example of school-based tripartite assessment of students' skills and competencies, involving teachers, parents and students, could be a possible model.
- 4) The involvement of parents and local communities is crucial in creating a positive learning environment. In recent years, Community Schools have been actively promoted, allowing for the voices of parents and

community representatives to be reflected in the schools' education and management. With the participation of schools and communities, school managers are no longer solely responsible for creating a quality learning environment. The cases examined in this study illustrate that children are educated not only in schools, but also in the community through extra-curricular activities and career development projects. Collaborative learning is not limited among students and between students and teachers, but rather, it takes place in cooperation with local community members. The unprecedented experience of the Great East Japan Earthquake of 2011 showed that the role of the community in schools has become crucial and that community collaboration is expected beyond formal educational settings.

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Pedagogical Practices in Fiji Schools

Cresantia Frances Koya

Introduction

This chapter presents the findings of a study carried out in 2013 at three primary schools and five secondary schools in Fiji. The study aimed to compile information about pedagogical approaches, so as to inform future reforms in national education policies and educational practices in the Asia-Pacific context. A mixed-methods approach was used, including document and policy analysis, questionnaires, classroom observations and talanoa, an indigenous dialogic research instrument. Participants included Ministry of Education (MOE) officials, teacher educators at the University of the South Pacific (USP) and a group of primary and secondary school teachers.

Background

Country context

The small island state of Fiji has over 300 islands and had a population of 837,271 in 2007. Around half of the population (475,739) are indigenous (iTaukei), while the second largest population group is of Indian descent (313,798). The remaining 47,734 is made up of other minority groups (Fiji Bureau of Statistics, 2012).

Fiji was under colonial rule for almost 100 years until attaining independence from Great Britain in 1970. The nation celebrated 17 years of democracy before the coup d'état of 1987, which was followed by further illegal seizures of government in 2000 and 2006. In September 2014, general elections resulted in the democratic election of a government, following eight years of military rule.

Education in Fiji

During the colonial era, Fiji adopted the British system of education. While the post-independence era offered the promise of autonomy and

self-determination, it brought little change to education, however. An education agreement was reached that included implementation of New Zealand curriculum content, textbooks and national examinations. It was not until the 1990s that locally-developed national curriculum and examinations were introduced.

Fiji has conducted four education commissions; three of which were held prior to independence, in 1909, 1926 and 1969. The most significant findings of the 1969 Education Commission report were: significant gaps in the areas of access and equity, a need for curriculum reform, a shortage of trained teachers, and a general dissatisfaction with the teaching profession. The report also emphasized that the system promoted passive teacher-centred pedagogies that encouraged rote learning. Three decades later, the fourth education commission, conducted in 2000, found that things had not changed much since the 1969 review (Koya-Vaka'uta, 2002). Consequently, an agreement was signed between the Fiji Government and Australia initiating the Fiji Education Sector Reform Project (FESP), which ran from 2003 to 2008 (Koya, 2008, p. 29).

Fiji, like all Pacific island nations, adheres to a centralized curriculum development approach. National curriculum decision-making is located within the Ministry of Education's Curriculum Advisory Services (CAS). This centralized system, driven by content and examinations, fuels the 'teacher talk' (teacher-centred) pedagogy and rote learning identified as serious concerns by the 1969 and 2000 education commissions.

A 2006 study conducted at the University of the South Pacific titled 'Teacher Education for the Future' found that teachers in Fiji at that time felt pressured to deliver results. A participant in that study said that school pressures and the 'top-down approach to curriculum development and implementation of curriculum development taken by the ministry of education' prevented them from being innovative (Tuinamuana et al., 2006). The study report notes that: 'These pressures sometimes forced them [teachers] into using a 'banking' pedagogy (transmission model of teaching) as opposed to the more innovative and child-centred pedagogies emphasized in their training' (Tuinamuana et al., 2006, p. 334).

As part of the 2000 Education Commission, 70 teachers were surveyed and asked about their perceptions of teaching (Coxon, 2000, pp. 407–18). Coxon noted that three common teacher complaints were limited resources, examination pressure and teacher overloads (p. 414). An added dimension to

this discussion was the finding by the 2000 Education Commission panel that parents perceive examinations as the best measure of students' academic performance and learning achievement. Many parents did not agree with the reduction of examinations despite having had the benefits of alternative approaches explained to them (Koya, 2008, p.29). The commission noted that this 'certification mentality' appears to be deeply entrenched (Sadler, 2000, pp. 344–45). Two months after the September 2014 elections, the newly appointed Minister for Education made the announcement that two of the national examinations that had been cancelled may be reintroduced in years 6 and 10 as benchmark assessments (Soveraki, 2014).

Policy directions

Fiji is a member of the Pacific Islands Forum, an organization that aims to foster cooperation between member-country governments and international agencies to enhance the well-being of the people of the Pacific. In 2001, the organization published the Forum Basic Education Action Plan (FBEAP 2001–2008), the first regional education policy document in the Pacific islands. Its goal was 'to achieve universal and equitable educational participation and achievement; and to ensure access and equity and improve quality and outcomes' (Pacific Islands Forum Secretariat, 2001, p. 2). The FBEAP presented an urgent call for 'better quality development and education outcomes', focusing on improving various facets of education, including teacher competency, the quality and relevance of teaching materials, methods of teaching, learning styles and assessment (Pacific Islands Forum Secretariat, 2001, p. 4).

The second regional policy framework was released in 2009, the Pacific Education and Development Framework (PEDF 2009–2015). While the FBEAP provided loose guidelines for member countries to adapt and implement at the national policy level, the PEDF fleshed out the regional priority areas and outputs. The vision of the PEDF is quality education for all, supported by the mission: 'to enable each Pacific learner to develop all his/her talents and creativities to the full and thereby enabling each person to take responsibility for his/her own life and make a meaningful contribution to the social, cultural and economic development of Pacific society' (Pacific Islands Forum Secretariat, 2009, p. 5).

The PEDF has six Sub-Sector Education (SSE) themes. One of these (SSE 5) is Teacher Development. Recognizing the need for increased and improved

teacher preparedness, the Teacher Development SSE discusses how to improve in-service and pre-service teacher education, and raise the status of the teaching profession in the islands.

There is a substantial body of research internationally which affirms that quality education is not possible without quality teaching. Teachers are at the heart of every education system, and plans and strategies for the initial preparation and on-going professional development of teachers are central elements of the process and dynamic of achieving goals and targets relating to quality, access and equity in education (Pacific Islands Forum Secretariat, 2008, p. 13).

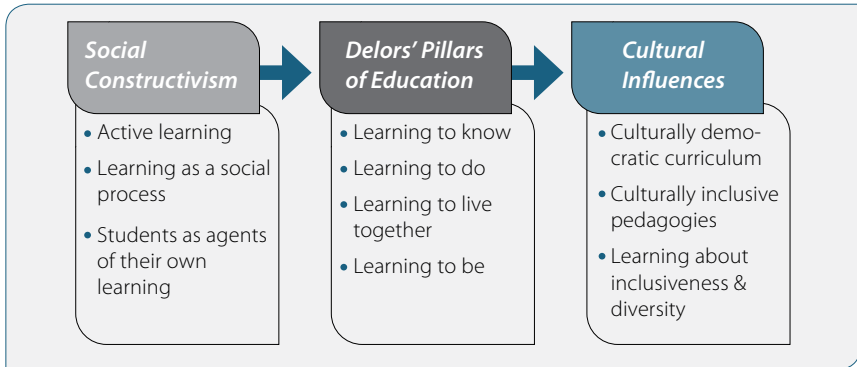
The PEDF also specifies the need to improve and increase school leadership training as well as to challenge 'colonial mind-sets' in teacher education and to develop and encourage what it calls 'Pacific pedagogies'.

In line with regional policy directives, the Fiji Ministry of Education's vision is 'quality education for change, peace and progress'. Its mission is to 'provide a holistic, inclusive, responsive and empowering education system that enables all children to realize their full potential, appreciate fully their inheritance, take pride in their national and cultural identity and contribute fully to sustainable national development' (Ministry of Education, Heritage and Arts, 2013, p. 1).

The most recent development in education policy in Fiji is the second edition of the National Curriculum Framework (NCF). Recognizing the changing and diverse learning needs of students in the twenty-first century, the NCF prescribes a 'social constructivist approach which emphasizes the importance of culture and social context for cognitive development' (Ministry of Education, Heritage and Arts, 2013, p. 14).

According to the NCF, curriculum content and classroom pedagogy should be guided by three core principles: social constructivism, Delors' pillars of education, and cultural influences. The social constructivism pillar particularly informs the kinds of pedagogical practice desired in Fiji. Figure 1 summarizes the principles adhered to in the NCF.

Figure 1: National Curriculum Framework Principles



Source: Adapted from Ministry of Education, Heritage and Arts, 2013, pp. 12–16.

Description of the study

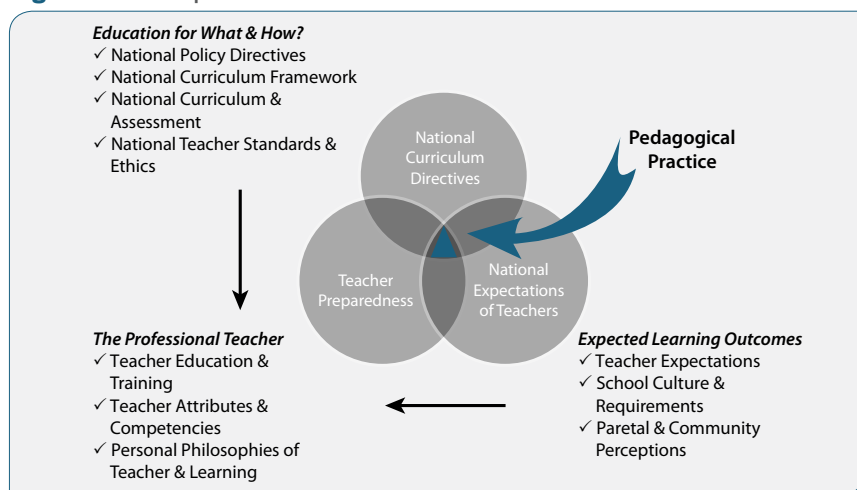
Research design

The study aimed to learn about teachers' pedagogical practices in Fiji. The primary question was, 'How do teachers in Fiji teach and what shapes their ideas and practice?' The researcher designed a conceptual framework to help gauge the place of this study within the broader scope of what shapes pedagogical practice.

There is a general universal understanding of pedagogy as the art and science of teaching, conceptualized as the result of a strong knowledge base and skill set and informed by teachers' beliefs, values, attitudes and behaviours (Pollard, 2010; Whitton et.al, 2010). Given that teachers' prior knowledge and personal philosophies of teaching inform pedagogical practice, an evaluation of pedagogical practice is, in essence, an inquiry into the teachers' psyche.

Figure 2, below, summarizes the conceptual framework upon which this study was constructed. The three spheres of influence identified as informing and shaping pedagogical practice and innovations are: national curriculum directives, teacher preparedness and expected learning outcomes of the school.

Figure 2: Conceptual framework



Methods

The researcher used a mixed-methods approach, drawing from both qualitative and quantitative research approaches, and adopted interpretivism as the overall theoretical paradigm. Interpretivism, in this context, takes the research-participant as an active agent who constructs his/her own meanings of reality (Mack, 2010).

(a) Classroom observations

The researcher conducted three classroom observations at each school to document the pedagogical practices of teachers. Observation sheets were designed to provide guidelines to researchers and to ensure consistency in data collected.

(b) Participant-researcher approach

The researcher used a participant-observer approach for the classroom observations. This was employed as a measure of internal research rigour to ensure the validity and reliability of data collected. Selected teachers (participating as teacher-researchers) conducted classroom observations and talanoa discussions, and administered a questionnaire to 10 other teachers within their own schools. Each teacher-researcher observed one teacher at their school. A similar approach was taken when gathering data at the Ministry of Education and at the School of Education of the USP.

(c) Talanoa

Talanoa is an informal means of communicating in Samoa, Tonga and Fiji indigenous contexts (Nabobo-Baba, 2006: 'Otunuku, 2011; Vaoleti, 2006, 2010). Talanoa has been subscribed to by many Pacific researchers as an effective method of gathering narrative data in a 'comfortable, non-threatening manner' (Koya 2013, p. 141). Talanoa sessions may be conducted one-on-one or with small groups. In this study, the teacher-researchers conducted talanoa sessions both one-on-one and with small groups of two to four teachers.

(d) Questionnaires

The researchers administered questionnaires to 80 teachers, 10 Ministry of Education officers and 10 teacher educators. The instrument included both open-ended and closed questions to elicit a variety of responses on pedagogical understandings and practices as well as perceptions of, and current approaches to, teaching and learning.

(e) Document and policy analysis

The researcher undertook an analysis of national policy documents and current thinking on education in Fiji to provide an understanding of the ongoing discourse on education in Fiji and the Pacific.

(f) Analysis of data

Applying a mixed-methods approach to data analysis, the researcher coded and tabulated numeric data for comparative analysis purposes.² Patterns were drawn from both narrative and numeric data applying Hycner's explication process (1999). This process has five phases (cited in Groenewald, 2004, p. 19):

- i. Bracketing and phenomenological reduction.
- ii. Delineating of meaning.
- iii. Clustering of meaning to form themes.
- iv. Summarizing narrative data, validating and, where necessary, modifying it.
- v. Extracting general and unique themes and making a composite summary.

2 Note on coding: Ministry of Education staff were coded as follows: Policy-makers/ Education Officers: P/EO; Teacher Educators: TE; Primary School Teachers: PT; Secondary Teachers: ST.

Research sites and participants

The three research sites selected for fieldwork study were the USP, where the researcher is based; the Ministry of Education in Suva; and selected primary and secondary schools.

The researcher included a select sample of Ministry of Education officers in this study to determine the policy directives being pursued and to gauge the level of understanding and shared ideas about the significance of pedagogy in the education system in Fiji.

Teacher educators at the USP were sampled to ascertain the extent to which pedagogy is prioritized in the teacher education programmes on offer, as well to learn about the general understandings of the education system in Fiji and the pedagogical practices of teachers.

This study only examined teacher education at the University of the South Pacific, rather than also studying other teacher education facilities, because the USP has been the premier tertiary education provider in the region since 1968. With its main campus located in Suva, the USP provides pre-service training, in-service initial teacher education, postgraduate degrees in education and professional development for Fiji teachers. Teacher education programmes are offered through the School of Education, in the Faculty of Arts, Law and Education.

Permission was obtained from the Ministry of Education to conduct this research at three primary schools and five secondary schools in the central division. Ten teachers were selected from each school.

The selected primary schools were two peri-urban schools and one urban school. All of the selected schools are co-educational, offering mainstream public education from years 1 to 8. These schools represent typically-sized primary schools with student populations of 699, 692 and 906, respectively. Average class size is between 35 and 40 pupils, with one teacher designated for each class.

The secondary schools sampled included one all-girls school and four co-educational schools, all of which offer mainstream public education from years 9 to 13. Three schools are categorized as urban schools with one peri-urban. School populations range from 350 to 1,600. These schools represent typical secondary schools with small, medium and large school rolls. Class sizes vary in these schools, with between 20 and 40 enrolled in compulsory

subjects such as English, while specialist subject classes have even greater variation. While one of the schools offers an open schooling programme, 'Matua', which runs afternoon and evening classes, the study only included teachers of day classes.

Findings

Prevailing pedagogical approaches

The study found that pedagogical intentions are not reflected in pedagogical practice. Classroom observations show that while teachers do try to apply their philosophies of teaching and learning in pedagogical practice, many feel pressured by the need to cover content on time, resulting in lecture-style teaching, note taking and, in some cases, teachers even admitting to keeping children in at recess time to complete set tasks.

Analysis of class observation data indicated that the majority of teachers had positive rapport with their students and with other teachers, were confident and were usually well-prepared for their classes. Positive observations included effective management of spaces through colourful and creative classrooms, well-planned, -managed and -delivered lessons, a wide variety of activities, well-designed guided-learning activities for slower students, general abilities-focused tasks, code-switching and bilingual teaching to enhance understanding, development of own resources, and the effective use of positive reinforcement in some cases. Each observer noted that the teachers began the classes by stating the purpose of the lesson (primary school level) or the lesson objectives (secondary school level).

A number of negative observations were also noted. These included very large numbers of students in small classrooms, which inhibited movement and group work; students coming late to class; lack of resources, text books and science equipment; language levels posing difficulty for students; poor time-management; note taking and lecture-style lessons; and predominant use of negative reinforcement. There was some concern about some teachers being too friendly and lax in their handling of disruptive students and, in one instance, of a teacher not being prepared. Yet another teacher was reported as having been distracted by non-teaching duties and having left the classroom, leaving students to their own devices. While most teachers observed were well-prepared for their lessons, some observations left the research team convinced that there is a need for pedagogical training interventions.

Overall, the study found that the prevailing pedagogical practice among participant teachers is a mix of teacher-centred and student-centred approaches. There is an understanding among teachers of the relationship between content-knowledge focused lessons, in which teacher-talk and passive learning is sometimes necessary, and skills- and inquiry-based learning situations. However, understanding and practice were not necessarily aligned.

Below are comments made by three of the teacher-researchers and observers of classroom practices.

Comment 1

I don't think many teachers know what pedagogical approach they are using. One of the teachers I observed, for example, explained in the talanoa session that she applied constructivism in her teaching. From what I saw, it was obvious that for her it simply means mapping students' prior knowledge at the beginning of the class. Once the class began, she focused on achieving the lesson objectives rather than building on the students' prior knowledge and prior learning. I mean, she did not stop to help improve students understanding when it was clear that they had not understood or completed the previous topic. In all the lessons I observed, it was the same. She asked questions on what they knew on the topic in the beginning, but then moved into the lesson and did not come back to what students had said.

Comment 2

After about five minutes of trying to quieten them down, he then got students to open their books and said that we would be marking the work from the previous day. The first half of the lesson was spent on correcting previous homework before he put them into groups and explained what the lesson was about. It was a large class of about 40 students and many were sharing books. Once the activity started, students worked well, discussing and working out the answers, but by then it was soon time to end the class. When the bell went, he reminded them to complete their work and said that they would go over the lesson the next day.

Comment 3

She was too friendly with the class and did not control the noise. Those students who were trying to focus were distracted by others and she did not seem to be bothered by this. After about ten minutes of sitting in the front of the room, she stood up and walked around explaining things in English and in one group used Fijian. This took about 10 minutes and then she left the class to see to her cleaning duties supervision. The class continued working unsupervised on the activities given and some seemed to be doing their homework in other subjects. When she got back, she asked them if they had coped with the unit tasks and they all said yes. She seemed pleased and then went over the homework activity.

It was clear from the observations that the prescribed theoretical approach of constructivism has been ingrained in all of the observed teachers' minds. As a result, they all said that they applied constructivist teaching approaches, but it was clear from observations that applied pedagogical knowledge and skills are lacking. What transpired in the classrooms could only be described as very much the conventional transmission approach, with an emphasis on increased student activities. What emerges is the need for review of the coverage and treatment of pedagogical approaches in teacher education programmes and in ongoing professional development. These will need to be constructively aligned to ensure that teachers have a firm understanding of the relationship between their 'pedagogical choices and student learning outcomes' (Kalantzis and Cope, 2010, p. 200).

An added problematic in the pedagogical understanding to action discourse was raised by Richardson (2003) who notes that the learning theories that inform teaching should be examined carefully. She also questions the dynamics of constructivist teaching, and moves beyond just linking new content to prior content knowledge. This raises the issue of 'how students learn best' in context. The question that then emerges in Fiji relates to the diversity of student learning styles in the Fijian classroom. This is an area that has been neglected in educational research in Fiji and, given the multicultural composition of Fijian students, is an area in need of investigation.

In light of this, it is troubling that most teachers surveyed in this study do not feel that context is critical to effective pedagogical practice. Less than half of both teacher samples agreed that the Fijian school context presents specific pedagogical issues that need to be addressed: 40 per cent of primary

school teachers (PT) and 42 per cent of secondary school teachers (ST). Additionally, teachers said that there is not much discussion about pedagogy and pedagogical skills among themselves at school (PT: 60 per cent, ST: 40 per cent).

A journal article by Nabobo and Teasdale written over 20 years ago (1994) explains why it is important to incorporate local culture into education in the Fijian context, and describes some of the thinking behind the development of a teacher education course to address this issue. It is important, however, to avoid what Richardson cautions as 'the imposition of inappropriate pedagogy on students who are not part of the dominant culture' (2003, p. 1633).

In a paper prepared for the Forum Education Ministers' Meeting in 2004, Dr 'Ana Taufeu'lungaki notes the general Pacific style of thinking and learning, which is assumed to provide the foundational base for pedagogical choices in Pacific classrooms.

In Pacific cultures, which value respect, generosity, loyalty, cooperation, sharing, humility, and fulfilment of mutual obligations, among others, the nature, forms and structure of knowledge are perceived differently, which, in turn, give rise to different speech rules and communicative behaviour and consequently, teaching and learning strategies. The thinking of Pacific Islanders is said to be right-brain dominated, which tends to be creative, holistic and spatial; divergent instead of linear logical; interpersonal, which favours group activities, spoken over written language, and demonstration and doing rather than verbal direction; and kinesthetic, which lends itself to physical activities. Such thinking styles are manifested in a number of ways in Pacific culture (Pacific Islands Forum Secretariat, 2014, p. 13).

This assessment is reiterated in a New Zealand study of Pacific students in tertiary education. Chu et al. (2013) present the argument that Pacific styles and contexts of learning are critical to supporting student academic achievement. They call on teachers to reflect on whether their teaching practice connects with the learner. In Fiji, the lack of research into teacher practice means that there is limited understanding of how well-versed and willing teachers are to develop and apply contextualized pedagogies. Existing research findings can therefore only provide a 'snapshot' of teacher's beliefs, understanding and practices.

The researchers observed code switching and group work, but the study found that some teachers made no real effort to go beyond conventional

(teacher-centred) transmission pedagogies. The notion of student-centred learning appears to have been translated as 'lots of student activities', which equates to keeping the class occupied and busy while completing the content requirements. Many teachers do not seem to understand that student-centred learning is self-directed and participatory, and therefore do not understand that the predominant practices of passive pen-paper activities and question-answer techniques are not necessarily student-centred.

A recommendation for the Ministry of Education and for the School of Education at USP would be to unpack the meaning of constructivist teaching in context, taking into account the 'culture-gap' (Little, 1995): the difference in expectations between the home culture and the culture of the school. Richardson (2003) explains:

The difference [in teaching styles] may ... be attributed to differences in cultural beliefs about the nature of teaching and learning. I believe it is much more than that: that psychological constructivism's roots are western, liberal, and individualistic (Eurocentric), and much of the current approach to constructivist pedagogy, at least in the United States, was developed within privileged classes. It is not clear to me that the less privileged and minority cultures are interested in the strong individualistic approach suggested in current constructivist pedagogical approaches to teaching given the perceived importance of community maintenance and development (Richardson 2003, p. 1633).

The researchers found that while all teachers spoke of the desire to facilitate more student-centred lessons, they all said that they felt pressured by time and heavy teaching loads, and time and again the discussion returned to the reality of time-bound coverage of a content-full and assessment-driven system. Teachers perceived that it was necessary to conform to this system, as it is the primary means of school-based and ministry-level evaluation of teacher effectiveness. Teachers were mindful that their performance was assessed based on student scores and percentage pass rates. The teachers said that the only teaching or classroom assessment that had been conducted was during their teacher training. These findings indicate that pedagogical practice in Fiji may be driven by compliance, where teachers are focused on the coverage of all content within the given time-frame, aiming to improve students' assessment and examination results, and to get a positive performance review of their teaching. This suggests that little has changed in the classroom in the 14 years since the 2000 Education Commission.

Thus, in this study, a strong issue that emerged from the data is that teachers would like to be able to facilitate more active learning. They expressed a desire to be innovative in their pedagogical practice and to incorporate the teaching and learning of non-cognitive skills. The challenge, they said, is the pressure to complete the prescribed content coverage, and the added responsibilities of the new internal assessment model. The latter, internal assessment through class-based assessment tasks, is proving to be problematic for teachers, causing substantial stress and taking up a lot of teacher-time both in and out of school hours.

Teachers' perceptions of policy and practice

The teachers participating in this study were well versed with the NCF. This awareness can be attributed to Ministry of Education training programmes, which have taken place since 2006. The teachers were aware of the pedagogical directives in the NCF and were of the view that it is their responsibility to ensure that the directives are followed. The study found that some MOE education officers (EO) believe that pedagogy is adequately covered in the NCF, but a large proportion (67 per cent) notes that pedagogy has received limited treatment. Responses from the EOs indicate that some feel there are gaps in the national policy, and a third (33 per cent) argue that pedagogy ought to emphasize social learning, curiosity and creativity.

Teacher educators (TE) appear to be the least knowledgeable about the contents of the NCF, with more than half (57 per cent) selecting the 'not sure' option when asked about specifics. Those teacher educators who were aware of the NCF (43 per cent) believed that there was a broad range of pedagogical coverage provided for, with specific emphasis on collaborative learning, problem solving, integration of technology, student-centred approaches, social learning, curiosity and creativity, constructivism, inclusive and special needs, cultural and multicultural approaches and critical and creative thinking.

Although the teachers were able to describe a variety of ways in which they learned about pedagogy and developed pedagogical skills, the researchers found that half of the teachers felt that teacher training may not adequately cover the subject of pedagogy (PT: 50 per cent, ST: 50 per cent). This view was also shared by half of the Ministry of Education officials (50 per cent) and almost three-quarters of teacher educators (71 per cent). At the same time, however, three in four secondary teachers (75 per cent) were of the view that their teacher training had prepared them for the pedagogical realities of

the Fiji classroom. Among primary school teachers, only around a third (35 per cent) felt this way. All of the primary teachers felt that they did not have the opportunity to further develop practical pedagogical skills to manage their changing role in the classroom and school.

The findings of the study indicate that teachers recognize the value of gender-inclusive, culture-inclusive and special and inclusive pedagogical approaches. Most teachers agree that gender-inclusive pedagogies are critical (PT: 65 per cent, ST: 92 per cent). Culture-inclusive pedagogies were valued more by the primary teachers (PT: 75 per cent, ST: 48 per cent) and special and inclusive pedagogies seem to be favoured by secondary teachers (PT: 40 per cent, ST: 82 per cent). Secondary teacher training appears to have provided for a wider pedagogical scope (culture: 48 per cent, gender: 82 per cent and special and inclusive education: 76 per cent) than primary teacher training (culture: 20 per cent, gender: 40 per cent, and special and inclusive education: 45 per cent). An important line of inquiry for future research would be an analysis of the curriculum across the board at teacher education institutions in Fiji to assess the breadth and depth of the treatment of pedagogy across specific programmes.

Teaching and learning of non-cognitive skills

Non-cognitive skills (NCS) are increasingly considered important to student learning outcomes. Gutman (2013, p. 4) defines NCS as follows:

Non-cognitive skills are those attitudes, behaviours, and strategies which facilitate success in school and workplace, such as motivation, perseverance, and self-control. These factors are termed ‘non-cognitive’ as they are considered to be distinct from the cognitive and academic skills usually measured by tests or teacher assessments.

The eight non-cognitive skills that are considered by Gutman (2013, p. 7) as being key competencies in the twenty-first century are as follows:

1. Self-perception;
2. Motivation;
3. Perseverance;
4. Self-control;
5. Metacognitive strategies;
6. Social competencies;
7. Resilience and coping;
8. Creativity.

Fiji's National Curriculum Framework, similarly, presents nine key characteristics that enable school graduates to 'participate in a changing world' (Ministry of Education, Culture and Arts, 2013, p. 6)

These are as follows:

1. Communicate effectively;
2. Handle change;
3. Make wise decisions;
4. Be innovative and enterprising;
5. Learn how to learn;
6. Solve problems;
7. Investigate and research;
8. Realize that learning is lifelong;
9. Participate in team work and cooperative learning.

The study findings indicate that the concept and co-relational value of non-cognitive skills are poorly understood by all of the participants. This is evidenced by the treatment of NCS as 'content' specific. While support for NCS is high among all groups (EO: 100 per cent, TE: 71 per cent; PT: 65 per cent; ST: 86 per cent), those outside the ministry perceived a lack of emphasis of NCS in current educational policy. While ministry officials said that NCS were prioritized highly (100 per cent), less than a third of the teacher educators agreed with this view (28 per cent), and two in five teachers viewed the policy treatment of NCS as lacking (PT: 40 per cent, ST: 40 per cent). When asked about teaching and learning of NCS in Fiji schools, many participants shared the view that current NCS treatment is inadequate.

Teachers felt that NCS form an important component of education in Fiji. While opinion on the degree of importance varied, the majority were of the mind that these skills were either important (PT: 30 per cent; ST: 14 per cent), very important (PT: 35 per cent, ST: 32 per cent) or essential (ST: 32 per cent). Significantly, a large number of teachers said that they had already tried to incorporate NCS into their pedagogical practice (PT: 70 per cent, ST: 60 per cent). Despite this, confidence levels in the delivery of NCS learning opportunities were quite low (PT: 35 per cent, ST: 36 per cent).

Many participants cited the integrated 'across-the-curriculum' approach as the predominant method used to teach NCS (EO: 67 per cent, TE: 43 per cent, PT: 60 per cent, ST: 62 per cent). Other methods of delivery include coverage in specific subject areas such as values or religious education,

as well as through core subjects such as physical education, music and arts and crafts, and extra-curricular activities such as clubs and cadet training. This finding emphasizes, again, that Fiji has an academic education system and a content- and assessment- driven focus, to the point that it is considered acceptable that NCS are only taught-learned outside the formal curriculum.

Some teachers indicated that they were 'finding their way' or 'trying their best' (PT: 10 per cent, T: 8 per cent), and a small, but nonetheless alarming, percentage responded that they feel 'lost' when it comes to NCS (PT: 5 per cent). The same proportion of secondary teachers said that they wondered if they were the right people to teach NCS (ST: 5 per cent). Analysis suggests that there is a general uncertainty regarding whether NCS really is covered at school and whether participants felt this was the correct response. More than half of the teachers expressed the need for further training to enhance the teaching and learning of NCS (PT: 55 per cent, ST: 60 per cent).

A particularly disturbing finding is that many teachers feel that they are unable to move beyond subject-content coverage and assessment. This perception is due to a number of pressures, including syllabus content demands (PT: 35 per cent, ST: 42 per cent), internal assessment (PT: 45 per cent, ST: 28 per cent), school expectations (PT: 25 per cent, ST: 10 per cent), parental expectations (PT: 25 per cent, ST: 10 per cent) and student expectations (PT: 20 per cent, ST: 5 per cent). These findings corroborate findings of the study by Tuinamuana et al., (2006) in which teachers said they felt pressured to apply a 'banking' pedagogy.

The need to change pedagogical practices does not seem to have been ingrained into teachers, given the range of pressures they face, and which perpetuate the system of content and examinations. Teachers are aware of the importance of responsive and innovative pedagogy, in line with the new curriculum focus as outlined in the NCF, but there have been inadequate efforts towards changing teachers' pedagogical beliefs and attitudes, and there has been neglect of the critical factors for establishing a sense of teacher ownership of the change (Carless, 2013).

Creative avenues for teaching and learning

In addition to having heavy teaching loads, teachers implement extra-curricular activities that enable the teaching and learning of non-cognitive skills (through non-formal and informal learning experiences).

Both primary and secondary teachers favour pedagogical foundations that prioritize child-centred approaches and constructivism, and which emphasize guided-learning, collaborative or peer-learning opportunities and a wide variety of activities and learning experiences.

Below are four examples of arts education in Fiji, in which innovative approaches to teaching and learning are used to foster NCS. A number of the teachers who participated in the study have been part of these initiatives. These teachers describe these approaches as being authentic and creative methods of teaching and learning, which present students with real-life problem-solving opportunities.

The first of the examples is the Tadra Kahani, an annual national performing arts competition. Schools register to participate in this competition and work towards the staging of a live performance on a contemporary issue or theme. The second example is the Kula Film Festival, a national student film competition, in which students compete for awards for short films. The third is Voices for Change, a national music festival that brings together students from across the country to participate in choral singing and dance. The final example is the Suva Primary School Teachers' Arts Association, which is a teacher-driven initiative that brings together teachers from the greater Suva area to develop resources for the teaching of art in primary schools, to provide professional development for art teachers and to facilitate art activities and exhibitions featuring the creative works of primary school students in Suva.

The teachers participating in these innovative efforts are committed to facilitating holistic learning experiences that extend beyond gaining subject content knowledge. They emphasize not only the development of artistic skills, but also learning of other skills through the arts.

Professional networks such as the Primary School Teachers' Arts Association are viewed as providing an avenue for collaborative learning and peer-mentoring of teachers, and for developing pedagogies that work, as well as for sharing good practices. Teachers found that students who participated in the learning-through-the-arts experience were capable of more holistic critical and creative thinking. The teachers also agreed that these benefits are transferred to subject-based learning in the classrooms.

Conclusions

Despite various reforms of education in Fiji over the last 40 years, the findings of this study indicate that teachers' pedagogical practices do not seem to have evolved since the pre-independence Education Commission conducted in 1969. The findings also confirm the findings of a similar undertaking by the School of Education of the University of the South Pacific in 2006 (Tuinamuana, et al., 2006), and suggest that the major, systematic curriculum changes brought about through the Fiji Education Sector Reform Project, which ended in 2008, do not appear to have resulted in major changes at the classroom level.

The research results indicate that teachers' philosophies of teaching are holistic in nature, with ideals of constructivism balancing guided student learning and opportunities for self-directed learning. Teachers believe in the need for rigorous and purposeful pedagogies such as reflective teaching practice based on the continuous assessment and evaluation of teaching methods and action research in the classroom.

There was a consensus among all sample groups that improved pedagogical practices will lead to good learning outcomes, with positive implications for social cohesiveness, economic development, citizenship and sustainability in Fiji. Classroom observations found that many teachers try to provide positive and creative learning opportunities for students, although some seem unprepared and are distracted by non-teaching responsibilities.

Despite the awareness among teachers of the need to improve their pedagogical practices, the fact remains, however, that the Fiji school system is content-full and assessment-driven. The teachers' heavy teaching loads and extra-curricular responsibilities, coupled with the pressure to complete the syllabus and administer frequent internal assessment tasks, leave little time for reflective practice in pedagogical planning, delivery and evaluation. Additionally, parents and the community prioritize academic learning and assessment scores, making it even more difficult for teachers to make changes to their pedagogical practices.

While teachers currently use a mixed-methods approach, using both teacher-centred and student-centred methods, the data collected in this study do not provide adequate insight into whether current pedagogical approaches within school-based initiatives may cumulatively contribute to innovative practice. Further investigation is necessary to interrogate the learning

experiences provided by extra-curricular activities, in particular learning through the arts, and to examine the potential spill-over effect of these creative learning experiences on the teaching and learning process within the classroom.

It is expected that teacher educators at the University of the South Pacific ought to be well versed with policy directives relating to teacher development, standards and curriculum in the university member countries. It appears remiss that some appear to be ill-informed about changes in curriculum directions at the national level in Fiji. The lack of teacher educators' awareness of policy directives in Fiji poses a concern as these educators play a key role in preparing teachers for the world of the classroom. This finding suggests a lack of consultation and dialogue between teacher educators and the Ministry of Education. This will need to be addressed if teacher education and training are to be improved.

In summation, this study provides insight into the context and reality of the teaching experience in Fiji. It also raises a number of issues that warrant further research and dialogue. Areas requiring particular attention include policy awareness and implementation; research into pedagogical practices; wide stakeholder consultation; teacher preparedness, including teacher training and education, the professional development of teachers, and teacher workloads and incentives; the pressure of curriculum content; and current assessment approaches.

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Quality Teaching and Learning in Nepalese Classrooms

Ganesh Bahadur Singh

Introduction

Nepal first put priority on increasing access to education and improving education quality in its first national commission on education, the Nepal National Education Planning Commission (NNEPC), in 1954 (College of Education, 1956). Nepal's net enrolment rate (NER) and gross enrolment rate (GER) have both improved significantly over the past 60 years, but Nepal nevertheless is unlikely to achieve universal primary education by 2015. In 2011, the net attendance rate (NAR) at primary level was only 68.8 per cent (Central Bureau of Statistics [CBS], 2011a), indicating that considerable efforts are still required to increase access to education.

In terms of improvements in the quality of education in general, and in teaching and learning practices in particular, it is clear that achievements over the past six decades have been inadequate and further efforts are vital. This chapter explores Nepalese efforts to transform teaching and learning practices and the impacts so far, and analyses the facts to identify possible ways forward.

Background

Country context

Nepal, a landlocked country, encompasses an area of 147,181 square kilometres. The country is bordered by India to the west, south and east, and by the Tibet region of China to the north. The country is divided into three geographic regions (mountain, hill and terai) and five administrative regions (eastern, central, western, mid-western and far-western). The country is further divided into 14 zones and 75 districts. Nepal has a population of 26.6 million, according to the 2011 census (CBS, 2011b). The population is diverse, comprising 125 ethnic groups speaking about 123 languages.

The modern history of Nepal began with its annexation by Prithivi Narayan Shah in 1768. In 1816, the Sugauli Treaty with the British East India Company defined the boundaries of present day Nepal and due to this, Nepal lost nearly 40 per cent of its territory. Factionalism inside the royal family led to the Rana rule, founded by military leader Jung Bahadur Rana in 1847 (Chand, 2000). Then, in 1950, the Ranas were thrown out and democracy established. Democracy was lost by force in 1960, and reinstated in 1990, and removed again in 2005. In 2007, Nepal became a republic and it is currently governed by a constituent assembly.

Nepal is predominantly an agrarian country but has a number of industries that process and export agricultural products. About a quarter of the population lives below the poverty line and the Government of Nepal seeks to reduce poverty in the country. Tourism, agricultural and industrial development are seen as key sectors for economic development (Pokharel, 2010). Education plays a major role in providing the required human resource requirements.

Education in Nepal

Overview

The Nepalese school system is currently structured as follows: primary (grades 1–5), lower secondary (6–8), secondary (9–10) and higher secondary (11–12). The structure is undergoing changes, however, in line with the National Curriculum Framework (NCF), School Sector Reform Plan (SSRP) and other rules and regulations. The SSRP (Ministry of Education [MOE], 2009) envisions two tiers of schooling: basic education (grades 1–8) and secondary school education (grades 9–12) and the SSRP has indicated the possibility of breaking down basic education into three types of schools: foundation (grades 1–3), primary (1–5) and upper primary (1–8).

Currently, the government provides one year of pre-primary education – Early Childhood Development (ECD) – for children aged 4 and above, with the aim of preparing children for primary school. ECD provision is either community- or school-based, and support children’s physical and cognitive development (Curriculum Development Centre [CDC], 2005).

The objective of primary education in Nepal is to provide children with knowledge and skills in the areas of nationality, democratic values, basic language and arithmetic, life skills, creativity, inclusive attitudes and awareness of human rights. Lower secondary level education emphasizes the development of positive attitudes towards work. The NCF framed the main

objective of basic education as the development of 'the innate ability of each child through child-centred education' (CDC, 2007a, p. 41). It aims to produce citizens who are loyal to the nation and to democracy, and aware of their responsibility towards society and the natural environment. Students are also expected to be competent in communicating ideas, and to be independent, hardworking, health-conscious and morally sound.

According to the NCF, the objectives of secondary education (grades 9–12) are to produce competent and healthy citizens who can contribute to economic development and are familiar with national traditions, cultural and social heritage, and democratic values. Its main aims are to produce a pool of skilled human resources capable of furnishing solid contributions to the all-round development of the country, and to impart the basic knowledge required for a university education. These objectives were adopted by the CDC for grades 9 and 10 (2007b).

Nepal also has a non-formal education system. Literacy, general education, vocational and technical education, and skills training are provided by various institutions at various levels.

The Government of Nepal is committed to the provision of good quality education for all. It also recognizes that learning should be useful to the learners for their immediate, as well as future lives. The curriculum therefore incorporates various forms of knowledge, skills and attitudes. The curriculum tends to focus on cognitive aspects, however,³ despite recognition of the need to incorporate non-cognitive skills. The government has attempted to include some non-cognitive skills in the curriculum (CDC, 2005) and has developed teacher preparation courses on some non-cognitive⁴ aspects and has provided teachers with training, but only sporadically.

3 Cognitive theory is concerned with knowing and thinking. It studies the structures and components for processing information. The fields of study encompassed are memory, attention, perception, language, reasoning, problem solving and creativity (Elliott et al., 2000). The cognitive foundation of learning theory was initially based on the study of human 'memory', and it takes 'mental representation' as a central proposition.

4 Non-cognitive attributes are skills and traits that are not specifically intellectual or analytical in nature. These skills are not directly related to specific subject and content. They include a range of personality and motivational habits and attitudes that facilitate functioning well in school and life, such as life skills, critical thinking, peaceful living, value-based living, perseverance, motivation, self-control, and other aspects of conscientiousness (Rosen, Glennie, Dalton, Lennon, and Bozick, 2010).

Pedagogy

Indigenous (religious) education has roots trailing far back into Nepal's history. Religious and classical Sanskrit systems of education dominated until 1853, the year that marked the entry of the British system of education, which was introduced with the establishment of Durbar High School by Jung Bahadur Rana after his return from a visit to Great Britain. The English system introduced into Nepal followed the British model of education in India. The earlier forms of education, including Buddhist Bihar, Hindu Ashram and Gandhian Basic Education continued alongside the British model (College of Education, 1956).

The religious system of pedagogy (i.e. methods used in the classroom to enable students to learn), involved oral transmission, recitation, repetition, rote memorization and drills. In the religious system, students had to memorize, by rote, the given content. This system was also followed in the British (secular) schools. One practice of the religious system of education that did not continue after 1853 was the system of lesson progress, which had until then depended on the ability of student (Alterker, 1956). Under this system, a new lesson was given to a student only when the student was able to present (fully understand) the previous lesson. This practice was more individualized than the British system, because each student would be provided the next lesson only if they showed they had understood the previous one. Thus, teachers continuously assessed each student.

In 1954, the government formed the Nepal National Education Planning Commission (NNEPC). The commission's report demanded respect for individual differences and intelligent adaptation of the curriculum to the various local conditions and to the individual differences of children, and called for the implementation of a thematic approach, active learning, the use of the project method, and student-teacher cooperative planning (College of Education, 1956). In effect, this was an early appeal for child-centred teaching and learning principles.

Later reports, plans, programmes and project documents also provided suggestions regarding classroom pedagogy in Nepalese schools. For example, the diagnostic and reflective approach was recommended in 1961 (MOE, 1961); modern and researched methods were advised in 1971 (MOE, 1971); the integrated delivery approach was suggested in 1997 (MOE, 1997); respect for diversity was proposed in 1999 (MOE, 1999); respect for differential abilities and calls for inclusive education were put forward in 2003 (Ministry of

Education and Sports [MOES], 2003); and independent learning and flexible instructional arrangements were proposed in 2008 (MOES, 2008).

Despite the many mentions of learner-centred approaches, studies have shown that, in practice, classroom pedagogy in Nepal has been dominated by lectures, textbook reading, paraphrasing, drills and rote memorization. At the higher grades, examinations are the focus and efforts are targeted towards exam preparation during school hours, along with extra coaching and private tuition for those who can afford it (Research Centre for Educational Innovation and Development [CERID], 2002).

Description of the study

The classroom is where the intention of the curriculum needs to be translated and where skills are transferred. Both of these aspects are reported to be weak in Nepalese classrooms. This study examined these aspects to identify ways to improve classroom pedagogy, so as to address future requirements.

The overall objective of the research was to contribute to increasing knowledge and understanding of pedagogical approaches in the Nepalese education system.

The specific objectives were to:

- Identify and critically analyse the diverse features of pedagogical approaches in practice in Nepalese classrooms and harness the lessons learned.
- Describe and analyse innovative pedagogical practices in the Nepalese education so as to mainstream effective practices.
- Formulate recommendations for the development of pedagogical approaches that respond to the changing learning requirements.

Research questions were developed to guide the research more concretely:

- What were the pedagogical practices in the Nepalese education system in the past that have been instrumental in shaping present practices?
- What lessons can be derived from these practices to improve present and future practices?
- What are the present policy and plan related to classroom pedagogy?

- How are the policy and plan being implemented to improve classroom practices?
- What are the impacts of the endeavours to improve pedagogical practices in Nepal?
- What lessons can be drawn from innovative pedagogical practices in Nepalese education so as to mainstream effective practices?
- How are the education system and pedagogical practices responding to the changing learning requirements for the twenty-first century?

This study used a mainly qualitative research approach, involving a review of the literature about pedagogical processes in Nepal, followed by comparison of theory with the actual pedagogical practices being used in classrooms. Research reports were used to identify classroom practices in use, and a small empirical study (classroom observations and teacher interactions) was used for comparison and triangulation purposes.

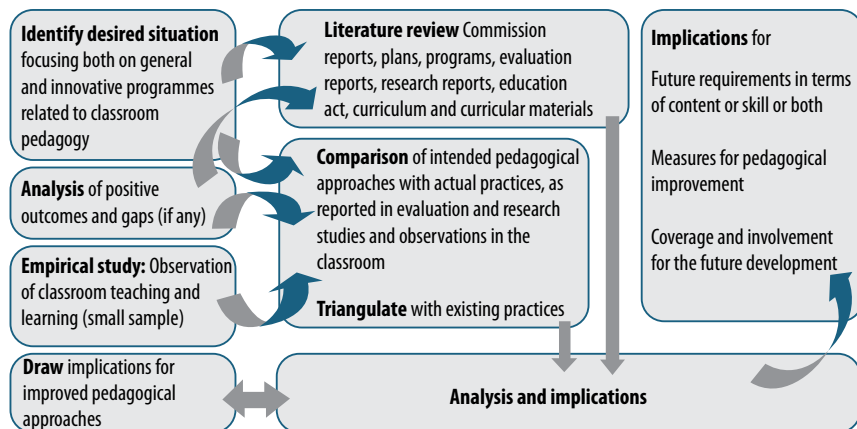
The research tools used in the study were:

- Literature review – The researcher examined education commission reports, policies and plans, programmes, evaluation reports, research reports, the Education Act, the curriculum and curricular materials, teacher training documents, and other reference materials.
- Classroom observations – The researcher observed classroom teaching and learning practices in seven schools⁵ in three districts. Altogether the researcher observed 21 classes, out of which 12 were at schools participating in innovative pilot projects.
- Interviews – After the classroom observations, the researcher briefly interviewed five of the teachers to clarify some of the aspects of classroom teaching-learning in the observed classes. Implications of the practices and future requirements were drawn based on theoretical and conceptual analysis.

5 The seven school were selected in consultation with the District Education Office with the aim of selecting average performing schools. Out of the seven schools, four schools were implementing innovative projects at the time of the study (child-friendly schools in Dhading District and the Critical Thinking Method at Sindhupalchowk), while the other three schools had no special pedagogical activities ongoing at the time of the study.

The research design used in this study is illustrated in Figure 1 below.

Figure 1: Research design



Findings

Present pedagogical practices reflect past practices, though the degree varies depending on the context and any reform initiatives that have been implemented. Therefore, existing pedagogical practices need to be analysed in connection with practices in the past. This section presents the main findings of the research under three headings: pedagogical practices in the past, current pedagogical practices, and pedagogical prospects.

Pedagogical practices in the past

As noted above, the Buddhist and Hindu systems of education continue to exist in Nepal, alongside the British system. These religious education systems delivered knowledge mainly through rote learning and repetition in chorus. 'The mode of transmission was oral – through constant recitation and repetition, backwards and forwards from teacher and pupils, texts were committed to memory' (Alexander, 2000, p. 89). According to the Nepal National Education Planning Commission Report (1956), students engaged in memorization and repetition of the content matter, rather than in activities that aimed to increase understanding and bring about intellectual transformation. The religious books, which were the main source of information, were to be savoured and illuminated rather than interrogated (Alexander, 2000). Accordingly, students devoted a great part of their lives to

their studies without understanding the meaning and the context of what they were reading about (College of Education, 1956). The NNEPC report described the set routine in a monastery as follows:

The day's routine for a student began with prayer at the break of day in the prayer hall ... The students squatted cross-legged in long criss-cross rows over carpets. The choir leader squatted on a dais and chanted hymns ... The singing of psalms was done in a deep bass (to imitate the voice of Buddha) by the choir leader, followed by the thousand voices of the students. There was occasional clapping to mark the pause in the stanzas and also to drive out evil. With the coming of day, the students attended open air classes, sitting on the ground, each class forming a group. ... While one class was receiving instructions, the rest formed circles and practiced debating. (College of Education, 1956, p. 15).

Sharma (2005) notes, however, that rote learning was not the only practice used by teachers. Other teaching-learning methods employed in religious schools included listening, speculation, explanation, question-answer and discussion.

Teachers held high status as a source of knowledge and had a fair measure of autonomy as to the selection of texts and the pacing of pedagogy with regard to individual needs and progress. As noted earlier, those students who had already memorized a given piece of text would be given the next part of the task (Altekar, 1956).

Following the adoption of democracy in 1950, education expanded rapidly. Recognizing the need for education reform, the NNEPC report made the following suggestions (College of Education, 1956):

- Teach children rather than cover textbooks (p. 92).
- Use a thematic approach (p. 94).
- Arrange both teaching periods and practice time (p. 96).
- Make children take an active part in the learning process (p. 101).
- Follow the activity or project method (p. 101).
- Engage in cooperative teacher-pupil planning (p. 101).
- Use an informal method of teaching that is well-adjusted to children (p. 105).
- Cater to the individual needs of the children (p. 104).

Later education commissions (MOE, 1961 and 1971) also made suggestions for improving classroom pedagogical approaches. These recommendations were not heeded, however. In 1992 the National Education Commission (NEC)

noted that: 'The teaching and learning situation in primary schools is rather depressing. ... Students are encouraged to learn by rote, and assessments are made on the same basis' (NEC, 1992, p. 24).

A coordinated and concerted effort to improve the quality of education at the primary level was initiated in 1984 with the Primary Education Project (PEP). The PEP was succeeded by the Basic and Primary Education Project 1992–1996 (BPEP-I), BPEP-II 1997–2002, Education for All 2004–2009 (EFA) and the School Sector Reform Programme (SSRP) (2009–2016). The reforms introduced through these projects brought about improvements in the curriculum, curricular materials, teacher preparation and physical infrastructure.

Reports have also asserted that, though slow, classroom teaching and learning practices improved as a result of the various projects. For example, the PEP, which was piloted in six districts, allowed for the greater use of role playing, demonstrations and group work. While both the PEP and non-PEP school teachers were observed to have used mainly direct teaching methods such as lectures, questions and demonstration, studies found that the PEP teachers prepared lesson plans more often than non-PEP teachers. Still, teachers of both groups were found to rely mainly on their textbooks for teaching purposes (CERID, 1989).

The achievements of students during the BPEP were not impressive. The BPEP-II Master Plan 1997–2002 offered two possibilities to explain the lack of improvement of students, noting that, 'either the new curriculum has not been appropriately delivered, or it has not been delivered to the required extent' (MOE, 1997, p. 281). The master plan also observed that the mechanism of curricular transaction in the classroom environment was one of the major issues. The document emphasized that learning on the part of children becomes meaningful if an integrated approach of delivery is adopted. It noted that child learning does not occur simply as an accumulation of discrete bits and pieces of information or course contents. Learning should be an assimilation of knowledge into the existing cognitive structure to form an integrated whole of new learning.

Focusing on improving the quality of education by improving classroom teaching-learning, the Concept Paper for Further Support on Basic and Primary Education in Nepal 2004–2009 pointed out a need to de-emphasize rote learning and to move away from treating the students as homogeneous units (MOES, 2002).

The core document of the EFA envisioned that by 2015 classrooms would provide a stimulating learning environment, ensuring that each student develops to their full potential (MOES, 2003). This recognized that children learn in different ways at different rates and achieve different levels of attainment. Furthermore, the emphasis was put on using assessments to identify each student's strengths and weaknesses, so as to cater to the needs of students as individuals to improve each student's learning. Thus, assessment was to be used for learning.

Further conceptual development has continued under the SSRP, which proposes to, 'promote independent learning by students being educated under diverse situations. ... Local curriculum, content and materials will be developed ... A child's mother tongue will be employed as the medium of instruction up to grade three ... Flexible instructional arrangements will be developed and employed...' (MOES, 2009, pp. 13, 81 and 83).

Current pedagogical practices

While the vision and intention in Nepal has been to achieve child-centred education, and all of the government projects and programmes have stated a commitment to 'quality primary education' (College of Education, 1956; MOE, 1971; MOE, 1997; MOES, 2003; MOE, 2009), the findings of studies of pedagogical practices in the Nepalese classrooms are not encouraging (CERID, 2002; National Center for Educational Development [NCED] 2010). There is a long way to go before 'child-centred education' becomes a reality in Nepalese classrooms.

Studies such as CERID (2002) and Room to Read (2014) found classroom delivery to be teacher-dominated with an emphasis on rote learning. The dominant approaches used by teachers include lecturing, paraphrasing, drills, reading and repeating from the textbook, and memorizing questions and answers. Single language, single session, same material (if used), same method (usually lecture, paraphrase) were the general practices in the classroom delivery. Researchers also noted that the classroom process, which is envisioned to be child-centred, was generally one of 'whole-class teaching', which left 'weaker' learners behind, and classes were teacher-dominated and textbook-based.

Studies by CERID (2002 and 2003) indicate that teachers' most common classroom teaching-learning practice was to use the textbook. Teachers rarely used the teacher's guide or other curricular materials, even when these were

available in the school or could easily be obtained. These studies analysed the curriculum and the teacher guides related to the concerned lessons and found that most of the teaching methods and materials suggested in the teacher guide are covered in the training manual, and if the teacher had followed the suggestions provided in the teacher guide, the lessons would have been delivered more effectively. Thus, the issue is not a lack of curriculum or teaching guides, but an inability of teachers to apply the skills they learned during training and/or a failure by teacher training institutes to train teachers to implement teacher guides effectively in the classroom.

A study by CERID (2002, p. 47) noted that normal teacher practices in classrooms were as follows:

- On entering the classroom, the teacher asks students for a copy of the textbook if he or she does not have one with him or her.
- The teacher asks the students where they were (page number or lesson number) or asks students to turn to a specific page number.
- The teacher asks one of the students to read the text or the teacher reads it, adding his or her own interpretations here and there, mainly in a paraphrasing manner.
- In the lower grades, the usual practice is for the students to repeat the text in chorus, while in the upper grades, the students are told to memorize the questions and answers.
- In English language classes, the 'translation method' is the most common practice.

This CERID study found a small number of teachers (12 per cent) who involved students actively. The classroom practices of the better performing teachers were as follows:

- Teachers used real objects to demonstrate concepts (e.g. pebbles for multiplication).
- Teachers explained and demonstrated first, then asked one of the students to demonstrate the same, and then got the whole class to practice it. The teacher also went around the class and provided individual feedback.
- The teacher used objects in the classroom and around the school to teach English words rather than just giving the meaning in Nepali.
- The teacher encouraged students to ask each other questions in English (CERID, 2002, p. 47).

A study by NCED (2010, pp. 83–85) found signs of improvement in classroom teaching-learning practices. The researchers observed that significant percentages of teachers were performing above average in their platform skills (82 per cent), selection of content (64.6 per cent), delivery of lessons (69.7 per cent), concluding lessons (64.3 per cent) and using transfer strategies (60.3 per cent). These positive findings indicate that Nepalese teachers are perhaps moving away from rote memorization and teacher-centred pedagogical approaches towards student-centred approaches. However, studies by others, such as Room to Read have not been so positive, with a study report noting that teachers used the lecture method, asked students to turn to a specific page of the lesson of the textbook and to ‘recite the given content either silently or loudly’ (Room to Read, 2014, p. 3).

For the present study, the researcher observed classes in seven schools of three districts to identify what the common pedagogical practices were. Altogether, 21 classes were observed, of which 12 classes were in four schools in which innovative approaches were being piloted, while the remaining nine classes were in three ‘regular’ schools (those in which innovative approaches were not being implemented). All of the schools covered in this study were public schools.

The classroom practices observed in the nine classes in ‘regular’ schools were as follows.

- In seven of these nine classes, nothing was done by the teachers to link the day’s lesson with previous lessons or with the experience of the students. There were no pre-lesson or anticipation activities to prepare students for the lesson. Two of the classes were started by the teachers asking and checking homework. Half of the class time was spent in checking homework, which took time out of the day’s lesson. Two of the classes began with a review of the previous lesson and then the teacher started the day’s lesson, but in one of these classes the new lesson lacked continuity with the previous day’s lesson. Thus, in only one class out of the nine did the teacher start the lesson by reviewing the previous lesson and explaining how it was related to the new lesson.
- In all nine classes reading was the main activity (conducted for the majority of the class time). Five of the classes were delivered by either the teacher or a student reading a paragraph from the book and the teacher then explaining the paragraph. Sometimes the teacher simply repeated what had been read aloud and sometimes the teacher explained the meaning or simplified the paragraph. In one class, students were asked to read from the book and then

ask the teacher if they encountered any difficulty. Reading was in chorus and some of students asked the teacher how to pronounce a difficult word they had encountered. In only one of the classes, the reading exercise was implemented in a participatory manner. The lesson was poetry, which was to be recited with rhyme. The teacher first demonstrated, then asked the whole class to repeat after her, then asked the whole class to repeat in a group without the teacher, then asked each bench to recite in turn, and finally asked students to recite individually by selecting them randomly. All the students had opportunity to participate and they seemed to enjoy the lesson.

- While reading aloud, the teachers occasionally stopped to ask the students questions. Most of the questions required 'yes' or 'no' answers or short responses. Questions were of a low level and verbatim from the textbook. The teachers expected standard answers. If students gave slightly different answers, those were rejected as being 'wrong' in most cases.
- In two of the classes, teachers could have brought in crosscutting issues or could have related the lesson to social or environmental issues. For example, in the lesson 'natural disasters', the teacher could have begun by asking students to share examples of disasters they had experienced or heard about. The lesson could have then built upon what the students had shared. Even a story or incident where someone has been victimized could have been used to inspire empathy or cooperation. The teacher delivered the lesson reading from a book and paraphrasing, with the occasional question and, thus, this important lesson was reduced to being content to be memorized for a test.
- In one of the classes, one student had forgotten to bring his book. When his turn came to read the next paragraph from the book, he asked his peer for the book. His peer was reluctant to share the book. Although the teacher scolded the other child for being selfish, the teacher did not take the opportunity to fully use the situation to teach the students the reason why life skills such as cooperation, sharing and togetherness are important.
- Communication was directed from the teacher to the students. Students rarely took the initiative to ask the teacher a question or to ask his or her peers. Genuine feedback and corrective measures were largely missing.
- During the reading and paraphrasing activity, classroom questioning mostly involved the teacher asking the class a question and the class answering in chorus. The teacher rarely waited for an answer, and rarely simplified the question, redirected or hinted. Thus, while questioning is a topic that is covered extensively in teacher training in Nepal, teachers rarely use questioning skills effectively in the classroom.

- Two of the classes observed were mathematics. In both of these classes the teachers provided a solved model on the board, explained the steps and rules, and then provided the students with a problem to solve. Then the teacher went around the class and checked the class work. After some time, the teacher provided another mathematics problem. At that time, however, about one quarter of the students were still working out the previous problem. When the teacher was asked later why he had not given attention to these students, his response was that they were the weak students and rarely completed their work, and he therefore felt it was not necessary to wait. This case indicated that although teacher training covers formative assessments, the continuous assessment system (CAS), and use of assessment to provide remedial support, teachers are not putting these into practice and are leaving weak students behind.
- In another mathematics class, the teacher started with a song about subtraction. When there was a question in the song, the students replied in unison. This activity was fun to the students. After the song, however, the teacher followed the model, steps, rules and drill format.
- In two of the classes, the teachers divided students into groups. One of the teachers formed the groups, gave each group a list of questions, and asked them to prepare answers. Instead of working together as a group, however, the students prepared answers to the questions individually. Later, the teacher asked each group to read out an answer to one of the questions. One of the students in each group got up and read out his or her answer. Thus, although the teacher described the activity as 'group work', it was not. The teacher explained after the class, that he had participated in a three-day teacher training the previous month, which had covered group formation and group work. He noted that the type of group formation that had been done in the training hall was not possible in his less spacious classroom. This indicated that the trainers had failed to reflect on the situations prevailing in classrooms and had failed to provide teachers with the skills to adapt what they learned into their classroom situations.

The findings from the nine 'regular' schools indicate that reading aloud, paraphrasing, lecturing and rote learning prevail in today's classrooms, much as in the past. Furthermore, few of the skills gained by teachers in their training are being transferred to the classroom.

Twelve lessons were observed in the four schools in which innovative projects were being implemented by United Mission to Nepal (in Dhading District)

and Goreto, Nepal (in Sindhupalchowk District). In most of the lessons the teachers were observed using methods they had been taught in the training. The key observations were as follows:

- One teacher asked all the 15 students in the class to come in the front of the room. The task was to share the name of a food with their peers and find out what food name their peers were thinking of. The activity was 'mix-freeze-pair' and was enjoyed by the students. After the class the teacher explained that this activity enabled students to learn from each other and also led to students developing positive social behaviour. The teacher reported that after using this activity in the previous year, the students had become more open to one another and they mixed more easily.
- In a science class the teacher began with a 'think-pair-share' activity. Although the activity was correctly implemented by the teacher, the question used for the activity was not appropriate because the question was about the content the class had yet to cover that day.
- In a mathematics class, the teacher asked the students to sing a song related to the course content. The teacher then showed the class picture cards and asked the students to count the number of animals in a picture. The teacher then showed the students how to match number cards with the animal picture cards so that the number cards matched the number of animals. After that, the students were divided into groups and the teacher gave the students a stack of number and picture cards for the group to match. The teacher moved around, checked the group's work, and helped students when they asked for assistance. This activity seemed to promote collaborative learning. When a student in a group made a mistake, other students helped him or her correct the mistake. Apart from learning the content, the students also learnt important life skills such as cooperative behaviour, helping each other, and teamwork.
- In another class, a 'jigsaw' activity was used to involve everyone. The students also participated in discussions and some also made presentations. For the 'jigsaw' activity, the class was divided into three groups to work on three different sections of a theme. Each of the groups discussed the topic, then made a presentation to the rest of the class. In one group, the discussion and presentation was led by one student only. When the group was asked why the others were not participating, the students explained that the assignment was prepared by one student only, not divided between the members of the group. The teacher suggested that the group members should divide

the task among themselves and should all participate in the discussion and presentation the next time. This activity promoted collaborative learning, teamwork, interpersonal communication and confidence.

- In two of the observed classrooms, the teachers began the classes with some physical activities. These were enjoyed by the students. After this, however, the teacher initiated drill activities. In one class, this involved memorization of the multiplication table, while in the other class the drill was word meanings (English to Nepali). When asked, later, to explain why they used drills, these teachers were of the opinion that such content could only be memorized using drills.
- In both districts, the teachers provided students with immediate and positive feedback, mostly asking questions to the group but expecting answers from individuals. There were, however, chorus answers from time to time. In these cases, the teachers reminded the students to take turns to answer. This indicates that the teachers were trying to transfer to their classrooms the questioning skills they had gained during their training.

The examples from the four schools participating in the innovative projects indicate that teaching-learning practices are improving as a result of the projects. It was clear that the innovative methods used by these teachers were not only useful in delivering the required content but were helpful in developing some non-cognitive skills as well. It was noteworthy, however, that teachers were not aware that they were instilling students with these non-cognitive skills, and these skills were not assessed or recorded. Nevertheless, these cases indicate that when particular efforts are made to provide teachers with in-service training in innovative teaching-learning practices, the outcomes are positive. Further analysis of the innovative approaches is essential, however, to understand their implications and the feasibility of mainstreaming them.

Many innovative initiatives have been undertaken over the past 15 years to improve pedagogy in Nepalese schools. These include the Child Friendly School initiative of Save the Children (2006), the Innovative Child-Centred Teaching-Learning Process of UNICEF (Integrated Forum for Community Development, 2004), the Quality Education Resource Package of World Education (2007), the Quality with Equity Initiative – Community Owned Primary Education of the United Nations Development Programme (2002), and various efforts by the NCED of the Ministry of Education.

The pedagogical approaches emphasized in these innovative programmes and projects included establishing a child friendly environment; encouraging positive learning experiences; working cooperatively in groups; supporting interactive learning; fostering creativity; participatory learning; 'play way' learning; joyful learning; individualized teaching-learning; project work; dancing, drama and storytelling for learning (Arts in Education); continuous assessment; remedial instruction; and fostering critical thinking skills. The evaluations of these programmes and projects indicated that outcomes had been positive and that classroom practices had improved. Such practices included lesson structuring, timed activities, provision of materials and community involvement, as illustrated in the examples below.

- In a three-year pilot project (CERID, 1989, pp. 53–54), the percentage of school teachers in the targeted schools using student-centred approaches rose from 34.8 per cent in the base year to 87.5 per cent in the third year, whereas there was no improvement in the control school. An evaluation of the project found that at the beginning of the project the most common technique of evaluation used by teachers was oral questioning. By the end of project, the teachers in the targeted schools employed other techniques as well, such as administering written tests, assigning homework, checking exercise books, evaluating student participation in classroom activities, discussing with students and fellow teachers, and evaluating student performance in small groups. The evaluation report noted that 'in general, the achievement levels of project school students present an encouraging picture, indicating the effectiveness of the inputs and instructional strategies adopted by the project. The dropout rate of the project schools also shows a declining pattern' (CERID, 1989, p. 138).
- A study by Kafle and Bhattarai (2004) found that the supplementary teacher-training provided through the Community Owned Primary Education Programme was able to bring about desired changes in the classroom performance of the participating teachers. By the end of the project, the majority of the teachers were 'strong' in their questioning techniques and were confident in presentation and in the use of instructional materials. These teachers were found to be 'satisfactory' in defining new or unfamiliar terms for the students, giving examples, pointing out real world applications of knowledge, implementing a continuous assessment system, facilitating the learning of students from disadvantaged groups, and maintaining eye contact (p. 32).

- An assessment of the Integrated Forum for Community Development project (IFCD, 2004, p. 39) found that out of 14 classes observed in Nawalparasi District, teachers used the 'enrichment' method in nine classes; the 'progress report maintenance' and 'news sharing' methods in 10 classes; the 'teacher message', 'small-group reading' and 'evaluation' methods in 11; 'group activities' in 12; and the 'storytelling' and introduction and instruction method in 13 classes. Out of 19 classes observed in Sunsari District, teachers used the 'news sharing' and 'small-group reading' methods in 15 classes; the 'storytelling' and 'teacher message' methods in 18; and the 'introduction and instruction', 'group activities', 'enrichment', 'revision and evaluation', and 'progress report maintenance' methods in 19 classes. The report noted that the teachers had also made various other changes in their teaching activities to improve the quality of education, including preparing daily lesson plans, developing creative activities, disseminating messages and facilitating learning (p. 76).
- Koirala, Dhakal and Dhakal (2006), in their evaluation of a Save the Children Norway project, found that teachers were using 'play way', 'discussion', 'demonstration' and 'storytelling' methods of teaching, and noted that evaluating students' learning on a continuous basis had enabled teachers to form a closer bond with their students and create a congenial classroom environment. The evaluation also found that meetings between grade and head teachers had been helpful in sharing ideas, issues, experiences and best practices, as well as in improving teaching methods and intra-school relations (p. 13).

It has been observed that when an innovative programme or project is expanded or mainstreamed, the impact is often much lower. What worked and brought about desired improvements during the project or pilot phase often does not achieve the expected results when it is implemented widely by the government. For example, the 'continuous assessment' system, the 'child-centred education' approach, and 'life-skills education' have not had beneficial outcomes within the government school system despite successes demonstrated by non-governmental organizations working with small groups of schools (CERID, 2002 and 2003). This may be a result of various shortcomings in the government system. One such issue is the lack of accountability in government schools, with schools failing to delineate teachers' responsibilities for improving teaching and learning in the classroom. Another shortcoming is weak monitoring and supervision at the classroom level, along with a lack of on-the-spot technical backstopping for teachers and weak skill-based teacher training, which lack demonstration, practice and feedback and instead focus on teaching content and disseminating information. A further issue is

the absence of an effective plan for mainstreaming an initiative beyond the piloting phase.

It is also worth noting that one project or pilot might not provide lessons for each and every aspect of implementing a learner-centred approach. Finding the best approach for a particular district or school requires recording what the situation is and what changes are needed, analyzing the information and planning the next step. Such organizational learning and growing seems to be weak in Nepal, however.

Whatever the outcome of previous endeavours towards improving pedagogical practices at the classroom level, the study found that such endeavours have been strongly emphasized in the Nepalese education sector.

The government has institutions across all levels, including district education offices, the Curriculum Development Centre, the National Centre for Educational Development, Regional Education Directorates, and the Department of Education and Resource Centre (Nepal Law Commission, 2010). The newly-added Education Review Office in the MOE is responsible for conducting external audits of agencies based on set norms and standards by using appropriate measures (Education Review Office, 2010). In addition to this, universities, donors and non-governmental organizations are also seeking to improve pedagogical practices. All these endeavours, if channelled properly, should be able to bring about significant improvements.

Forms of education that are essential in the modern-day world include values education, life skills and critical thinking, but these are not adequately incorporated into the education system in Nepal. Even though some of these aspects are covered in the curriculum, in textbooks and in teacher training, in most cases the required skills are not delivered in the classroom as intended. These skills are behavioural and therefore must be inculcated through interaction and activities, not content learning and memorization.

Much remains to be done to improve pedagogical practices. This will take time. In the meantime, however, efforts must continue. Education needs are growing, and the world is changing. High population growth, political turmoil, poverty, uncontrolled development and low literacy are some of the challenges facing Nepal. In addition, the wounds of the 12-year armed insurgency have not yet healed. Both cognitive and non-cognitive skills are essential if the next generation is to address these challenges and overcome them.

Much is being done already. For example, the Curriculum Development Center has integrated life skills into the primary school health education curriculum (CDC, 2005). Similarly, teacher training has been reformed to incorporate methods of delivering life-skills education in the classroom, including fostering problem identification skills; facilitating discussion, drawing conclusions and making presentations; encouraging appropriate feedback; developing relevant instructional materials and using them appropriately; and facilitating individual and group activities, projects and exercises (NCED, 2005 and 2007). The topics of peace, human rights, human values, managing diversity, rights based education, critical thinking, among others, are now incorporated in the teacher training curriculum (NCED, 2011).

In spite of these reforms, however, teacher training remains more inclined to pass on skills in information sharing, and does not sufficiently develop teachers' ability to foster life skills in the classroom. Another drawback is the focus on instilling theoretical knowledge, rather than on enabling teachers to develop pedagogical skills. For example, the peace education curriculum for teachers includes the topics: elements of peace, types of peace, importance of peace, ways to establish peace, etc., which means that training is focused on the content rather than on the skills for delivery and for making the classroom environment conducive to learning.

Conclusions and recommendations

The focus of Nepalese schools is on achieving quality education for all. One of the most important prerequisites for good quality education is effective teaching-learning practices, which are envisioned to be, among other things, child-centred interactive and inclusive. The government and various other stakeholders have implemented numerous programmes and projects with the aim of improving teaching-learning practices in Nepalese schools. The main challenge in this endeavour has been to support teachers to shift away from rote-memorization focused lecturing and content repetition towards pedagogy that makes learning joyful, constructive and reason-based.

Progress has been seen in schools where innovative projects have been implemented, but when attempts are made to mainstream such projects, good practices are not transferred. Therefore there is still much to be done. For innovative methods to be transferable, planning and careful implementation are needed.

Improvement of pedagogical practices should be the focal activity and connecting element among the institutions working to improve the quality of education in Nepal. To improve pedagogical practices, it is recommended that the stakeholders in the education sector:

Support effective initiatives. Various agencies, people and systems are already bringing about positive changes in student learning. These need to be recognized and supported. The motto should be: start small, experiment, and then expand successful initiatives. Implementation should be step-wise, coordinated and linked, rather than a one-time event.

Prioritize teacher preparation. To improve pedagogical practices in Nepalese schools, it is vital to prioritize teacher education. Steps should be taken to deliver teacher training effectively, using no-cost materials or low-cost materials that can be purchased with school funds. Pre-service and in-service teacher preparation programmes need to clearly explain the underlying philosophies and concepts relating to student-centred pedagogy. Teacher preparation programmes must particularly focus on modelling the desired pedagogical practices and must allow for extensive practice of the methods by the trainees, followed by debriefing and discussion.

Rethink the curriculum. Revise the curriculum to reduce the information load. Instead of continuing to promote content-acquisition, the curriculum should emphasize the skills required to seek, analyse and use information from various sources. Classroom time should be devoted to learning these useful skills, rather than to learning facts. In addition, non-cognitive skills need to be integrated across the curriculum and in all subjects.

Revise assessment practices. Improvement in the curriculum and pedagogy should be accompanied by improvements in assessment practices. A continuous assessment system, portfolios, observation, self-assessment, peer-assessment, and other appropriate practices should be encouraged.

Keep up-to-date. It is important for curriculum developers and teacher educators to keep themselves up-to-date with the pedagogical research and innovations, and to try out best practices.

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Pedagogical Approaches in the Republic of Korea

Kyungsuk Chang

Introduction

Future societies are likely to be characterized by lower birth rates, aging populations, transformation in the positions of women, increasing reliance on information and communication technology (ICT), knowledge-based economies, ongoing globalization and issues relating to diversity and equity (Organisation for Economic Co-Operation and Development [OECD], 2001). Such changes in society are likely to transform our lives in the future. To what extent can the existing educational system meet the new needs arising from the expected changes?

In the Republic of Korea, research was conducted to identify what skills will be required by society in future and to seek approaches that will fulfil the requirements. This research was conducted in recognition of the fact that changes in society and the transition to a knowledge-based society pose new challenges, and opportunities, for Korean education. Twenty-first century society requires not just intelligence but also talented people with well-rounded characters – sociable, sensitive and moral citizens (Ministry of Education, 2013). Efforts are being made to cultivate global talents with the creativity and character required in the future (Lee, 2013; Ministry of Education, 2013).

The studies into future needs suggested that a gap exists between the current outputs of the education system and society's education needs, but that this could be bridged by a multipronged approach that involves making changes to curricula, teacher supply and training, infrastructure and technology (Lee et al., 2009; Yun et al., 2007). The curriculum reform of 2009 has been at the centre of these multipronged efforts. As of 2015, a revised curriculum is being implemented in schools across the country.

The present study, through increasing understanding of pedagogical approaches in the Republic of Korea in the context of the 2009 curriculum

reform, aims to contribute to future reforms in education policies and practices, to ensure future needs are met.

Background

The Republic of Korea occupies the southern portion of the Korean Peninsula, which is roughly 1,030 kilometres (km) long and is 175 km wide at its narrowest point. It is known as a country with almost no natural resources of monetary value, and its economy is driven primarily by manufacturing and exports. In 2013, the nation's GDP was 1.1975 trillion United States dollars (International Monetary Fund, 2014). The Republic of Korea has a population of 49.3 million (International Organization for Migration, 2013).

Korea has a 5,000-year-old history. The attitudes and humanitarianism of classical scholars are highly valued and are deeply embedded in society (Ministry of Education, 2014). The Republic of Korea was established in 1948, but the subsequent 'Korean War' left the country in ruins. The nation overcame the despair, however, and rapidly grew, achieving the 'Han River Miracle' in the 1970s (Ministry of Education, 2014). In the 1980s, the economy continued to grow rapidly, and the Republic of Korea was one of the four 'Asian Dragons', with the nation developing into a prominent player in the global economy (Ministry of Education, 2014).

Education in the Republic of Korea

Koreans believe that education has contributed significantly to the country's rapid and dramatic national development. The national passion for, and investment in education is considered a driving force for the economy. The government guaranteed the right to quality education for all through steady investment in education (Ministry of Education, 2014). Effective education policies resulted in the provision of the human resources and technology necessary for economic growth.

A historical overview of Korean education over the past 60 years reveals that the expansion of educational opportunities is one of its greatest achievements (Lee, et al., 2010). An egalitarian approach has been taken in expanding access to education. As a result of this expansion, the Korean literacy rate is currently 97.8 per cent, up from 22 per cent in 1945 (Lee et al., 2010). The college enrolment rate is 71 per cent, considerably higher than the average rate for OECD members, which is 56 per cent (Lee et al., 2010).

Korean students have recorded high scores in international academic achievement assessments in recent decades, steadily ranking among the top in the Programme for International Student Assessment (PISA) tests and achieving high scores in mathematics and science in the Trends in International Mathematics and Science Study (TIMSS) ranking (Song et al., 2013). Since the 1980s, Korea's education attainment level has been the highest of all OECD countries (OECD, 2009).

While Korean students have ranked among the highest performers in terms of their academic achievements, these students have ranked among the lowest in terms of interacting and cooperating with others (OECD, 2006). Furthermore, although Korean students' academic performance in PISA 2009 drew other countries' attention to the country's education system as a subject of analysis for policy-making (Song et al., 2013), studies have revealed that levels of interest in learning and efficacy are low in the Republic of Korea (Choe et al., 2013).

The gap between efficacy and achievement levels may be caused by competitiveness, with Korean students suffering from intense competition in the college entrance examination (Choe et al., 2013). Furthermore, the expansion of educational opportunities at lower levels of education has increased competition for limited places in higher education institutions, resulting in a feverish reliance on private tutoring, rising financial burdens on parents and increasing social inequity (Lee et al., 2010). There is growing concern that competitiveness in college entrance examinations and reliance on private tutoring are obstacles to learning some of the skills and competencies required for a knowledge-based society. The competitive education system has therefore been criticized for failing to meet society's future needs. Lee, Kim and Adams (2010) emphasize that the education system in the Republic of Korea needs to move beyond the current focus on quantitative expansion.

The 2009 curriculum reform

Recognizing the need to change the existing education system, which values academic achievements highly but neglects some of the skills and competencies increasingly required in the twenty-first century, in 2009 the Korean Ministry of Education developed a revised curriculum framework and notified schools that it would be implemented from 2013.

The curriculum reform drew much attention because of its emphasis on creativity and character education. The goal of the curriculum reform was to nurture students' creativity and their consideration for others (Ministry of Education, Science and Technology, 2009), and the revised curriculum was named the 'curriculum for creativity and personality education'. It aimed to meet students', schools', communities' and national needs; to develop students' autonomy and creativity; to customise individual schools' approaches, and to improve quality (Ministry of Education, Science and Technology, 2009).

The goals of the revised curriculum included the following (Park et al., 2010):

- To develop creative human resources that put consideration and sharing into practice.
- To organize the common curriculum (primary and middle schools) and the elective one (high school) to be customized to meet students' needs.
- To implement the curriculum in a flexible way through enhanced transition and cooperation between grades.
- To reorganize the number of subjects and credits required for grades.
- To integrate creative hands-on activities into the individualized school curriculum.
- To improve the assessment system so as to provide feedback for quality management.

The main changes identified in the revised curriculum included subject and grade clustering, flexibility of time allotment, reduction of the number of subjects per semester (referred to as 'intensive course taking'), introduction of creative hands-on activities, and reinforcement of career education (Park et al., 2010, p. 123). In the revised curriculum the subjects are clustered and the various grade levels are clustered. For example, Grades 1 and 2, Grades 3 and 4, and Grades 5 and 6 are introduced as three clustered grades (Park et al., 2010, p. 123). The 'intensive course taking' allows students to concentrate on the subjects they choose from a reduced number of subjects, instead of dividing their attention among all of the subjects presented in the curriculum (Park et al., 2010, p. 123).

One of the key elements of the revised curriculum, creative hands-on activities, is given emphasis as an effective way of increasing creativity and ensuring personality-focused education (Park et al., 2010). The new curriculum divides the creative hands-on activities into four areas: autonomy,

extracurricular, volunteer work and career activities (Ministry of Education, Science and Technology, 2009). Through a variety of activities in these four categories, students are expected to develop traits such as self-directedness, cooperation, communalism, consideration, responsibility and etiquette.

The revised curriculum also places much emphasis on 'character education', which should include the following: communalism, cooperation, sharing and consideration, and autonomy and individuality (Park et al. 2010). Each subject has its own virtues and humanistic capacities to be pursued, which are differentiated from others. Studies have been conducted on how the subjects can be learned and taught to best foster the desired virtues and capacities (Kim et al., 2013).

Several creativity-character experimental schools were selected to participate in the initial rollout of the new curriculum in 2013 (Kim et al., 2013). This experimental phase aimed to show what works, and what does not, for creativity and character education, and what should be done to bring about effective changes in schools.

Description of the study

In the context of the 2009 curriculum reform described above, this study explores the following questions:

- What are the prevailing pedagogical approaches used under the new curriculum?
- What are some of the existing innovative practices which are found to be effective for learning under the new curriculum?
- What are some of the issues and challenges in bringing about the changes that the new curriculum intends to make?

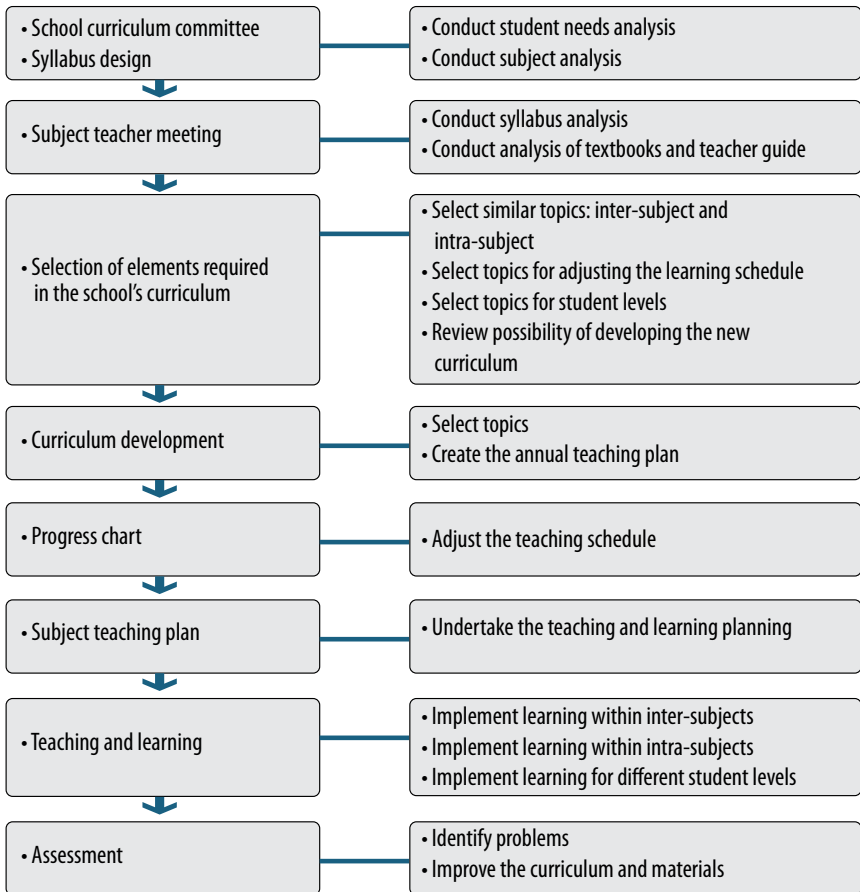
The researcher compiled data from secondary sources, including research and statistical reports by institutions such as universities, government-funded education research institutes, the Ministry of Education, 17 local offices of education, Statistics Korea, and international organizations. Data on prevailing pedagogical practices were gathered from school syllabi, teaching and learning materials, assessment materials and other resources. Data on students', teachers', administrators' and parents' views on the revised curriculum were gathered from studies and evaluations of the curriculum conducted by education institutes and individual researchers at universities.

Findings

Customized curricula

Under the new national curriculum, schools have autonomy in developing their own school curriculum to meet their particular needs. Figure 1 shows the procedure schools usually take to set up their own curriculum (Min et al., 2012, p. 238).

Figure 1: School curriculum development procedure



Source: Min et al., 2012, p. 238.

The content of the subjects are selected from the learning standards proposed by the national curriculum. The selected subject contents are graded and sequenced according to needs, and presented in the form of textbooks. Generally, most textbooks used for subject learning in the classroom are authorized by the Ministry of Education. Teachers can use supplementary materials to support teaching and learning, if needed.

Studies of curriculum development in the experimental schools (Cho et al., 2012; Kim et al., 2013; Yang et al., 2011) indicate that teachers commonly use subject grouping and intensive course completion as strategies to meet the diverse needs of the students. In subject grouping, various subjects are converged, and through intensive course completion students can concentrate on the subjects that interest them, and complete them in less time, instead of spending time on all the subjects presented in the curriculum. The studies note that teachers view the new, customized curricula in their schools as having made a contribution to enhancing students' confidence and self-efficacy, closely related to character building and creativity.

Differentiated instruction

Under the new curriculum, students are given differentiated instruction to meet their particular needs and to maximize the effect of teaching. Students are grouped into different levels for each subject on the basis of the test scores they received in the previous academic year. In some cases, the different levels have different teachers, while in other cases the same teacher is responsible for all levels of the subject, but uses different materials and methods for each level. For example, for a mathematics class in a middle school, individual students are placed in four levels (or classes), based on the results of a placement test. The four levels are: A, B, C and D. For Grade 1 of middle school, the highest student achievement level (Level A) requires 'high' performance, while Level A in Grades 2 and 3 includes both 'above-high' and 'high' performing students. The students placed in Level D study with other 'below-low' students in the regular classes, but also have an extra class after school. The following table illustrates this ranking (Min et al., 2012, p. 156).

Table 1: Organization of differentiated instruction in a mathematics Class

	A	B	C	D
Grade 1	High	Middle	Low, Below-low	Below-low
Grade 2	Above-high, High	Middle	Low, Below-low	Below-low
Grade 3	Above-high, High	Middle	Low, Below-low	Below-low

Source: Min et al., 2012, p. 156.

Analysis of differentiated instruction in several subjects reveals that there are three ways of organizing learning tasks and achievement goals (Korea Institute for Curriculum and Evaluation, 1998). In the first way of organizing tasks, the students complete different tasks according to their levels, but everybody aims to reach the same goal. For example, in a primary school practical arts (technology and home economics) class, the goal was to 'experience robots', and three activities were undertaken by the students. Activity 1 was to find everyday supplies with robot technology; Activity 2 was to classify daily supplies with robot technology according to different types of sensors; and Activity 3 was to make a robot with a simple sensor (Min et al., 2012). Students ranked as being 'high' and 'above-high' performers undertook Activity 3, while the other students undertook the other activities. In the second way of organizing tasks, the students not only complete different tasks but also aim for different goals, depending on their levels. In the third way of organizing tasks, the students complete the same task, but aim for different goals. Each student uses their own strategy to complete a set task and can achieve different goals depending on how far they are able to progress.

In some subjects, different teaching modes are applied depending on students' traits. For example, a teacher of a physical education class might choose to use a 'direct' approach with 'evasive' students, while using an 'inquiry learning' approach with 'participatory' students (Min et al., 2012, p. 267). For this approach to work, it is necessary for teachers to make correct and appropriate judgements about their students' traits, so that they can choose relevant teaching modes. Thus, within one subject teachers can employ different teaching modes according to the students' learning styles. Table 2 lists the various instruction modes appropriate for the student traits.

Table 2: Instruction modes

Modes	Student traits
Direct teaching	evasive, competitive, dependent
Individualized teaching	evasive, competitive, dependent
Peer learning	participatory, cooperative, independent/dependent
Cooperative learning	participatory, cooperative(intra team), competitive(inter team), independent
Sport education	participatory, cooperative(intra team), competitive(inter team), independent
Inquiry learning	participatory, cooperative, independent
Teaching games for understanding	evasive, competitive, dependent

Source: Min et al., 2012, p. 267.

Another example is a primary school class in which students can choose an activity to engage in for learning the topic. In this case, the teacher presents the possible activities (e.g. role play, painting, etc.), and the students choose one option. Figure 2 illustrates this method using the example of telling a story. The children all had the same goal: to express the behaviour of the characters in the story they read. The teacher used whole class, group and pair activities when the students were engaged in reading the story, and when talking about their experiences and about the characters of the story, but the children chose their own activities to explore the meaning of the story (Min et al., 2012, pp. 47–48).

Figure 2: Students' choice of learning activities

Objectives	Read the story and express what the characters look like and how they behave
Unit	1–2–9 unit 10–11 (pp. 242–249)
<ul style="list-style-type: none"> • Motivation <ul style="list-style-type: none"> - Students wear masks of cows and mice and have a dialogue • Main learning activities <ul style="list-style-type: none"> - Reading the story - Talking about their experiences of seeing cows and mice - Talking about the story - Imitating what the characters say in the story - Expressing the appearances and behaviours of the characters - Choosing one activity they like and completing the task 	

- role play
 - painting
 - making a mini-book
 - making dolls
 - making a movie poster
- Evaluation of the task
 - Wrap-up the class

Source: Min et al., 2010, pp. 47–48.

In the next example, from a middle school social studies class, the teacher used different modes of instruction depending on the content being learned (Min et al., 2012, pp. 93–94). The class was learning about the constitution and national assembly, and the teacher chose the most effective way of instruction to help the students learn about this particular content. In this case, the teacher used the internet to present the learning objectives and motivate the students before the main learning activities began. Worksheets were used to reinforce students’ learning. At the inquiry stage, the students used the internet to find answers to the questions regarding the national assembly. Using the cooperative learning mode, the students then worked in groups to share information they had found on the internet, and discussed the issues raised by the teacher and the group. After the group work, the students worked individually to design a poster to share their own opinions about the topic.

Table 3: Social Studies class about the constitution and national assembly

Stage	Mode	Teaching aids
Warm-up	Q & A with the whole class	Internet
Development	Inquiry learning	Worksheets, internet
	Cooperative learning	Worksheets
	Individualization: presentation	Poster-making materials
Wrap-up	Direct mode	Presentation software

Source: Min et al., 2010, pp. 93–94.

Evaluations of the new curriculum (Cho et al., 2012; Kim et al., 2013) note that parents have reported positive changes in students’ attitudes toward learning since the introduction of the differentiated instruction method.

Furthermore, parents have also seen positive changes in their children's behaviour and study habits at home since the introduction of the new curriculum, and parents have also seen greater participation by their children in school activities. These studies also note that teachers have welcomed the differentiated instruction approach as it provides a key to efficiently integrating students who are at different levels. A study to evaluate the effectiveness of the new curriculum (Kim, et al., 2013) found that teachers think the changes in teaching and learning approaches have brought about self-directed learning by students, leading to changes in behaviour.

Emerging practices under the 2009 curriculum

Engaging students in collaborative learning activities

Collaborative activities (group work) are characterized by student participation in discussion and cooperative learning. These activities enable students to develop skills such as compiling outputs from group work for self-assessment and presentation-skills. Group work also provides an opportunity for teachers to assess the participation of individual students in discussions, and to assess students' teamwork skills. Table 4 provides an example of how a two-hour Korean class for high school 2nd graders uses group work (Lee et al., 2011).

Table 4: Using group work in a Korean class

Time	Main activity
10:20	<ul style="list-style-type: none"> • Teacher supervises grouping and seating arrangements. • Teacher shares the learning objectives with the class: group discussion to linking students' views with what is presented in the textbook.
10:35	<ul style="list-style-type: none"> • Teacher explains the topic, the students' roles and the methods of group discussion. • The students engage in group discussion of a particular topic. • Teacher monitors the group work.
10:45	<ul style="list-style-type: none"> • Each group presents the outcome of their work. • Students take notes of what is presented. • Teacher makes comments between the presentations by the groups, if necessary.
10:59	<ul style="list-style-type: none"> • Teacher sums up the presentations of the group work. • The class is told the task for the next group activity, 'Brain Writing'. • Mini-break.
11:22	<ul style="list-style-type: none"> • Teacher introduces the new group activity (Brain Writing), explaining that it involves each group discussing and brainstorming for key words related to the given theme.

Time	Main activity
11:30	<ul style="list-style-type: none"> • Each group chooses a leader according to the rules given by the teacher. • Group leaders present the key words, and the groups brainstorm. • Each group is engaged in finding solutions to issues raised through the key words. • Each group chooses a member to present their solutions. • Each group presents their findings.
12:10	<ul style="list-style-type: none"> • Teacher summarizes the class findings. • The class chooses the best group and presenter. • The best group and presenter are given awards. • Closing

Source: Lee et al., 2011, pp. 101–102.

Integrating daily experiences into subject content

By integrating daily experiences into subject content, teachers, like the mathematics teacher in the following example, can be successful in enabling their students to discover the practical value of the subject, and to become motivated to learn and solve problems in cooperation with peers (Lee et al., 2011). In the example illustrated in Figure 3, the middle-school teacher used a problem-solving strategy to change the students' rigid way of thinking about mathematics into a flexible one, and also motivated the students to learn. The teacher also engaged his students in problem-solving in groups to improve the students' communication skills.

Figure 3: Integrating daily experiences into a mathematics class

A mathematics class for middle school 2nd graders

Learning goal: To be able to solve problems using 'linear inequality'.

Seating arrangement: Six groups of four students, sitting face to face.

Procedure:

- Students watched a 'Kung Fu Panda' animation with a dialogue the teacher dramatized with the inequality formula. (Students were motivated to watch and concentrated on the formula.)
- Each group was given a problem-solving task related to their everyday life or interest (e.g. to compare transportation fares; to get cheaper tickets to see a popular music band, etc.)
- The teacher encouraged the students to solve problems in cooperation with their peers in groups.

Source: Lee et al., 2011.

Engaging students in different ways of thinking

Teachers can use various methods to encourage students think in a new way about a given topic. For example, a teacher in Korea gave her class the topic: 'English as an official language' and asked them to consider what it meant. The teacher then began the 'six hat' activity (a type of debate activity or way of 'playing the devil's advocate'), for which the students were divided into six groups. Each group was given several hats of different colours (see explanation in Figure 4). The students were asked to put on their hats and to align their thinking with what the colours symbolized. Throughout the class, the teacher emphasized that there was no stupid question or stupid answer. After the activity, the teacher explained to the class that human beings have an inclination towards one way of thinking, and tend to ignore or exclude evidence that contradicts their way of thinking, and that this was called 'confirmation bias'. According to the teacher, the students paid a great deal of attention to the lesson and to the roles they were supposed to play while wearing the hats. Furthermore, all of the group members took an active part in the discussion, so it was not dominated by one or two students, and the teacher found the activity to be effective in developing flexibility, fluency, creativity and critical-thinking skills (Lee et al., 2011).

Figure 4: Engaging in different ways of thinking

A Korean class for middle school 3rd graders

Learning goals:

- To be able to discuss the topic related to the reading text.
- To be able to listen to others and understand their intentions.

Seating arrangement: Six groups of five, sitting face to face.

Procedure:

- The students read a text about the English language in the globalized world.
- The class was given the discussion topic, 'English as an official language'.
- The students put on their coloured hats, and played the role assigned to each colour, discussing the topic within their groups.

Colour	Role
White	Explain reasons for the social phenomenon related to the topic
Black	Specify negative sides
Green	Alternatives to solve the problem
Yellow	Specify positive sides
Blue	Chair (taking notes)

- Each group then shared what its members thought about the topic.
- Six students were then selected (one from each group) to present their arguments on the issue, 'Is it necessary to make English an official language?'

Stimulating creative thinking

The Science, Technology, Engineering, Art and Mathematics (STEAM) approach is an example of converged subject development that has been integrated into the new school curriculum to develop students' creative thinking through real-world problem-solving. For example, students studying the unit 'Our Body' in a science class in the 5th Grade of primary school used the STEAM approach to learn about the subject (see Table 5). Applying the STEAM approach enabled students to develop their creative thinking skills as well as self-efficacy, interest, motivation and attitudes toward science (Park and Shin, 2012).

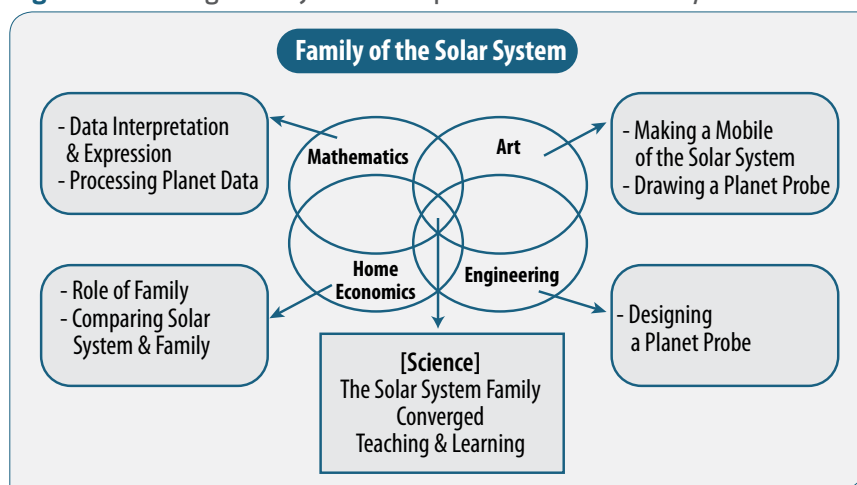
Table 5: Using the STEAM approach in a primary school class

Period	Theme	Learning activity	Subjects
1	Body	<ul style="list-style-type: none"> • How does our body move? • Types of bones, muscles and organs in our body. 	Science
		<ul style="list-style-type: none"> • Measuring each part of our body. 	Mathematics
		<ul style="list-style-type: none"> • Types of robots doing the work our body does. 	Technology/ Engineering
		<ul style="list-style-type: none"> • Making mini-me dolls. • Drawing our body with imagination. 	Art
		<ul style="list-style-type: none"> • Understanding bones and their roles. • Assembling bones. • Understanding how arms move and the changes in muscles. 	Science
2–3	Bones & Muscles	<ul style="list-style-type: none"> • Making models of bones and muscles. 	Technology/ Engineering
		<ul style="list-style-type: none"> • Measuring changes in the muscles of moving arms. 	Mathematics
		<ul style="list-style-type: none"> • Names of digestive organs, positions, shapes and roles. • Cutting-edge technology to investigate digestive organs. 	Science
4	Digestive organs	<ul style="list-style-type: none"> • Designing tools for investigating digestive organs with imagination. 	Engineering
		<ul style="list-style-type: none"> • Drawing the investigation of digestive organs using the designed tools. 	Technology
		<ul style="list-style-type: none"> • Drawing the investigation of digestive organs using the designed tools. 	Art
		<ul style="list-style-type: none"> • Drawing the investigation of digestive organs using the designed tools. 	Art

Source: Park and Shin, 2012, p. 40.

Likewise, the topic 'The Solar System' can be taught using a combination of subjects, including mathematics, art, home economics and engineering, thereby enabling students to learn the required knowledge while also gaining multiple transferable skills (Min et al., 2012, p. 221). Using the STEAM approach, teachers can devise, in cooperation with students, a variety of activities that can be undertaken to learn about a topic in a given period of time. Figure 5 illustrates some of the subjects that can be involved in teaching about 'The Solar System' and some activities that can be undertaken.

Figure 5: Converged Subject Development of 'The Solar System'



Source: Min et al., 2012, p. 221.

A recent study (Min et al., 2012) found that the effects of STEAM can be far-reaching, depending on the way the class proceeds. Studies of the impact of the new curriculum indicate that creative hands-on activities such as those used in the STEAM approach, by engaging students in a variety of ways, are helpful in developing character, because they promote transversal skills and competencies, such as respect, consideration, responsibility, participation and cooperation, sympathy and acceptance, problem solving and conflict resolution competencies, and justice (Cho et al., 2012; Kim et al., 2013; Yang et al., 2011).

Assessment tools

An analysis of the assessment tools used at the schools in which the new curriculum has been implemented reveals that in some schools that are providing differentiated instruction, the students still all take the same paper and pencil (written) tests for their mid-year and final-semester examinations. These tests are designed to measure students' knowledge using mainly multiple choice questions. The most common test type has five choices. There are also short answer questions, which require students to fill-in the blanks, and yes/no questions. The short answer questions, in most cases, only have one correct answer so that there is no controversy surrounding the answer. The analysis found that the summative tests are norm-referenced, so the students are ranked according to the results they get.

In other schools where differentiated instruction is provided, however, different types of test questions are presented, and the students can choose which one to answer, which allows the assessors to measure the extent to which each student has achieved the learning goals. Figure 6 gives an example of this kind of differentiated test (Min et al., 2012, p. 158). In the figure, there are three types of questions. Each option requires a different level of problem-solving skill, and different scores are given according to the skill level (i.e. 3 points for the low level, 4 points for the intermediate level and 5 points for the advanced level).

Figure 6: Test options for a differentiated class

Choose and solve one question out of the three.

5-1. Simplify $2(x-3)-3(3x-5)$ [3 points]

5-2. Simplify $\frac{3x+2}{3} - \frac{x-5}{2}$ [4 points]

5-3. Simplify $-\frac{2x-2}{2} - 2(2x - \frac{2x-1}{3})$ [5 points]

Source: Min et al, 2010, p. 158.

Some schools are adopting process-oriented performance assessment approaches and are devising rubrics for assessment, which they share among teachers. Rubrics can be used to assess various types of learning activities such as voluntary participation, presentation, group work, homework and cooperative learning. Figure 7 shows a rubric an English teacher uses to assess student performance in summarizing a given story (using a graphic organizer) and writing up the main points of the story.

Figure 7: A Rubric for performance assessment in an English class

Goal \ Level	Above-high, high	Middle	Low, Below-low
To summarize the story	<ul style="list-style-type: none"> Completed 5 steps of the plot graphic organizer without errors. No grammatical errors were found. 	<ul style="list-style-type: none"> Completed more than 3 steps of the plot graphic organizer without errors. A few grammatical errors were found. 	<ul style="list-style-type: none"> Completed more than 2 steps of the plot graphic organizer with minor errors, or less than 2 steps without errors. Incomplete sentences or grammatical errors were often found.
To write the main idea.	<ul style="list-style-type: none"> Identified the correct main idea. No grammatical errors were found. 	<ul style="list-style-type: none"> Identified the correct or similar main idea. A few grammatical errors were found. 	<ul style="list-style-type: none"> Identified the wrong main idea. Incomplete sentences or grammatical errors were often found.
Total : 10 points			
Feedback			

Source: Kim et al., 2014, p. 219.

Other types of performance assessment methods that schools are using include observations, experiments, discussions, oral tests, interviews, performances, self-assessment, essays, report writing, and portfolios. The teacher chooses the most appropriate approach to assess the learning activities given.

In schools that use process-oriented performance assessment, teachers must agree on how the performance assessment is integrated with the paper and pencil test. It is commonly observed that more weight is given to paper and pencil tests with multiple choice questions than to performance assessments.

Multiple choice is used in the national-level tests such as the National Assessment of Educational Achievement (NAEA), which aims to measure levels of achievement with regard to the national curriculum, and the College Scholastic Ability Test (CSAT). The following is an example of a test question in the NAEA. The question aims to measure whether the test takers (high school

2nd grade students) understand the relationship between the individuals in the given dialogue. The test taker needs to choose the best answer among the five choices given.

Figure 8: An Example of Listening Test Items in NAEA

Listen to the dialogue and choose the relationship between two people.

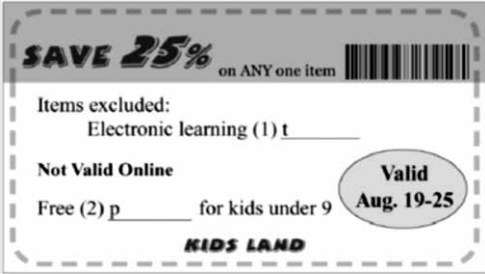
1. policeman – driver
2. bodyguard – actress
3. librarian – student
4. porter – visitor
5. guide – spectator

Source: NAEA website, www.kice.re.kr

Figure 9 illustrates an example of a NAEA test question that seeks to measure students' listening and writing skills.

Figure 9: A listening and writing test question in NAEA

Listen to the dialogue and fill in the blanks (1) and (2) with the expression starting with the letter given.



SAVE 25% on ANY one item

Items excluded:
Electronic learning (1) t _____

Not Valid Online

Free (2) p _____ for kids under 9

Valid
Aug. 19-25

KIDS LAND

Source: NAEA website, <http://www.kice.re.kr>

CSAT, the national college entrance examination, is considered a high-stakes test. The results of this test have a significant impact on the rest of the candidates' lives because the results affect what colleges the candidates can go to, and entering a prestigious college is highly valued in the Korean society. Figure 10 provides an example of a question from an English test, which aims to measure the students' listening, comprehension and response abilities. The student must complete the dialogue by choosing the most suitable expression out of five choices.

Figure 10: A listening test question in the CSAT

Listen to the dialogue and choose the best answer to what the man says.

Woman: _____

1. I hope you'll understand money doesn't matter.
2. It doesn't sound easy, but it must be rewarding.
3. More and more people enjoy hiking these days.
4. I'm glad I can work with you at the same company.
5. It's a good idea to have a picnic at the nearby park.

Source: CSAT website, www.kice.re.kr

The results of school mid-year and final examinations provide teachers with useful information when making decisions on their use of teaching methods, materials, tests, teaching aids, etc. Likewise, the information from the NAEA results is fed back into curriculum evaluation and revision. The results of school tests also provide information for a students' academic record, which affects whether or not the students can enter higher education institutions. CSAT results have a very powerful influence on whether or not students can enter university, and which university. Given that the main goal of many students is to get good results on the CSAT, schools tend to focus on preparing students for this. There has been a lot of controversy, however, about the negative effect CSAT has on teaching and learning in primary and secondary school education.

In situations where candidates applying to prestigious universities outnumber places the universities can accommodate, the most important factor in the principles of good assessment seems to be reliability, which refers to the consistency of test scores (Coombe, Folse, and Hubley, 2007). Students, teachers, head teachers, and parents are exposed to an arena of competition to get better scores in such high-stakes tests. This has a negative effect on changes in pedagogy, pushing students into rote learning and test-taking strategies. In such cases there seems to be no place for performance assessment designed to assess the development of students' non-cognitive skills.

Studies of the impact of the revised curriculum on assessment (Cho, et al., 2012; Kim, et al., 2013; Yang, et al., 2011) indicate that teachers perceive process-oriented performance assessment as having more positive effects on the acquisition of 'creativity and personality' skills promoted by the 2009

curriculum than the conventional paper-and-pencil tests. These studies also note that student participation in the assessment process is helpful in enhancing their learning. Their findings also indicate that criterion-referenced and development-oriented assessment is required to foster the desired skills. Thus, it is necessary to focus on the process rather than on results or end products. The studies suggest that process-oriented performance assessment is more effective in educational contexts where innovative instructional strategies such as project-based learning, cooperative learning and problem-solving are used to teach and learn the skills and competencies promoted by the 2009 curriculum. They recommend that assessment results should be fed back into motivating students.

Discussion and conclusions

The 2009 revision of the curriculum was a government-led effort to ensure that school curricula meet the diverse needs of individual schools and students. As explained above, under the new system each school develops its own curriculum on the basis of a needs analysis and the local context. Thus, schools now have the autonomy to develop curricula to meet their students' needs.

The new curriculum proposes differentiated instruction and materials to improve the effectiveness of teaching and learning, and to meet individual students' needs. This differentiated instruction approach allows students to choose classes appropriate to their interests and achievement levels. It also encourages students to take responsibility for their own learning, leading them to become self-directed learners. The new curriculum also promotes innovative teaching-learning activities teachers can use for character education and to encourage creative thinking.

The reforms are already having impacts in primary and secondary classrooms, with various changes being observed, including a shift from the teacher-centred approach to a student-centred one in which students integrate their own experiences into learning, play an active role in learning by seeking their own solutions to problems, and work in collaboration with others in problem solving.

The revised curriculum also emphasizes the importance of using appropriate educational assessment tools to measure the desired skills and competencies. This change reflects the understanding that curriculum and pedagogy should be linked to assessment. The role assessments play should not be undervalued,

given that paper and pencil tests prevail in national-level assessments such as the NAEA or CSAT, and given that most universities still heavily rely on the scores of such examinations. In order to bring about improvements in pedagogy, efforts must be made to change the college entrance examination system, as well as tests at the primary and secondary education levels.

The revised curriculum is causing teachers' roles to expand to include tasks such as curriculum development, materials development, facilitation, guidance, instructional decision-making and evaluating. Thus, a teacher's role is no longer restricted to being a knowledge transmitter.

The studies highlight some of the issues and challenges that schools face in bringing about the required changes. Regarding the process of developing a customized curriculum at the school level to meet students' needs, for example, the reports note that teachers expressed concerns over the additional workload involved in creating new syllabi, preparing materials for differentiated instruction and setting up new assessment criteria (Cho et al., 2012; Kim et al., 2013; Yang et al., 2011). Teachers also expressed that they experienced difficulty in working in collaboration with the community to vitalize creative hands-on activities due to lack of understanding by teachers about the local communities, no communication, or no information exchange with the communities (Cho et al., 2012; Kim et al., 2013).

It is clear that effective changes in pedagogy require teacher training, which should be provided through local education offices. Support must be given to teachers to assist them in making changes in pedagogical practices. For the effective implementation of the revised curriculum, it is also necessary to support new learning communities for teachers and to provide teachers with adequate teaching and learning resources, while also reducing teacher workloads and providing systemic support for collaboration with communities. One report suggests that coordinators should be appointed to promote collaboration between schools and communities, and a 'control tower' should be established to ensure sustainability (Cho et al., 2012).

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Teachers' Pedagogical Approaches in Kyrgyzstan: Changes and Challenges

Duishon Alievich Shamatov

Introduction

This chapter describes pedagogical approaches that are used by teachers in primary and secondary schools of Kyrgyzstan, and presents the results of a study, conducted in 2013, which was designed to increase understanding of pedagogical approaches and thereby contribute to future reforms in national education policies and educational practices for improved learning.

Background

Country context

Kyrgyzstan, officially the Kyrgyz Republic, is a small, landlocked and mountainous independent nation in Central Asia. Kyrgyzstan's territory is close to 200,000 square kilometres, bordering China to the east, Tajikistan to the south, Uzbekistan to the west and Kazakhstan to the north (Shamatov, 2005).

Kyrgyzstan was previously one of the 15 republics of the Union of Soviet Socialist Republics (USSR). Soviet rule was established between 1918 and 1922 (Landau and Kellner-Heinkele, 2001). During Soviet rule, and especially from the 1960s onwards, many Kyrgyz people became "Russified" (Ibraimov, 2001). This was reflected in people's dress, personal behaviour, language and modes of speech at the time (Akiner, 1998). Korth and Schultzer (2003) observed that many Kyrgyz, particularly those who lived in urban areas, became deeply immersed in Russian culture and barely spoke their mother tongue.

Major changes in the political life of the USSR began in the mid-1980s, when Mikhail Gorbachev introduced the policies of *perestroika* (restructuring) and *glasnost* (openness) to overcome social, political and economic stagnation in the country (Davies, 1989). 'Windows opened up to the pluralism of opinions, cultural and political associations and various forms of economic activities' (Niyozov, 2001, p. 97) in Kyrgyzstan, as in other parts of the USSR.

With *perestroika* and *glasnost*, people in Kyrgyzstan gained the rights of assembly and freedom of speech, the right to strike and the right to hold multi-candidate elections. Kyrgyz people thus began to raise questions regarding preserving their heritage and mother tongue. Consequently on 23 September 1989, Kyrgyz was given the status of state language (Ibraimov, 2001; Korth and Schulter, 2003; Landau and Kellner-Heinkele, 2001).

The dissolution of the USSR began in 1989 and Kyrgyzstan became fully independent on 26 December 1991. Gaining independence aroused the hopes and aspirations of the people of Kyrgyzstan. An array of reforms was introduced, including introducing a national currency (*som*), privatization, shifting to a pluralistic electoral system and a market economy, and securing membership in international organizations (Niyozov, 2001).

Despite growing hopes, the dissolution of the USSR brought about chaos, despair and uncertainty to the lives of thousands of people in Kyrgyzstan (Rashid, 2002). Dislocated civilians, unemployment, poverty, poor living conditions and various health problems plagued Kyrgyzstan from the early 1990s. Kyrgyzstan's economy was in a deep crisis: between 1990 and 1996 industrial production declined by 63.7 per cent; agricultural output declined by 35 per cent and capital investment by 56 per cent (Rashid, 2002). Additionally, during this period at least 60,000 people became unemployed (Shamatov, 2005, p. 98). High unemployment led to a dramatic increase in poverty. Urban poverty increased from 30.3 per cent in 1996 to 42.4 per cent in 1999, while rural poverty increased from 49.6 per cent to 60 per cent over that period (Mogilevskiy, 2004, p. 27). These severely unstable socio-economic conditions led to the migration abroad of many people (Ibraimov, 2001).

Education in Kyrgyzstan

The Soviets held that the pace of societal progress depended on the development of science and education, and Kyrgyzstan achieved considerable progress in education during the Soviet era (Holmes, Read and Voskresenskaya, 1995). With massive campaigns for basic education, the literacy rate in Kyrgyzstan jumped from 16.5 per cent in 1926 to 99.8 per cent in 1979 (Ibraimov, 2001, p. 33). Schools were built in even the most remote mountain villages (Tabyshaliev, 1979). From the outset, education was free.

A system of education, with both Kyrgyz and Russian-secondary schools, was introduced in Kyrgyzstan early in the Soviet era. It was intended that there would be no difference in the quality of education provided by the two types

of schools. Contrary to official doctrine, however, Soviet schooling was never monolithic or egalitarian (Niyozov, 2001; Sutherland, 1999). In spite of the policy of internationalism above nationalist and ethnic identities, in practice the Soviet education system promoted Russian identity over other national identities within the USSR. All students were exposed to the same centrally-designed curriculum, with minor local adaptations to accommodate each Soviet republic (De Young, 2002).

Despite high learning standards and an egalitarian approach, success in the Soviet Union was closely related to speaking and acting like Russians. The reality was that Russian speakers occupied higher positions in most Soviet institutions (Korth, 2004). This emphasis on Russian culture resulted in a neglect of, and even disdain for, the Kyrgyz language, identity and culture (Korth and Schulter, 2003). Thus, in the 1960s many parents began to send their children to Russian-secondary schools (Korth and Schulter, 2003).

Obvious differences also existed between urban and rural schools (Korth and Schulter, 2003; Shamatov, 2005). Rural areas of the USSR had considerable difficulties in terms of education (Kondakov, 1974). The rural schools lacked 'equipment ... visual aids, technical teaching devices, education literature, and fiction [literature texts not adapted to schools]' (Morozov and Ptitsyn, 1975, p. 65). Rural schools also experienced serious teacher shortages, because many young teachers failed to report to their job placements (Anisimov, 1991). Status differences also existed between schools that had an emphasis on English and those with an emphasis on mathematics (Niyozov, 2001).

In terms of pedagogical practices, instruction was characterised by a fairly rigid pattern of rote mastery of texts, oral recitation by students and teacher dominance of classroom activity. Kerr (1990, p. 25, cited in Niyozov, 2001, p. 18) noted that:

Although special schools with more flexible approaches served the children of the elite and the specially talented, the typical Soviet school was often a dreary place: a decrepit building with few textbooks, out-dated equipment, alienated students, bored teachers, and an authoritarian administration. Students graduated with little understanding of the concepts or principles they had studied, or with narrow, outdated occupational training that was often useless in practice.

The 1980s saw the beginning of many reforms in education in Kyrgyzstan. Since the adoption of Kyrgyz as the state language in 1989, the number of Kyrgyz schools has increased steadily (Korth, 2004). By 1998, the number of Kyrgyz schools had increased by 17.3 per cent, while the number of Russian schools had decreased by 39.3 per cent since 1989 (Shamatov, 2005, p.107).

In response to *perestroika* and *glasnost*, innovative teachers were able to push hard to have more say in teaching practices. Many progressive teachers expressed concern that Soviet schooling did not encourage their pupils' creative thinking, and that pupils and teachers alike were more worried about inspectors' judgments than about learning (Sutherland, 1992). Progressive educators advocated *netradissionnye* (non-traditional) teaching approaches (Anisimov, 1991), and the term 'pedagogy of cooperation' became widely endorsed by progressive educators (Lysenkova et al., 1986).

Following the dissolution of the Soviet Union, Kyrgyzstan saw a decline in both enrolment and graduation rates (DeYoung, 2004). Pre-school enrolment declined catastrophically. Out of 1,604 pre-school institutions existing in 1991, only 416 remained by 2000 (DeYoung, 2004, p. 2005). This decline was related to the increased costs of education, reduced state subsidies for transport and food, and lower family incomes (Eversman, 2000). While 83.6 per cent of the population of Kyrgyzstan completed secondary education in 1993, this decreased to 76.4 per cent in 1996, and then to 69 per cent in 1999 (DeYoung, 2004, p. 205). Unofficial reports suggest, however, that the actual percentages were far below these official figures (DeYoung and Santos, 2004). High drop-out rates were a by-product of economic collapse and declining support for the social sector, which had resulted in insufficient food, lack of adequate clothing and inability to afford learning materials. Declining prestige and perceived value of education also contributed to the high drop-out rates (Shamatov, 2005).

Kyrgyzstan inherited its teacher education system from the USSR. Kindergarten and primary school teachers are trained in colleges, while secondary teachers are trained in institutes or universities. Student teachers can enrol in college after completing a so-called 'incomplete secondary education' (Class 9), or can enrol in university after completing their secondary education (Class 11). Pre-service teacher education is normally four to five years of study (Kerr, 1991; Shamatov and Joldoshalieva, 2010). Fewer than half of the teacher education graduates ever enter the teaching profession, however, because of the low prestige of teaching profession. Teacher education is not seen as a good investment by donors. Therefore, pre-service teacher education has

been neglected as ‘donors considered teachers to be a “lost generation,” not worth investing in’ (Silova and Steiner-Khamsi, 2008. p. 32).

In-service training (once every five years) is a state requirement in Kyrgyzstan (Shamatov and Joldoshalieva, 2010) and is conducted by the Kyrgyz Academy of Education and teacher training institutes (TTI), which operate at the central level and to some extent at the province level. TTIs provide compulsory 72-hour training modules, and teachers need to pass these courses. The national policy on teacher education in the Education Strategy 2012–2020, introduced in 2012, however, described the pre-service training for secondary school teachers as being inadequate.

The instructors of teacher education institutes use both conventional and interactive teaching methods, the latter having been learned through participating in various international projects. Many international development agencies have assisted local education authorities to provide in-service training which introduces elements of student-centred and interactive teaching methods. ‘Modern’ teaching methods include more active learning and student-centred forms of pedagogy that are designed to foster inquiry, application, initiative and teamwork, and that encourage students to play a more active role in improving their own personal and family situations, as well as their larger environment (Silova and Steiner-Khamsi, 2008).

In 2010, there were 2,134 public schools in Kyrgyzstan, out of which 1,379 were Kyrgyz-secondary schools, 162 were Russian-secondary schools, 137 were Uzbek-secondary schools, seven were Tajik-secondary schools and 449 were schools with two or more languages of instruction (Shamatov, 2013, p.135). Public schools in Kyrgyzstan are co-educational. Almost 83 per cent of schools are located in rural areas, along with 70 per cent of Kyrgyzstan’s population (Shamatov, 2013, p. 136–37).

Today, in Kyrgyzstan private schools have emerged. Private schools are mostly located in urban areas; and are only populated by the children of those wealthy enough to afford to pay school fees (Shamatov, 2012). While many private schools have adopted modern teaching approaches, most public schools have not. The large majority of rural, semi-rural and mountain schools, in particular, still emphasize facts and memorization. A large gap in the quality of education has therefore developed between urban and rural schools. The results of the Program for International Student Assessment (PISA) 2006 tests and PISA 2009 tests confirmed this gap. The PISA test assesses higher-order thinking and the application of knowledge in real life, as well as literacy skills,

and results of the test showed that students at private and elite urban schools of Kyrgyzstan have significantly better skills than their rural counterparts. Unfortunately, the private-public and urban-rural gaps have continued to increase in recent years, with some urban schools becoming stronger, while the majority of rural and mountain schools deteriorate.

Over the past two decades the government of Kyrgyzstan has worked to improve the quality of education and to align it with international standards. In 1996 the Ministry of Education and Science and Kyrgyz Academy of Education developed education standards, which were revised in 2004. Other reform efforts have included the development, in 2002, of A Concept of Education in Kyrgyzstan; the release in 2010 of a new national curriculum framework, developed with the assistance of the Soros Foundation (National Curriculum Framework, 2010); and, in 2012, the launch of the Education Development Strategy 2012–2020. Between 2005 and 2012 the Asian Development Bank implemented the Second Education Project (ADB SEP), which aimed to develop subject-based curricula for primary grades 1 to 4. Subject curricula for grades 5 to 9 are still being developed.

The curriculum reform initiatives have aimed to shift from content-based to competency-based curricula. Competency is defined as the ability to do something successfully, such as apply knowledge, skills and abilities efficiently. Competency-based curricula aim for children to be able to use their school knowledge in real-life situations (National Curriculum Framework, 2010), by developing student competencies through innovative teaching methods (ADB SEP Specialist, Interview, 3 April 2010). The question is, whether these efforts to reform education have made any impact on teaching practices in schools.

Description of the study

Research design and methods

As noted above, reforms in Kyrgyzstan are aiming to move from conventional pedagogical approaches to alternative approaches, with particular emphasis on developing students' competencies (National Curriculum Framework, 2010). This study examined teaching practices and classroom dynamics in primary and secondary education, with a view to identifying whether the reforms have had an effect.

The main instruments employed in this study were interviews and document analysis (Merriam, 1988; Miles and Huberman, 1984; Bell, 2005).

The researcher interviewed 10 experts, who were selected using the following strategy. First, the researcher prepared a list of education experts in organizations and institutions in Kyrgyzstan. Second, the researcher approached these experts and asked them to participate in semi-structured interviews. The respondents were informed of the purpose and nature of the study (Cohen and Manion, 1997; Clandinin and Connelly, 2000; Glesne, 1999). Those who agreed to participate were then interviewed. Respondents included representatives of the Kyrgyz Academy of Education (KAE), representatives of international donor agencies, local education experts working in international development organizations and representatives of regional teacher training institutes and district education boards.

The types of documents reviewed and analysed in the study included reports, conference presentations, media articles, teacher training materials, curricula, teachers' guides, MOES and government documents such as the National Curriculum Framework (2010) and the Education Development Strategy 2012–2020, and Kyrgyz Academy of Education documents on national teacher policies. These documents were in English, Kyrgyz and Russian.

The study was based on the findings of a previous study, conducted in 2010, which was a baseline study for the Quality Learning Project implemented by the United States Agency for International Development (USAID). The baseline study was conducted to measure the performance of teachers across Kyrgyzstan. As part of the study, individual interviews were conducted with a sample of 137 teachers of grades 4 and 7 from 25 schools in three districts of Kyrgyzstan (Shamatov, 2010). Structured interviews measured teachers' understandings of concepts and examined their use of techniques and methods for instructional quality. In addition, questionnaires were completed by 158 teachers of the same 25 schools.

The current study did not include lesson observations, due to time limitations. The lesson observations undertaken during the preparation of the researcher's doctoral thesis study (Shamatov, 2005) were used in the current study. The thesis examined the professional socialization of beginner teachers in Kyrgyzstan over the period between 2001 and 2005, and the data was collected in 2001 and 2002 in southern Kyrgyzstan. Using a qualitative

design, the researcher conducted an in-depth study of two beginner teachers' professional socializations and, aside from class observations, conducted semi-structured interviews to collect data.

Findings

Although Kyrgyzstan has been politically independent from the Soviet Union for more than 20 years, education in Kyrgyzstan has not changed significantly over that period. Today, as in the Soviet era, a teacher in a conventional classroom is considered to be an expert and a provider of knowledge. This system tends to promote 'reproductive knowledge', i.e. knowledge that should be memorized for further reproduction, rather than 'productive knowledge' that might be used creatively (interview with the vice-rector of Kyrgyz National University, 12 February 2014). As in the past, today most teaching is reportedly poor and not aligned with modern pedagogical theories and practices. A specialist from the KAE (interview, 25 June 2009) observed that,

More than 70 per cent of teachers in Kyrgyzstan are doing their job routinely or with inertia. They just come to work, pretend to be teaching and then leave. Teachers only cover the daily plans developed by the Ministry of Education. Only about 5 per cent of teachers update their knowledge. Students do not like the way their teachers teach because what they teach often has no relevance to students' daily lives.

The findings of the study indicate that a small proportion of schools seem to be promoting student-centred teaching approaches. These innovative schools are mostly located in urban settings (Shamatov, 2014) but, according to Asylbek Joodonbekov, 'there are some teachers, both at urban and rural schools, who continue working innovatively and conduct very innovative lessons. I can give the example of Gapyr Madaminov, who works in a remote district of Leylek. He is an innovative teacher' (interview, 25 August 2013).

The responses from the individual and focus group interviews likewise demonstrate that active-learning methods are being used in some schools. According to an educator from the Kyrgyz Academy of Education, some secondary school teachers demonstrate a high level of teaching skills, and their classes are characterized by a high level of student activity and involvement, rhythm and intensity of work, lively and cheerful surroundings, and active interaction between teachers and students (interview, 12 February 2014).

A teacher from a rural school in Talas Province noted that the active-learning method he is using is 'a method of teaching where the teacher and students engage in discussion interactively. Students become more active, and tend to express their views eagerly' (interview, 17 December 2012). Likewise, a primary school teacher from a school in Jalal-Abad Province commented that the method she uses 'helps students work independently. They compare their views [and] work more in the team'. During presentations the teacher discovers many examples of creative thinking, especially when they use drawings. 'It's fun' (interview, 4 March 2014). A teacher from a school in Talas approaches the active-learning method carefully, however, stating that he does not always use this technique because it 'does not fit in a lesson phase when you explain a new topic to students. They have to listen and take notes first. Absorbing the new knowledge individually gives more depth to class discussions later' (interview, 17 December 2012). Many of the teachers who were interviewed mentioned that they had improved their teaching approaches by attending workshops organized by the Soros Foundation in Kyrgyzstan.⁶

While some teachers have adopted modern teaching approaches, the majority of primary and secondary teachers use predominantly conventional methods. According to Asylbek Joodonbekov (specialist at the KAE), 'Most teachers are mainly engaged in giving instructions, lecturing, explaining, and having their students memorize and retell' (interview, 25 August 2013). Thus, teaching in most schools is still teacher-centred. School materials are outdated and new ones are not well developed. Many teachers do not use active learning pedagogy due to the overload of teaching hours and large class sizes, and because they are poorly trained and they are not encouraged by the school administration and higher levels in the system. Thus, basic education teaching practices need to be improved (Asylbek Joodonbekov, interview, 25 August 2013).

In addition, some teachers do not seem to use assessment strategies that are consistent with interactive and active teaching methods. Assessment is

6 The Soros Foundation is a network of foundations, programmes, and institutions established and supported by philanthropist George Soros to foster the development of open societies around the world. See www.soros.kg/eng/about/osi.html and www.soros.kg/index_e.html

done normatively. That is, if a particular student gets a good mark,⁷ then it is in reference to other students in her class, rather than against pre-determined criteria for learning. Thus, the teachers use norm-referenced assessment instead of criterion-based assessment (Airasian, 1994). Since teachers do not have the capacity to develop assessment criteria, they do not have any option other than to conduct their sessions without pre-developed assessment criteria. There are cases, however, when teachers develop and use assessment criteria on the spot, based on their judgement of what learning should be, but the criteria are not communicated to students. The following example illustrates this. In 2007, a teacher of a primary-level English class in a private school gave the students pair-work drills in which one student asked “When is your mother’s birthday?” and the other student answered with the date and then asked the same question. One student, when asked the question, said in perfect English, “I don’t know. I can’t remember”. When it came to giving a grade, the teacher gave this student a low mark. When the inspector asked why, the teacher said, “Well, every student should know their mother’s birthday”. This episode illustrates that teachers are not using valid criteria for assessing learning outcomes. Since students are not informed of the criteria, students can only guess what their teachers are expecting of them.

The Quality Learning Project (QLP) of USAID (2008-2012) attempted to improve pre-service and in-service teacher training systems and curricula to enable teachers to gain the skills required to ensure students learn higher-order thinking skills such as application, synthesis, problem solving and critical thinking. This project incorporated learner-centred pedagogy and the use of formative assessment techniques. Working with the Kyrgyz Academy of Education, the QLP developed education standards for primary grades and selected secondary subjects. The QLP training aimed at changing the Soviet-style practice of rote learning and focused on interactive or learner-centred methods, by developing teachers’ understandings of different levels of thinking and by promoting higher-order thinking. The training showed teachers how to ask students open-ended and conceptual questions, how to encourage discussions, how to ask students for their views and opinions and how to encourage students to ask each other questions. Teachers were

7 Another Soviet legacy is the marking system. Using this system, students are given a 1 to 5 mark (5 being the highest or best) based on their performance compared to other students. In some schools, if students are doing badly the parents might be hauled into the school in a public meeting and shamed. To prevent this, the “1” mark is not given at all these days, and “2” is also given rarely, especially not in high-stakes final year exams.

also trained in how to use pair and group work in their classes. The QLP also introduced alternative, more continuous, forms of formative classroom assessment (Shamatov, 2010).

For the study of the QLP, the researcher interviewed 137 teachers and observed their lessons to determine whether the teachers were using techniques, approaches and tools that promote the acquisition of higher-order thinking skills among students (Shamatov, 2010). The QLP study found that the teachers in the sample did not use active teaching methods and instructional strategies. These teachers rarely encouraged higher-order and analytical thinking in their classrooms. They did not ask complex higher-order thinking questions; instead, most of their questions were lower-order and factual only. The large majority (88 per cent) of these teachers did not encourage their students to ask questions, instead they themselves asked questions. They also rarely encouraged student discussion and debates in their classes, and did not ask students for their opinions. Their students passively listened to the teachers' explanations or they simply responded to the teachers' questions mechanically (Shamatov, 2010, p. 44).

The QLP study found, however, that there were some progressive teachers who worked on their own professional development by attending various seminars and workshops. A school teacher said, 'I wish I had learned all what I am teaching now when I was studying at university [in pre-service training]. I came without good methods and I had to relearn them here at school and by attending seminars' (interview, 14 February 2014).

The responses to the QLP Baseline Study (Shamatov, 2010) showed that out of total 137 teachers in the sample, 33 of them (24 per cent) use interactive or active methods regularly (every lesson) while 65 (47 per cent) use interactive or active methods once a week. When these teachers were asked to describe active or interactive methods, however, only 54 per cent of them were able to do so (Shamatov, 2010, p. 42). Moreover, only 9 out of 137 teachers (6.6 per cent) justified the use of active or interactive teaching on the basis of lesson objectives and the same percentage on the basis of students' learning needs, and even fewer (5.1 per cent) on the basis of subject content.

The study also showed that the teachers rarely encouraged higher-order and analytical thinking in their classrooms. Only 25.5 per cent of the teachers asked complex questions, only around 14 per cent of the teachers encouraged student discussion and debates in their classes, and only 27 per cent asked students for their opinions (Shamatov, 2010, p.42).

The lesson observations likewise showed that the great majority of teachers predominantly use whole-class activities, and rarely use group and pair work. The study found that half of the observed teachers (53 per cent), 84 out of 158, promote active student participation, but they do so in whole-class activities, while only six of the teachers used small groups and only one teacher used pair work (Shamatov, 2010, p. 46). This may indicate that the teachers are not familiar with this method of teaching-learning.

Analysis of the interactions observed between teachers and learners found that only around one third (31 per cent) of the teachers engaged in discussions with their students and only 29 per cent of the teachers encouraged students to express their opinions (Shamatov, 2010, pp. 46–47). From this is possible to conclude that the most interaction between teachers and students are initiated and guided by the teachers.

Observations of the types of questions asked by teachers and students showed that most teachers (88 per cent) asked questions during the lessons, but students rarely had the opportunity to ask questions (Shamatov, 2010, p. 47). Only 19 per cent of the teachers encouraged their students to ask questions, and only 14 per cent of the teachers gave frequent opportunities for their students to ask questions. Only 9 per cent of teachers required their students to ask other students questions and only 6.3 per cent of the teachers asked students to answer other students' questions. Only five teachers out of 158 normally asked complex (higher-order) questions.

Regarding the kinds of activities that the teachers arranged for their students, the observer noted that most teachers (86 per cent) asked their students to respond to verbal questions, 72 teachers (45 per cent) also asked their students to solve problems or do assignments individually, and only 11 teachers asked their students to engage in debate in the classroom (Shamatov, 2010, p.47). Student presentations were also not common in the observed classes, with only 40 per cent of the teachers encouraging their students to present their work in class. The lesson observations also found that only 24 per cent of the teachers began their lessons by introducing the lesson and its objectives (Shamatov, 2010, p. 42). A KAE representative noted that, 'For many teachers the main and single source for the whole lesson is a textbook. It seems that if there is a textbook the teacher is armed to teach'.

Akylbek Joldoshov, an education expert with an international development organization, noted that teachers mostly focus on a few active students during the lessons while ignoring the rest. He observed that normally only

the top students (about 10 per cent) are asked questions in every session (interview, 5 May 2010). The researcher found, however, that only 21 per cent of teachers focused only on a few students (Shamatov, 2010, p. 47).

Three examples of typical lessons that were observed by the researcher are given below. Two of these observations were conducted in 2002 (Shamatov, 2005), the third observation was conducted in 2007. Ainura is a young female biology teacher from an urban school and Kanybek is a young male history teacher from a village school. The third teacher, Aigul, teaches English in a rural school. Their lessons provide insights into teaching practices in Kyrgyzstan.

Biology teacher from an urban school

The usual pattern of Ainura's classes is as follows. Ainura enters the room, and greets her pupils, who rise to their feet to greet her. The pupils then take their seats and Ainura checks attendance, going through the class register. She then checks the pupils' homework by randomly asking questions or by passing along the rows of desks to see that pupils have done the written assignment. She warns pupils who failed to prepare the assignment at home; she sometimes gives them bad marks and tells them to prepare the assignment at home and show it to her later, after school hours. Ainura then explains a new theme and consolidates the material by asking questions to check comprehension. If the pupils have not understood the new theme, Ainura goes through the material once more. At the end of the lesson, she gives good marks to the active pupils who respond well, and gives bad marks to pupils who fail to respond when questioned.

Ainura generally uses teaching methods that she learned during her formal teacher education courses at the university and from observing other teachers. She uses lecturing, question and answer interactions and discussion. She explained that she mostly uses the lecture method because of time pressure and the need to cover all the material. She noted that, 'If we just keep on discussing, then we don't get anywhere. I have to hurry them up and then I just provide information, hoping that they will understand what I am explaining'.

Below is a transcript of the lesson that Ainura conducted on 10 December 2001. It was a biology lesson with Class 10B (Shamatov, 2005, pp. 169–71). The 12 girls and 14 boys in the class sat in pairs in three rows of desks, all facing towards the blackboard and the teacher's table. Some pupils hung their coats on the hooks at the back of the room, but several of them sat with their coats

on, because the temperature inside the room was around 0 degrees Celsius. The names of the students have been changed to protect their privacy.

Observation notes of a biology lesson

Teacher: *Salamatsynarby* (Good morning).

Pupils: *Salamatsyzby, ejeke* (Good morning, teacher).

Teacher: OK, pupils. Did you read your homework? Let us review it. Who will tell us how animals survive when change takes place?

Pupil: The animals also change to adapt.

Teacher: How do they change?

Pupil: They change their colour, their lifestyles....

Teacher: Anything else?

Pupil: They survive by natural and artificial selection...

Teacher: What do you mean by that?

Pupil: Natural selection is when nature selects animals, and some of them survive and others die out... . Artificial selection is when people select some animals or birds artificially.

Teacher: OK. Now answer what are ontogenesis and phylogenies? (She quickly switched to another question... She addressed one of the pupils). Bakyt, answer this question. What is evolution?

Bakyt: *Ejeke*, I don't know because I was absent from the last lesson.

Teacher: So what if you were absent? What is your last name?

Bakyt: (with hesitation) It's Mamytov, *ejeke*... . Please don't give me a "2". Let me prepare and respond next lesson?

Teacher: You were to prepare homework whether you came to class or not... You will do it as *otrabotka* (make-up work). (She put a bad mark in her notebook. Bakyt sat back in his chair dissatisfied). Now you know that you have to prepare this assignment and report to me after school hours. (Turning to the whole class) Now, another question. What is evolution? ... You cannot learn Biology without knowing about evolution.... First,

the most primitive living beings appeared. Then you know that evolution took place from simple to complex growth. More advanced animals with backbones (the vertebrates) appeared. Then big animals like dinosaurs appeared. Now answer my question. What is the difference between micro- and macroevolution? (Looking at a boy in the last desk) Kanat, respond...

Kanat: It is the gradual change of species... No, it is a change across species... (murmured and looked for help from his peers, and finally gave up) I don't know, *ejeke*.

(Two girls from the front row raised their hands to respond.)

Pupil: *Ejeke*, can I respond?

Teacher: (with firm voice and looking at Kanat) Microevolution is the gradual change within groups of species. And macroevolution is change across species. Have you understood?

Kanat: Yes, *ejeke*.

Teacher: (to the whole class) Now, all animals have tails. Animals and human beings have similar body structures (showed a picture of skeletons of a dog, a monkey and a human). They all have heads, bodies, and tails. They have blood circulation. ...

(Three pupils at the back whistled and hummed, showing no interest in what she was explaining. The teacher stopped and quickly began asking those boys some questions [the questions are not noted here]. The teacher then moved on.)

Teacher: What is the difference between animals and birds?

Pupil: Birds have wings, and we do not. ...

(Three boys in the back row kept talking about something. They distracted some pupils who sat close by. The teacher stood in front and continued teaching without paying attention to those who were speaking at the back).

Teacher: How did dinosaurs disappear? (She waited for a few seconds and began responding herself)... They disappeared due to rapid climatic change in the world caused by catastrophes; the scientists believe that large meteors fell to the surface of the Earth. Because of it dinosaurs became extinct.

(She noted the boys at the back were talking and addressed a question to them).

Teacher: What is evolution?

Pupil: Sorry *ejeke*, what did you ask?

Teacher: (with a firm voice) You heard the question. What is your last name?

Pupil: It's Aliev. Evolution is development. It is growth.

Teacher: What kind of development? Development since when?

Pupil: Since life appeared on earth...

Teacher: When did life begin on earth? (She continued asking questions from those pupils who were making noise).

Pupil: During the Archaeozoic period...

Pupil: No teacher. There was no life during the Archaeozoic period. Life appeared in the Proterozoic period.

Teacher: OK. What is the main driving force of evolution?

Pupil: I... I forgot... It was ... (he murmured something which was not clearly audible).

Teacher: No, it is not. It is heredity. That is the main thing. Animals have been living from the very beginning because of heredity. And of course they will continue in the future because of heredity. Heredity and natural selection are the driving forces of life. And what is heredity?

(The teacher noted that some girls from the front two benches began speaking among themselves and she turned the question to the whole class).

Pupil: Heredity is human reproduction. Offspring take the genes of their parents and they look like their parents.

Pupil: Sometimes a child may look like a neighbour too (several pupils giggled about the joke).

Teacher: (with a serious look and ignoring the joke and laughter) Look at the body structure of a human (showing a picture of a man). What is the origin of heredity? How do animals reproduce? (Pupils burst into laughter. Some girls seemed to be embarrassed).

Pupil: Animals are born after their parents have sex... (Laughter again).

Teacher: True. Why are you laughing? (Turning to the whole class rather seriously and trying to show that it was a serious matter). Yes, it is true. In such a way reproduction takes place. Otherwise animals cannot be born. In such a way you will also continue heredity, won't you? (Laughter).

Pupil: Yes, *ejeke*. But we need to get married first, *ejeke* (Laughter).

Teacher: Be serious. You should learn these things. You are now adults. If you do not learn these concepts, you will remain children. If anyone is interested to know more about how humans reproduce, you should come to additional courses in genetics. I will teach those concepts in-depth. If anyone wants to register for those courses, come after class; I will be here. Did everyone understand heredity? Now what was the second concept? Natural selection... What is it? Who can tell me? (Three pupils raised their hands, but the teacher began explaining it herself).

... Natural selection is when humans and animals struggle for existence. They choose suitable places to survive and live. All animals and plants that we have now have survived this struggle. We have many records to show that many animals and plants did not survive. You should know all these definitions by heart. You should be able to explain to everyone who asks you. [Several pupils were talking].

... Artificial selection is when humans select which species should continue. For example, hybrids such as mules. It is a crossbreed between horses and donkeys. Mules are very strong, but they cannot reproduce. Plants can also be grown by artificial selection. For example, Michurin, a famous Soviet biologist, conducted a lot of experiments with plants. The idea of crossbreeding of plants was successfully used in agriculture during the USSR era.

Teacher: Now we have finished the review of the previous lesson materials. I hope everyone understood. It is important to review and refresh our memories. Now, write down the new theme for today in your notebooks (she wrote the plan on the board). Today we will learn the following: "Classifications of Plants" and "Animals are the Reflections of Evolution".

Plan:

Classification groups;

Convergatsia (similarities of marks due to similar living conditions);

Principles of modern classifications...

(The teacher turned to class and made sure that everyone copied the theme and plan from the board).

Teacher: Now, look here. We will discuss these three concepts today. Before Darwin there were many people. . .

(The bell rang at this moment. The pupils got up and began putting their books and notebooks in their bags and some of them grabbed their coats from the hooks. They did not wait for the teacher to announce that the lesson was over and they went outside).

Teacher: For the next lesson, read Chapter 11 on pages 49–52. Come prepared.

This transcript of the lesson provides insights into this teacher’s teaching practices. It illustrates how she interacts with pupils, checks homework, assigns tasks to do at home, assesses, marks and deals with classroom management issues. Ainura started the lesson by asking questions to review the previous lesson’s materials and make connections with the new lesson. She asked questions quickly, one after another, because, as she later observed, ‘I wanted to cover materials that I planned for the lesson and keep the pupils’ interest and attention on the class.’ Ainura used questioning for classroom management purposes as well; she asked questions to draw the attention of some pupils who were off task. She explained this by saying, ‘When I ask them questions, they realise that I may ask them any time and they have to be ready to respond’. The lesson indicates that Ainura has a didactic approach to teaching and she uses the transmission mode of content delivery. This lesson demonstrates a typical teacher-centered approach. In brief, her main method was to give her pupils the content and then ask questions to check their understanding. Ainura underestimates her students’ abilities to analyse and think critically. She does not give students opportunities to ask questions themselves and she doesn’t allow students time to answer her questions, and learn from their mistakes if they make them, instead she answers the questions herself.

The box below describes the teaching approach taken by Kanybek, a history teacher in a rural school.

History teacher from a rural school

The teacher, Kanybek, developed his teaching ideas and practices on his own and by observing other teachers. He strongly believes in the existence of certain objective historical truths and thinks his job is to impart that knowledge to his pupils. Lack of new textbooks forces him to use the old Soviet-era textbooks or to lecture his pupils from his written conspectus. He questions the pupils' understanding and provides responses if the pupils do not understand certain concepts. Even though he encourages his pupils to explain concepts they have learned, Kanybek controls the substance of the 'truth', which is, in his view, the information presented in the new amendments to the curriculum sent from the ministry. Kanybek wants to establish good rapport with his pupils and encourage them to develop, articulate and defend their own views, but in practice he controls and channels the pupils' thinking and expression. Kanybek attempts to influence his pupils by telling, controlling, advising, setting examples and warning them, and punishing them when they violate rules.

Below is a transcript of a history lesson with Russian Class 10B that was conducted on 20 October 2001 (Shamatov, 2005, pp. 235–37). The theme of the lesson was The Archaeological Monuments in Kyrgyzstan. Before the class, Kanybek mentioned to the researcher that it was a new theme; during the Soviet era the pupils did not study it. Kanybek brought an old map of the Kyrgyz Soviet Socialist Republic to the class; he did not have a suitable new map for this subject. He hung the map in the front of the room. Twelve out of 14 pupils (five boys and seven girls) were present.

Observation notes of the history lesson

Teacher: Let us proceed with our lesson. What was your homework for today?

Pupil: We were to read the text about archaeological monuments.

Teacher: OK. Did you all read your notes? (Silence. Kanybek continued). You know that not so many historical monuments are preserved in Kyrgyzstan unfortunately. Only a limited number of them have reached us, but many were destroyed over a period of time. Those monuments were destroyed by frequent wars, invasions and natural disasters, and of course, by time.

Written sources tell that there were many towers, mosques, tombs, and other monuments. We have some wonderful architectural buildings remaining. The Tower of Burana is one of them. What do you know about this tower?

Pupil: Burana means *munara* (tower). It is close to the town of Tokmok. In old times there was a city called Balasagun there. Balasagun is famous because a prominent Kyrgyz thinker and scholar, Jusup Balasagyn, lived there in the eleventh century.

Teacher: Good. The *caravan-sarai* of Tash-Rabat also occupies a special place among our historical monuments. Tash-Rabat is situated 70 kilometres south of the ruins of the city Koshoi-Korgon (medieval city At-Bash). It is on the bank of the river Tash-Rabat in the Naryn *oblast*. Unlike others, this monument is located far from the medieval civilization centres. Who can tell us why was it built there?

Pupil: As the name implies, it was used by the caravans that travelled east to west and west to east along the Great Silk Route. Caravans used to stop over in Tash-Rabat.

Teacher: Right. We also have the mausoleum of Shah Fazil. It is an architectural monument built between the eleventh and fourteenth centuries. It is located in Ala Buka District, in the village of Gulistan. It is rectangular and built of fired bricks (baked, not sun-dried). The width of walls is between 163 and 167 centimetres, and the height is 15.37 metres. It has three gates. Inside, it is decorated with patterns, and the ceiling features Arabic and Persian scripts. One of the rulers of the Karakhanid State is buried inside. Who can show us where Shah Fazil is on the map? (He pointed towards the map).

Pupil: (from her seat) It is in Ala Buka District.

Teacher: Okay. ... Our government spends a lot of money to protect these monuments. What do you think is the reason for protecting them?

Pupil: To attract tourists. ...

Teacher: Yes, that is one of the reasons, but it is not the main reason. ...

Pupil: They have historical value for us. ...

Teacher: That is right. We have so many monuments and other ruins. They tell us about our history. Despite the fact that there are very few historical monuments in Kyrgyzstan, their historical significance is great. They are

protected by the government. You know there are many reasons that those monuments were built. For example, there is the fortress of Shyrdakbek. This fortress bastion was built between the tenth and twelfth centuries. It is in Ak-Talaa district, north of Cholok-Kaiyk (village), on the bank of the Alabuga River. It has a rectangular shape and its southern walls are 117 meters in length. It is in this area (he pointed at the map). It was built to protect the people from external enemies. And then we have monuments of Islamic architecture. Islam came to Kyrgyzstan in the ninth century, so the Islamic monuments were built after that. Unfortunately our so-called “Soviet party activists” destroyed them because they ‘took the head when they were told to remove a hat’.⁸ What other archaeological monuments do you know?

Pupil: There is Koshoi-Korgon. It is in Atbashi.

Teacher: Yes, Koshoi-Korgon, a significant trade-city, was built in rectangular form and was 245 to 250 square meters in size. The heights of the remains are between 4 and 8 metres, and 60 fortress bastions can be seen: 19 in the north, 13 in the south, 17 in the east and 11 in the west. There were gates on all four sides. Unfortunately, the walls of the buildings were completely destroyed because of agricultural works. The artefacts indicate that they were from the tenth and twelfth centuries.

Pupil: We also have Babur’s⁹ house on the top of our saint Sulaiman Mountain – Sulaiman Tak (*Takht-i-Sulaiman*) in Osh.

Teacher: So what do you know about it?

Pupil: Babur’s house was destroyed during the USSR era. Then it was rebuilt recently. Now people can see the house of Babur on the top of the mountain. Many Muslims from the Ferghana valley come for pilgrimage to Sulaiman Tak.

Teacher: So, it is our pride. What we should do?

Pupil: We should protect it, plant trees, keep it clean and pass it on to our future generations.

8 A Kyrgyz saying meaning that one overdoes things to please the authorities.

9 Zahir ud-Din Babur (1483–1530), a prominent poet and a founder of the Great Mogul Empire in the Indian subcontinent, built a house on the top of Sulaiman Mountain in Osh in 1496–1498.

Teacher: Good.

Pupil: There is a tower in Özgön town too.

Teacher: OK. Yes, let us discuss about Özgön tower in our next lesson ... the time is coming to an end. Several pupils were active and prepared for today's lesson well. I give Aida 'five', Sanjar and Jyldyz also 'five', Nargiza – I give you 'four' – I noted you read homework at home and prepared, so I can see you made good progress. I will ask others the next lesson. Now, take your homework. At home, read your conspectus about monuments again; in the next lesson I will teach you about Towers and Stone Monuments.

This transcript illustrated this teacher's teaching approaches, including how he interacted with his pupils, dealt with pupils' attendance, checked homework, explained concepts and assigned homework. He went through the homework by asking pupils random questions.¹⁰ He revised the previous lesson material and examined whether pupils had understood the concepts. He then started what he called 'teaching' (introducing a new theme) by lecturing, retelling, asking questions (directed at the whole class and to individual pupils), and responding to pupils' questions. At the end of the lesson, he gave some pupils marks for their performance and assigned homework.

His teaching beliefs and practices reflect the conventional teacher-centred approach. Kanybek used a combination of methods: lecture, question-answer and discussion. His predominant method was the lecture, however, which he explained as being because he wanted to cover the material within the limited time allotted for history lessons. He commented, 'I teach the most important aspects of the theme, and encourage the pupils to study the rest on their own'. He dictated his conspectus to his pupils and had them copy the material to read for homework. By using the lecture method, Kanybek addressed the challenge of the lack of history textbooks, but he also believed his lecturing was preparing his pupils to be able to study at university. He said, 'If I lecture and have the pupils write down notes from my lectures quickly, then it will be very helpful for them when they go to university, because I learned from my university experience that writing notes in a lecture is really tough'. Kanybek believed that teachers' success was usually measured by the number of their pupils who entered higher education institutions.

10 In other lessons, Kanybek called the pupils' names from the class register to make sure that pupils who had not responded in previous lessons got a turn to respond.

While conducting his lessons, Kanybek faced the challenge of his pupils' lack of motivation. He struggled to motivate the pupils. Initially he focused on only those pupils who wanted to learn. He noted, 'First, I thought 'why should I bother about those who don't want to learn?' He asked questions of those pupils who prepared their lessons and he concentrated only on them. While a few pupils studied hard, the rest merely idled. He adopted this strategy on the basis of his university education, where most of his professors left it up to the students to study rather than worrying about those who did not want to study. Kanybek eventually changed his approach, however. He felt uncomfortable that many of his pupils were not learning, and he also received criticism from the school administrators and his mentor about neglecting many of his pupils. Kanybek then began focusing on all the pupils, asking everyone questions and motivating them to study, and explaining to them that they needed to study well to succeed.

From the observations of the lessons of Ainura and Kanybek and others, it can be concluded that teacher-centred approaches are common in Kyrgyzstan. These teachers mostly conduct whole-class activities and rarely engage in activities that use small groups and pair work. They spend most of their time asking questions and explaining, and their questions are lower order rather than thought provoking (higher order).

Next is a transcript of a lesson that was observed in 2007. This was an English language lesson for Grade 7 students in Jalal-Abad *oblast* of Kyrgyzstan. The desks in the classroom were arranged in a horseshoe shape, rather than all facing the front of the room. Eleven out of 14 pupils (four boys and seven girls) were present. The four boys were seated together on one side, with the girls in the centre and on the other side of the horseshoe. This lesson featured many elements of interactive and learner-centred teaching approaches. It was conducted by a teacher named Aigul on 7 September 2007.

Observation notes of an English lesson

Teacher: Good morning (in English)

Pupils: Good morning, teacher (in English)

Teacher: I cannot hear well. Can you repeat? You should greet loudly and enthusiastically. Good morning.

Pupils: Good morning (louder)

Teacher: Good.

(Teacher wrote the date on the board)

Teacher: Now, can you tell me what date is it today?

Pupils: It is the 7th of September (in chorus).

Teacher: Very good. What day of the week is it today?

Pupil: It is Friday today.

Teacher: Very good.

Teacher: Today we are going to talk about school in our lesson and we will review grammar. Past Indefinite Tense, do you remember what it is? Did you review it over the summer break?

(No one responded, so the teacher repeated the question three times, then three girls said that they had reviewed it.)

Teacher: Now, let us work in small groups. Count 1 to 3 and make groups according to your numbers.

(Pupils counted 1 to 3, and then they moved into three groups.)

Teacher: I am now going to share instructions. Please listen to the instructions attentively. I would like you ask questions from each other, in English, about what you all did during the summer break. Let us talk about what you did during the summer break and where you spent your summer holidays.

(Students asked each other and responded to their questions.)

Pupil: I spent my vacation in *jailoo* (summer pasture) in the mountains with my grandparents.

Pupil: I spent my vacation in Bishkek and we visited many parks.

Pupil: I spent my summer holidays in Issyk-Kul and I enjoyed nice weather and swimming in our beautiful lake.

Pupil: I worked on our farm in the summer.

Teacher: Now, can someone in your groups share what you talked about in your groups and what you learned about each other's summer breaks?

(Pupils responded.)

Teacher: Okay. We will give a prize to the winner at the end of lesson. The winner will be the student who is the most active and responds to the most questions.

Teacher: Now, let us move to the next activity. It is a 'true and false' activity, and be prepared for that. You should prepare true and false statements about Kyrgyzstan and then read your sentences; then other students should decide which sentence is false and which sentence is true. Are you ready?

Pupils: Yes. (The teacher tried to involve most students in this activity. The students worked in small groups and prepared true and false statements. Then, one student from each group read out their statements and other students guessed which ones were true and false.)

Pupil: Kyrgyzstan is a multicultural state situated in Central Asia.

Pupil: True.

Pupil: Bishkek is the capital city of Kyrgyzstan.

Pupil: True.

Pupil: There are many beautiful seas in Kyrgyzstan.

Pupil: False.

Pupil: Lake Issyk-Kul is the most popular place for tourists.

Pupil: True.

Pupil: There are many lions and elephants in Kyrgyzstan.

Pupil: False.

Pupil: The population of Kyrgyzstan is more than 7 million.

Teacher: Bakyt, can you tell us whether this sentence is true or not (the teacher tried to involve a timid boy in the activity).

Bakyt: False.

(All students participated in this activity and even those students who did not say much, still seemed to participate, as they listened attentively and they often nodded when others were speaking.)

Teacher: We have now revised our ideas of Kyrgyzstan.

Teacher: Now, let us start the next activity. I would like you to open your textbooks and read the text 'Schools in England'. After that, you will need to write about your understanding of this text on these three posters. One of them, as you see, is about the school teachers, the second one is about students and the third one is about school subjects.

(Students read the text individually and after about seven minutes they started to write their understanding on the posters.)

(Students later moved from their posters to their peers' and corrected each other's mistakes. At the end, one student from each group presented their poster.)

Teacher: Okay. I hope you now know about school system of England. At home, I would like you to compare the school systems of Great Britain and Kyrgyzstan and write about them. We will discuss it in our next lesson.

(Most students wrote down the homework assignment in their notebooks.)

In this lesson it was observed that the teacher conducted several activities to promote active learning (group work, presentation, students asking questions from one another, and a game and competition). The teacher tried to involve the maximum number of students, though three girls were more active and responded more than others. Another positive thing was that she tried to engage the students to share their own experiences regarding what they did during the summer vacation.

Although this teacher tried to adopt non-conventional methods of teaching, she still had a didactic approach to teaching. Thus, the lesson had elements of both active and conventional lessons. On the one hand, the teacher tried to do many modern activities as described above, on the other hand, the teacher still dominated the class activities. She spoke most of the time, asked questions and expected the students to respond, and when the students could not respond, she answered her own questions.

Discussion and conclusions

In recent decades, the Government of Kyrgyzstan has attempted to improve the quality of education in this country and to align it with international standards. Programmes are being implemented to shift from content-based to competency-based curricula (National Curriculum Framework, 2010) and,

at the same time, teachers are being trained to teach differently. Teachers are today expected to enable their students to learn higher-order thinking skills such as application, synthesis, problem solving and critical thinking. In particular, teachers should ask, and encourage students to ask, open-ended and conceptual questions, teachers should encourage discussion, and should ask students for their views and opinions.

The findings of this study indicate that the curriculum reforms have had only a limited impact so far on teachers' pedagogical practices. This was clearly seen in the results of the PISA 2006 and PISA 2009 (Shamatov, 2014 and Shamatov and Sainazarov, 2010) as well as in the results of national assessments such as National Scholarship Tests (Shamatov et al., 2014), in which only a small fraction of urban children, primarily those from elite private institutions, achieved the highest scores and proved capable of responding to tests that measure higher-order thinking skills. Kyrgyzstan decided not to participate in PISA 2012, being afraid that the students of this country would end in the lowest position again. It is necessary, however, to learn from the poor results and to continue to attempt to improve education quality. Scholars and educators need to actively advocate for re-engaging with PISA in the future, for example in PISA 2015. Participation in PISA competitions would enable scholars and educators to track changes in the literacy level of the Kyrgyzstan students, assess factors affecting learning outcomes and effectiveness, learn from successful education approaches used in world practice, and elaborate recommendations and strategies to reform Kyrgyzstan's education system.

The findings of this study also indicate that there are issues related to equity and access to good quality education. The post-Soviet education policy officially endorsed the diversification of schools, resulting in the creation of a 'new type' of schools, which further stratified Kyrgyz society, and today only a small number of parents can afford to choose good quality education for their children (Shamatov, 2013). The clear disparities in the quality of education that existed during the Soviet era between Russian- and non-Russian-secondary schools persist today. Korth and Schulter (2003) observed that Russian-secondary schools continue to offer a better standard of education than schools taught in Kyrgyz and other local languages. Russian-secondary schools continue to enjoy high prestige and are attended by children of various linguistic backgrounds, while Kyrgyz-secondary schools are attended exclusively by ethnic Kyrgyz children (Korth and Schulter, 2003).

One of the reasons for the limited impact of reforms is that pre-service teacher training in student-centred methods has by and large been neglected. While some in-service teacher training in modern methods has been provided, including by international agencies, this training has had limited impact. The majority of teachers continue to use conventional teaching approaches, as seen in the examples of lessons observed in the study. In some cases, these programmes were poorly designed, given the local context, and in most cases the implementers did not work closely with the government institutions that are mandated to offer professional development to the teachers. In general, however, most teachers do not adopt active learning and learner-centred methods because they do not have in-depth knowledge and awareness of the philosophies behind this pedagogy. These teachers did not learn these ideas in their pre-service education, because those institutions have not yet experienced significant reforms. Another key issue restricting the ability of teachers to switch to using learner-centred pedagogy is that the majority of teachers in Kyrgyzstan have excessive teaching hours and heavy workloads.

The lack of impact of the reforms is also a result of broader contextual issues. Since independence, Kyrgyzstan has seen a myriad of international education assistance projects. From the early 1990s, various international inter-governmental and aid agencies, private foundations, philanthropists and international non-governmental organizations (NGOs) have been working actively in the field of education in Kyrgyzstan, with the result that most reform initiatives and documents are conceptualized and designed by international agencies. 'Education system reforms have been driven primarily by the agendas and procedures of the funding and technical assistance agencies' (Silova and Steiner-Khamsi, 2008, p. 10). Such reforms are adopted out of fear of falling behind internationally (Silova and Steiner-Khamsi, 2008, p. 60). Therefore, reforms are imposed externally rather than initiated internally. While the contributions of donors and other international agencies are much needed, there is often dissonance between the discourse of donors and local needs. It is still unclear whether international initiatives truly reflect local needs and bring about sustainable improvements. A KAE specialist noted the following.

It is true that there are many international organizations working in the education sector, but the problem is that in most cases they choose the education issues and problems for their project themselves without asking the MoES for suggestions. Sometimes, they repeat already implemented projects. Unfortunately, the MoES also does not actively suggest educational issues (interview, 25 June 2009).

This tendency to adopt external solutions rather than generate solutions internally is partly due to a lack of strong capacity among local education experts and policy-makers. Reforms are implemented sporadically with various planning agencies and implementing bodies that do not communicate effectively with each other. Thus, the various components of education, such as the overall curriculum framework, subject-specific curriculum, assessment, teacher training and textbook development are being worked on by different agencies, which often operate in isolation.

There is also no effective coordination between the international and national institutions working in the education sector. Systemic change in the education system is only possible when all stakeholders – both national and international – coordinate their activities and when the initiatives focus on strengthening institutions and sustainability. The lack of systematic, well-coordinated efforts (REP Assessment Specialist, 3 April 2010) often leads to overlap and duplication. Furthermore, most reform initiatives are not institutionalised, indicating a lack of sustainability (Steiner-Khamsi et al., 2007).

These outcomes reflect the findings of Fullan and Miles (1992) who, analysing the history of successful and unsuccessful reforms, assert that most reforms fail because those who push for change do not involve all stakeholders, fail to recognize the complexity of their problems, and adopt superficial and quick solutions. Another cause of failure of reforms is the failure to institutionalise an innovation. To truly bring about the necessary changes, reforms in the education system of Kyrgyzstan must be systematic and sustainable, and based on the inputs of all stakeholders.

Recently, there has been a change in donor behaviour through implementing a sector wide approach, along with putting the government in the driver's seat and, more importantly, building capacity among government staff to develop policies informed by evidence and international experience. The government-led Local Education Group, which includes all international and national donors as members, serves as a forum to discuss education issues and coordinate assistance. World Bank support, via its Rural Education Project, is aligned to the country's sector strategy and plan to implement government-initiated programmes rather than 'donor imposed' projects. Nevertheless, due to low capacity of government education actors, donors continue to mostly lead, if not dictate, current education reforms in the country. There is a need to systemize efforts to develop local capacity (of government staff and teachers) so that there will be a sustainable impact in the long-term and all

teachers gain an in-depth understanding of effective teaching and learning methods and can use these methods to achieve better learning outcomes for their students.

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Pedagogical Approaches in Viet Nam

Nguyen Ngoc Anh

Introduction

Viet Nam has achieved remarkable progress over the past 20 years in improving access to basic education. However, the quality of education in the country remains of great concern to educators and policy-makers.

Pedagogy is considered a crucial factor in determining the quality of education (Alexander, 2008), and many educators propose that priority should be given to improving pedagogical practices. The Government of Viet Nam likewise considers the reform of pedagogy important for the improvement of the quality of general education (Resolution No 40/2000/QH10 of National Assembly, 2000). In this context, this chapter examines current pedagogical practices in Viet Nam and considers ways to orient pedagogy in the future.

Background

Country context

Viet Nam has a population of 88.78 million and has 54 ethnic groups, of which the Kinh is the largest, making up around 86 per cent of the country's population (Central Population and Housing Census Steering Committee, 2010). The national language is Vietnamese.

The people of Viet Nam experienced two wars in the past century, the wars liberation from French colonialism (1946–1954) and American imperialism (1954–1975). These wars caused great destruction in the country, including the education system, with the result that the literacy rate was only around 18 per cent in 1979 (IndexMundi, 2014).

In 1986, Viet Nam began implementing the policy of Doi Moi, which has transformed the nation's economic institutions and external relations and has led to three decades of rapid economic growth and very significant declines in poverty, with the poverty rate falling from 58.10 per cent in 1993 to 9.45

per cent in 2010 (Ministry of Labour, Invalids and Social Affairs, 2012). In 2012, Viet Nam's gross national income (GNI) per capita was 1,400 USD (World Bank, 2013), and Viet Nam was recently ranked among the 'lower middle income' countries.

Viet Nam has made remarkable progress in improving access to basic education, achieving a net primary enrollment rate of 96 per cent in 2009. While there is widespread access to education, there remains, however, a need for improvements in the quality of education. The country faces a number of challenges in securing quality education, particularly with regard to the conditions for quality, including infrastructure, resources, management, teacher supply and, especially, effective pedagogy, through which educational quality is most directly mediated (Ministry of Education and Training [MOET], Japan International Cooperation Agency [JICA] and PADECO, 2004; Central Committee of the Communist Party of Viet Nam, 2013). In a step towards addressing these challenges, the government increased public expenditure on education from less than 3 per cent of gross domestic product (GDP) in 2000 to 6.3 per cent of GDP in 2010 (UNESCO Institute for Statistics, 2012).

With the aim of achieving good quality education for all, pedagogy reform was recently put at the top of the agenda in the country's education development policies and strategies. Notably, it was emphasized in Resolution No.29-NQ/TW of the Communist Party (Central Committee of the Communist Party of Vietnam, 2013).

Legal framework for education reform in Viet Nam

Efforts to improve teaching methods began in Viet Nam schools in the 1990s, along with curriculum and textbook reforms, in accordance with the resolutions of the Central Party. Central Steering Committee resolutions have called for a shift from teacher-knowledge indoctrination to guidance on proactive thinking, thus encouraging the development of individual capacities and 'promoting student autonomy in their learning process' (Resolution No.2-NQ/TW Central Steering Committee, 24 December 1996, p. 14; Resolution No.29-NQ/TW Central Steering Committee, 4 November 2013, p. 4).

The conclusions of the 6th Conference of the IX Central Party Executive Committee (2001) reinforced the notion that it was essential to review the curriculum, content and education methods of the nation so as to produce the highest-quality human resources for the country's development. This was manifest in the strategic objectives for the country's educational development.

The Education Law of 2005 specifically addresses the need to reform teaching methods and to change teaching from a system of one-way indoctrination to one of promoting active and conscious participation, so as to increase the initiative and creativity of students, enhance students' self-study and team-work capacities, and enable students to put acquired knowledge into practice. The law also recognizes the necessity of ensuring that subject content is grade-appropriate and of creating a joyful, comfortable and active learning environment (National Assembly, 2005).

In the country's 'Education Development Strategy 2011–2020' one of the solutions emphasized was to reform teaching contents and methods, and exams and education quality assessments, towards developing students' capacity, while also enabling education to be relevant to each locality and attaching importance to values education (morality, law and traditional cultural values), life skills, physical health education and career orientation (Ministry of Education and Training, 2012, p. 8).

Teaching methods in Viet Nam

Surveys in the 1990s found that the prevailing teaching method used at schools in Viet Nam was 'chalk and talk', described as 'teacher transmits the knowledge; students passively receive and memorize' (Phan and Nguyen, 2011, pp. 412–14). Studies conducted a decade later (Nguyen, 2003; Nguyen, 2006) indicated that the majority of teachers were still using the 'chalk-and-talk' approach. These studies found that active methods that put learners at the centre and which use problem-solving approaches were under-utilized. As a consequence, teaching-learning was focused on rote memorization and students consequently had poor critical-thinking and problem-solving skills.

The continued use of teacher-centred pedagogy is believed to be a result of ineffective reforms in teacher training and a lack of teacher motivation, as well the importance placed by society on succeeding in examinations. Furthermore, studies on pedagogical approaches in Viet Nam have concentrated on theoretical research rather than on empirical research, making it difficult to apply research results in practice (Phan and Nguyen, 2011, p. 414).

A report by the Ministry of Education and Training on teaching and learning practices found that positive changes had been observed in secondary schools during the school year 2008/09 (Ministry of Education, 2009). The report noted that active pedagogy was encouraged at schools, that most

teachers grasped the spirit of the reform of pedagogy as a means to promote active participation by students in learning, and that teachers were actively using information and communication technology (ICT) to make lesson plans, thus exploiting the available equipment for teaching and learning (Ministry of Education and Training, 2009, p. 40). This report also noted, however, that there were a number of shortcomings in pedagogy reforms at schools, especially in the area of civic education. In particular, the report found that textbooks were used inappropriately in civics classes. The report further noted that ‘innovative pedagogy’ was incorrectly understood by teachers to mean using ICT in lessons. Furthermore, the report noted that many teachers were not paying attention to the curriculum but were often dependent on textbooks, and usually tried to cover all the content of the textbooks in their lessons. Thus, the main objectives of the lessons were not being fully addressed. Importantly, the method of ‘the teacher dictates; students copy’ was common in many schools (Ministry of Education and Training, 2009, pp. 46–47).

Description of the study

Research questions

Given the above context, the present research focuses on addressing two key questions:

- What is the dominant current pedagogical approach being used in schools in Viet Nam (as of 2013/14)? What are the challenges in adopting improved pedagogical practices?
- What does ‘innovative pedagogical practice’ look like? What supports the promotion of innovative pedagogical practices?

Research Methods

The data for this study were collected using a questionnaire, in-depth interviews, focus group discussions (FGD) and a lesson observation (including making a video-recording of the lesson to enable deeper analysis). The data collection was carried out in October and November 2013.

The questionnaire was emailed to 120 teachers at 16 lower secondary schools in 11 districts of Quang Ninh Province. The schools were selected by the district bureaus of education and training (BOET). These schools were of differing sizes and situated in a range of geographical locations, including urban, rural and remote areas. Two of the schools were boarding schools for ethnic minority students.

The majority of the 120 teachers were female (82 per cent). Around 70 per cent of the teachers were Kinh and 3 per cent were of ethnic minority origins (the remaining 27 per cent did not mention their ethnicity). Nearly 60 per cent of the teachers were under 40, 20 per cent were between 40 and 49 and about 18 per cent were 50 and over. Almost half of the participants had between 10 and 20 years of teaching experience.

Nearly 20 per cent had taught for 25 years or more, while around 30 per cent of the teachers had less than 10 years of teaching experience. Teachers of all school subjects were included in the survey sample. On average, the surveyed teachers were teaching 15 periods per week (45 minutes per period) at the time of the study.

The researcher held two FGD with lower secondary trainee-teachers at Quang Ninh Teacher Training College to learn about how they were being trained in their course. The trainees were randomly selected from the Faculty of Social Science, the Faculty of Science and the Faculty of English. The two FGD groups consisted of 24 participants (19 female and 5 male) between the ages of 18 and 20, including seven first-year trainees, six in second-year and 11 in third-year. Of the trainees, 15 were from the Kinh group and nine from ethnic minority groups. During the FGDs, the researcher asked questions, took notes and monitored the discussions.

The researcher also conducted in-depth interviews, via telephone, with three senior experts and researchers (two male and one female, aged between 45 and 58) who had various kinds of research experience regarding the relationship between curriculum, pedagogy and assessment. The interviewees had previously worked as teachers at secondary schools and at a teacher education college and had later become researchers and managers with the Viet Nam National Institute of Educational Science and were consultants on national projects on curriculum and assessment reform. The duration of each interview was 60 minutes.

The researcher also observed a 45-minute Vietnamese lesson in the Pedagogical Practice School. This lesson was a Grade 7 class of 38 students, 15 female and 23 male, given by a 27-year-old female teacher from the Kinh ethnic group. The teacher had been teaching for five years. She was selected to demonstrate 'innovative practices' as she had good experience in applying ICT in her lessons. A total of eight people observed the lesson, including the school principal, head teachers, teachers, the camera operator (who was also a teacher) and the researcher. After the lesson, the observers gathered for

a meeting to evaluate the lesson, and the researcher later interviewed the teacher (separately) to gain her perspective on the lesson and on pedagogical approaches.

Findings

Pedagogical practices in schools

In the questionnaires, teachers were asked to state the pedagogical approaches they used, by selecting from a list of approaches widely used in schools in Viet Nam. These included: practice, experiment, discussion, presentations, the game-based approach, performance, cooperative-learning, role-play, the problem-based approach, field-trips and experience (Phan, 2005). As illustrated in Figure 1, the vast majority of teachers responded that they used the experiment (82 per cent), discussion (81 per cent) and presentation (79 per cent) approaches.

The results of the questionnaire indicate that the pedagogical approaches used by the teachers are closely linked to the subjects they teach. A literature teacher noted that she mostly used the presentation and performance approaches, while the science teachers said they used the experiment approach frequently, and the language teachers used the game-based and role-play approaches. Only around a third of the respondents reported that they used the problem-based learning and field-trip approaches (37 per cent and 32 per cent, respectively).

Figure 1: Teaching methods used in class

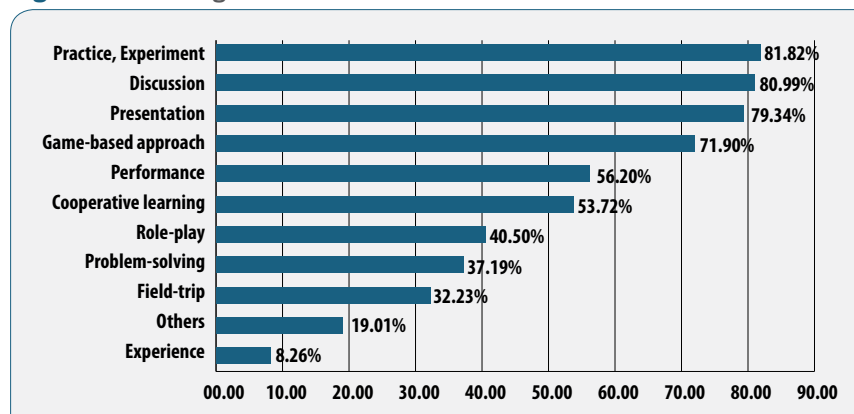
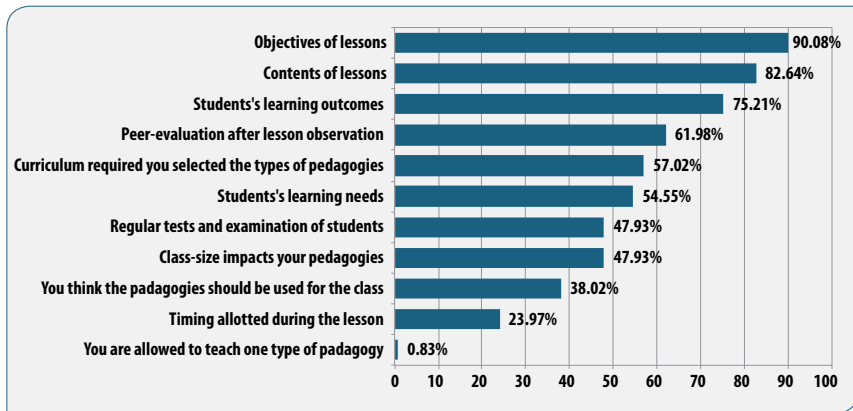


Figure 2: Factors influencing pedagogies used in class



The focus-group discussions with trainee-teachers and the in-depth interviews with the senior experts and researchers revealed that the prevailing pedagogical approach remains one-way lecturing, with an emphasis on teaching theory rather than practice, and teachers follow the text-books closely. As a consequence, students passively receive the introduced concepts, which the teachers do not link to the students' lives (to show how, or if, they are relevant to the students).

One of the senior experts in secondary education interviewed noted that,

Teacher-student interaction takes precedence over student-student interaction in the classroom. In many classrooms, teachers pose questions and students give answers, with students trying to provide the expected answer to the questions. Students rarely express an idea that is different to their teacher's. In some cases, even when students know that their teacher has made a mistake, they will not mention it, unless their teacher encourages them to do so.

In short, although the majority of teachers use practice, experiment and discussion approaches, they give limited opportunities for students to reflect their knowledge in practice. As teachers rarely conduct field-trips, this may be limiting students' opportunities to link the concepts taught in classrooms with reality. Furthermore, pedagogy is mainly curriculum- and textbook-oriented, rather than being student-centred (Nguyen, 2005; Vu and Tran, 1996).

Challenges in adopting effective pedagogy

The responses to the interviews indicated that although the Ministry of Education provides schools with the 'Guidelines for Task Performance of Secondary Education' at the beginning of each school year, including instructions regarding the pedagogies to be used, teachers and schools managers are still confused about how to apply them in practice.

One interviewee said, 'We were introduced to new pedagogies such as the 'hands-on' (VALOFRASE) method (introduced by the Meeting Vietnam Association, France), the New School Model of the Global Partnership for Education, and the Viet Nam Escuela Nueva- GPE-VNEN (introduced by the Ministry of Education and Training); we need to have more time to learn these methods and consider how they should be used in class.'

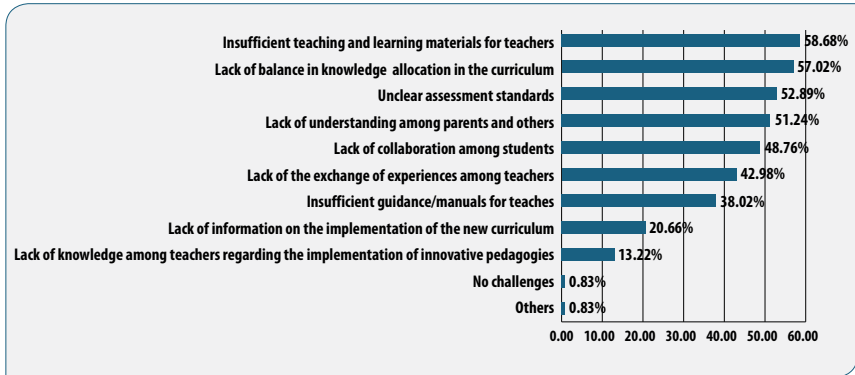
Another interviewee expressed support for the 'philosophy' of the New School Model of the Global Partnership for Education 'because it teaches every individual student' and this represents a fundamental change in education. The respondent noted, however, that 'It is hard because we have big classes. How can we pay attention to every student in a class of 62?' The respondent nevertheless observed that 'It does not mean we cannot change. But we should consider what approach is relevant to our circumstances.' He also noted that 'Textbooks and the curriculum should be considered as blueprints, based upon which a teacher should provide bricks, cement, doors, hinges, etc., and students should then be able to build their "houses" under the supervision of the teacher.'

Overall, the responses to the interviews suggested that teachers would understand more specifically how to improve their teaching practices if they had access to detailed guidelines and to more training opportunities on pedagogical methods.

When teachers were asked in the questionnaire what hindered their adoption of effective pedagogy, more than half responded that they did not have sufficient teaching and learning materials to implement innovative pedagogies (58.68 per cent), that it took more time to cover the required curriculum content when innovative pedagogical methods were used than when conventional methods were used (57.02 per cent), that the assessment standards were not clear (52.89 per cent), and that there was a lack of support from parents and other stakeholders (51.24 per cent). Almost half of the teachers (48.76 per cent) pointed to a lack of collaboration among

students. Other issues identified by teachers included a lack of the exchange of experiences among teachers (42.98 per cent), insufficient guidance and documents on teaching methods (38.02 per cent), a lack of information regarding the implementation of the new curriculum (20.66 per cent), and a lack of knowledge among teachers regarding the implementation of innovative pedagogies (13.22 per cent). Figure 3 illustrates the responses.

Figure 3: Obstacles faced in adopting effective pedagogy



Regarding in-service training courses, most teachers (72 per cent) responded in the questionnaire that they had received guidelines on pedagogy, and almost all of the teachers (90 per cent) had participated in annual in-service pedagogy courses on thematic lesson observation, and/or had participated in thematic meetings on teaching, and in ‘good teacher’ competitions at their schools. The four-week courses were held before the beginning of each school year and were conducted by key teachers who participated as teacher-trainers at the central or provincial level (Ministry of Education and Training, 2009, pp. 77–78). However, many teachers found the courses to be insufficient in enabling them to implement innovative pedagogies in real classrooms. One of the focus-group participants noted that, ‘We learn about new approaches in a very short, didactic in-service training course, and we do not have the time to develop new lesson plans or practice implementing them during the courses’. Another participant commented that, ‘We all participated in the annual in-service teacher training methodology courses organized by DOET [Department of Education and Training]. ... And we are provided with guidelines on pedagogy, but they are not adequate’.

Regarding the pedagogical practices taught in pre-service training, the trainee teachers participating in the FGD felt that the training involved too

much theory and too little practice. This made it very difficult for them to implement new pedagogical approaches in class.

The trainee teachers felt they should have more opportunities to engage in practical teaching training such as the 'Teaching and Learning Activities at School', 'Out-Of-Class Activities' and the 'Regular Pedagogical Practice Programme'. Many trainee teachers stated that they enjoyed doing practice at the Pedagogical Practice School because 'the concrete instructions of teachers and micro-teaching help us improve our pedagogical skills'.

According to all of the trainee teachers, they frequently use group-work and group discussion in class. The second- and third-year students identified presentation, practice and game-based approaches as the most frequent approaches used. A few respondents mentioned using a cooperative, problem-solving approach. Most of the trainee teachers said they liked participating in group discussions to practice and do experiments because they could work with peers to exchange ideas. One said, 'exploring new knowledge together helps us absorb lessons more insightfully'.

With regard to the curriculum, around 86 per cent of first-year trainee teachers participating in the FGD felt that they were not well-prepared during their pre-service training to utilize the school curriculum. However, among the second year students participating in the FGD, 83 per cent felt prepared, along with 72 per cent of the third year students, stating that they had engaged in some activities to prepare for implementing micro-teaching, making lesson plans and undertaking class observation at schools.

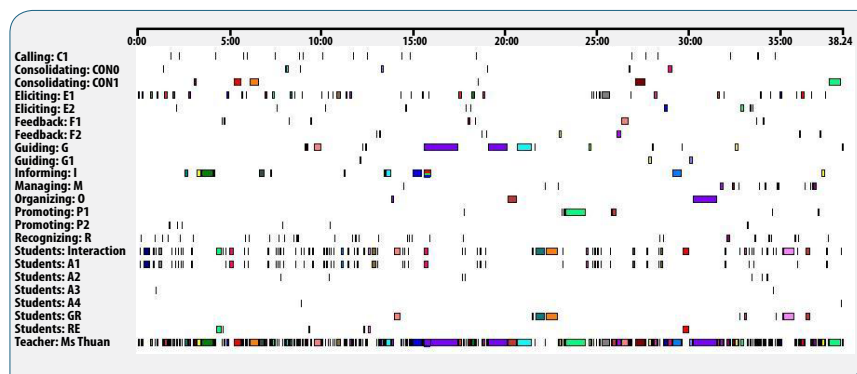
Innovative pedagogy in Viet Nam

The researcher examined an example of 'innovative pedagogy' through observing a Vietnamese lesson conducted by a teacher using ICT as a pedagogical tool. The researcher observed the lesson and also watched a video-recording of the lesson. Analysis of the lesson indicated that the teacher had used several innovative practices, and that these were manifest in the teaching techniques, procedures and attitudes of the teacher.

The teacher used various forms of ICT to deliver the lesson, including presentation and mind mapping applications, to enable students to visualize the concepts of 'synonyms' and 'antonyms', and she used computer animation to create game-based activities that generated strong interest among her students.

The ICT was not the only factor that made her teaching practices effective, however. The teacher's interaction with her students was also important. For example, during the class the teacher frequently elicited ideas from the students. The teacher also often raised questions and provided additional information to elicit answers (see E1 in Figure 4). Thus, the teacher tried to create opportunities for her students to contribute their ideas regarding the concepts, and therefore gain a full understanding of them. This 'eliciting' occurred 50 times and accounted for 13.4 per cent of the total duration of the teaching period. Furthermore, the teacher encouraged her students to give additional answers by giving them more time to think about it (E2 in Figure 4). This 'wait time' occurred 12 times and made up 2.3 per cent of the class time.

Figure 4: Pedagogical actions and patterns of interaction in the classroom



Below is a transcript of the interaction between the teacher and some students (between 01.45 and 02.10 minutes of the lesson).

Teacher: Now we are examining the exercise titled “Tùng tells the truth, not telling a lie”. Please find a synonym for the words ‘truth’ and ‘lie’. Thai Minh, please (the teacher called Thai Minh, who had raised her hand).

Thai Minh: Dear teacher, ‘correct’ is a synonym of ‘truth’.

Teacher: Yes, thanks Thai Minh. Is there anyone who has a different idea? (pause) What other words are synonymous with the word ‘truth’? Dat, please (the teacher called Dat who had raised his hand).

Dat: Dear teacher, that is ‘accuracy’.

Teacher: Very good, thank you, Dat.

The teacher asked her students to give responses on a voluntary basis (by raising their hands) 41 times (C1 in Figure 4). This technique is known as 'calling'. She did not force her students to give an answer if they did not want to. The students in this classroom enthusiastically raised their hands to give answers to their teacher's questions. The researcher also noted that both well-performing and poorly-performing students actively raised their hands to give ideas. Notably, they were given time ('wait time') to think over the questions so that they would be able to come up with answers.

Another notable feature of the teacher's method was that she made sure the students understood the introduced concepts before moving on to a new assignment or task. This is called 'consolidating' (CON). The teacher asked a question to confirm that her students understood the introduced concepts (CON0 in Figure 4) 10 times and she repeated the concepts (CON1 in Figure 4) seven times during the class. The students mostly answered that they had understood the concepts.

The teacher recognized all the students' answers or ideas regardless of whether they were right or wrong. This is called 'recognizing' and occurred 50 times (R in Figure 4). She accepted the students' ideas without making an immediate judgment, so as to show respect for the students, which is a technique that, in return, creates respect for the teacher.

The teacher also encouraged the students to comment on their peers' ideas or answers. This kind of 'promoting' (P1 in Figure 4) occurred 10 times. The teacher also used another kind of 'promoting' technique by tactfully asking other students to correct their peer's answers (P2) but without making the students who had answered wrongly 'lose face'. As a result, those who made mistakes continued to respond actively to their teacher's questions.

Below is a transcript of the interaction between the teacher and some students (between 08.19 and 08.38 minutes of the lesson).

Huyen: The antonym of 'bravery' is 'shyness'.

Teacher: Thank you, Huyen! (pause for two seconds) Is there anyone who has a different response? (pause) Thien, please. (the teacher called on Thien who had raised his hand).

Thien: Dear teacher, the antonym of 'bravery' is 'cowardliness'.

Teacher: Uh, cowardliness, thanks Thien (pause for two seconds). Do you agree with Thien's response?

Students: Yes (all the students responded in chorus).

Teacher: Uh, cowardliness is the antonym of 'bravery' ... (pause). Our friend Huyen correctly identified the antonyms of almost all the words. She only made a minor mistake with this final word. She did a good job. Applause for our friends, Huyen and Thien, please! (All students clapped their hands.)

If none of the class members were able to correct a student's mistake, the teacher provided the correct response (F1 in Figure 4). It is noteworthy that she often gave her feedback on the students' ideas with some praise (F2 in Figure 4).

The teacher also got students involved in a competition between the groups (GR in Figure 4). The students were very excited about engaging in this group assignment.

While the observation of the class found that the teacher was engaging in many positive pedagogical practices, the researcher noted some shortcomings. First, the teacher oriented the students to the expected answers, rather than asking the students to explain why their answers were different.

Below is a transcript of the interaction between the teacher and some students (between 12.17 and 12.29 minutes of the lesson).

Teacher: An 'antonym' is a word that has the opposite meaning of another word. So you have the same answer as your friend Tung, don't you? (brief pause) Thanks Tuan! (brief pause) Thien, do you have any additional idea?

Thien: Dear teacher, a word may have an opposite word that belongs to different types of antonyms.

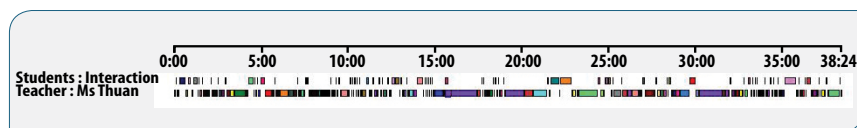
Teacher: Uh, thank you, Thien.

Another shortcoming was that the interaction between the teacher and students predominated in the classroom (92.3 per cent of the duration of the class), while student-student interaction was very limited (A3 and GR in Figure 4), making up only 7.7 per cent of the class time. Thus, the style was largely teacher-centred.

Although the teacher predominantly elicited thoughts and ideas from the students, it was observed that she spent a lot of time giving information, eliciting students' answers and guiding her students to read and write on the blackboard. As shown in Figure 5, the teacher's pedagogical actions

accounted for the largest proportion of the class time (74 per cent), while student activities made up only 26 per cent of the class time. An alternative, more student-centred, approach would be to enable the students to elicit their peers' responses or put aside more time for students' self-exploring activities. Furthermore, the students' critical thinking skills would have been more effectively enhanced if the teacher had offered them opportunities to raise questions (in general) or question what the teacher said or what their peers said.

Figure 5: Mapping of students' responses and teacher's pedagogical actions in the classroom



Despite these shortcomings, the observers and the researcher concluded that the teacher had adopted effective pedagogical practices because she had created a comfortable and active learning environment and had successfully engaged her students in learning. Furthermore, she gave the students a certain amount of autonomy in their learning. Notably, the teacher respected her students' ideas and enabled them to construct and explore the concepts by themselves. An effective pedagogical approach needs to ensure the autonomy and self-realization of the students in classroom. This was actualized in the teaching techniques, procedures and attitudes of this particular teacher.

Support needed to promote innovative pedagogy

One of the senior experts interviewed noted that,

Teachers need to be self-aware of the importance of their pedagogical actions in provision of a quality education. They should be given sufficient support to self-improve their teaching. The most effective way to help teachers to reform their pedagogical practices is to create a self-reflection mechanism. Teachers learn by themselves from observing their teaching practices and receiving feedback from their colleagues. Apart from having adequate access to professional materials, teachers would be strongly motivated to transform their pedagogy if their managers supported them to have autonomy in their teaching practice.

Most of the FGD participants agreed that in order to be good teachers in the future, trainee teachers should be adequately equipped with relevant professional knowledge, skills and a high sense of responsibility. They also noted that teacher training programmes need to be more specific, and relevant to the local contexts and to the needs and capacities of teachers. Additionally, the trainees felt that classrooms should be better equipped, i.e. provided with sufficient teaching and learning materials and facilities. Overall, the view of trainee teachers is that pre-service and in-service training programmes need to be improved with more practical components to enable teachers to meet the needs of students, parents and the community. Other studies have reported similar perspectives among teachers and trainee teachers (see Nguyen, 2009; Nguyen, 2006).

To improve the education system and teaching practices in schools, the school managers and teachers need to engage students' parents and communities in the education process. Parents and communities can contribute not only their labour and financial support to school construction and operation, but also their expertise and cultural knowledge, which can help teachers to deliver culturally-responsive teaching. The teacher of the class that was observed noted in the post-lesson interview that,

It is clearly recognized that students are more interested in learning when it is based on familiar content. Therefore, it is necessary to embed introduced concepts in the students' contexts. In my classroom, the students eagerly share their living experiences and daily practices. The engagement of parents and community in our teaching practice can make my students proud and motivated. I sometimes encounter difficulty in designing and delivering the lesson with cultural content, such as local festivals and the functions of administrative agencies. In these cases, the support of local people is important so that we can give meaningful lessons to our students.

Conclusion

In recent years, educators in Viet Nam have made a great effort to improve pedagogical practices, with a view to improving educational outcomes. This study contributes a picture of the current pedagogical practices in schools in Viet Nam and the shortcomings of those practices, as well as providing an example of innovative pedagogy. In particular, the findings of this study indicate that while 'discussion' and 'presentation' methods are used widely in schools, 'problem-solving' and 'experiential learning' are rarely present. Instead, teaching practices hang on a content-based curriculum and on textbooks.

Furthermore, this study's findings reflect the results of similar studies, which have emphasized that teachers suffer from a lack of materials on professional development and an absence of effective training modules and programmes to empower them to transform their pedagogy.

This study provided an example of innovative pedagogical practices being implemented in the classroom. Such practices are expected to ensure the achievement of the set objectives in the curriculum in terms of standardized knowledge, skills and attitudes, just as the conventional pedagogical model does. The innovative approach presented in this study involved promoting students' autonomy in learning and the approach respected and recognized students' voices.

An ideal approach puts student learning at the centre of the pedagogical process. Accordingly, students are enabled to engage actively in various activities in the classroom. They are also given the time to think over the questions, to construct concepts, and are given opportunities to think critically and offer opposing ideas to those of their peers (in a respectful manner). Using such an approach, the teacher needs to frequently encourage the students, and reinforce the strength and potential of each student.

The results of this study indicate that the efforts to reform pedagogy in Viet Nam are constrained not only by a shortage of professional development resources and a lack of practical pre-service and in-service training programmes but also by the absence of a structural support mechanism. In addition to providing adequate resources and practical training programs, as recommended by other researchers (Luong, 2012, pp. 228–33; Thai, 2009), this report strongly suggests that support mechanisms should be set up for all teachers in all schools. Additionally, learning and sharing mechanisms need to be promoted among teachers and among clusters of schools, including self-reflection mechanisms. Furthermore, the participation of parents and community should be strongly emphasized in the educational process. Mechanisms to facilitate such participation are necessary.

The transformation of education in Viet Nam requires a clear understanding of current pedagogy and its shortcomings. The development of relevant and innovative pedagogy is also important for education reform in Viet Nam. This study contributes a perspective on the existing pedagogy and desired pedagogical models for the future. Good quality education for all can only be achieved if education policy-makers, administrators, teachers and communities make strong and consistent efforts to reform pedagogy.

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Pedagogical Practices in Indonesia

Muhammad Zuhdi

Introduction

The study presented in this chapter examines two innovative pedagogical approaches in Indonesia: PAIKEM (active and creative learning methods) and GASING (fun learning). Some of the challenges that the Indonesian government is facing in the realm of education are discussed, including the relatively low quality of Indonesian human resources compared to many other developing countries. It is clear that in order to improve the quality of its human resources, Indonesia must focus on assisting teachers to improve their pedagogical practices.

Background

Indonesia's features and recent history

Indonesia is an archipelago of over 13,400 islands (BIG, 2014) and is the largest country in South-East Asia. With more than 230 million people (Biro Pusat Statistik, 2014b), Indonesia is the fifth most populous country in the world (Central Intelligence Agency, 2014). Indonesia has many ethnic groups, the largest of which are the Javanese, Sundanese, Batak, Aceh, Malay, Bugis and Dayak, and the country officially recognizes many different religious beliefs, including Islam, Christianity, Buddhism, Hinduism and Confucianism (Republic of Indonesia, 1965). With such a diverse population, Indonesia is at risk of potential ethnic and religious conflicts. Therefore, the Indonesian people have a set of common principles known as *pancasila*¹¹ that serve to unify the people. While the country has many different languages, the official language is Bahasa Indonesia.

11 *Pancasila* means 'five principles'. The principles are: (1) Believe in one God; (2) Just and civilized humanity; (3) The unity of Indonesia; (4) People's sovereignty (democracy) guided by wisdom and implemented in the form of deliberations among representatives; (5) Social justice for all Indonesian people (Yudi Latif, 2011).

Indonesia adopted democracy and the presidential system when it gained independence from the Netherlands in 1945. A general election is held every five years to select parliamentary members and a president. Joko Widodo, in power at the time of publication, is the seventh president of Indonesia.

Two major upheavals have impacted Indonesian political affairs since independence. The first was the three-year period leading up to the installation of the country's second president. In 1965, a conflict between the Indonesian army and the Communist Party resulted in the killing of seven top army leaders. Political unrest subsequently grew, involving the three major political groups: Nationalists, Muslims and Communists. At the same time, the country also experienced severe economic problems that led university students to demonstrate against the government. In 1968, through a process that remains controversial, General Suharto took over the country's leadership from Sukarno and became the country's second president. Suharto formed a strong government, known as the New Order.

The second upheaval was during the period leading up to the change of government in 1998. The global economic crisis of 1997 and factors such as corruption within the bureaucracy led to distrust of Suharto's regime. Following a massive student demonstration all over Indonesia, Suharto resigned in 1998. The country subsequently embraced a new political era, known as the Reformation Era. Since 1998, the Indonesian political system has given more freedom to people of different ideological and political positions, enabling them to express their ideas and opinions.

Overview of Indonesia's education system

Prior to independence, Indonesia had three kinds of education: Dutch government schools, indigenous secular schools and religious schools. The government schools were established to facilitate a proper education for Dutch children and indigenous elites, while indigenous secular schools were established by local activists to provide access to education for less-privileged indigenous Indonesians. These secular schools instilled a spirit of nationalism into young people. Religious schools were established with the aim of maintaining religious values in society.

Following independence, the Indonesian government adopted the secular system as the country's education system, but also retained religious schools. This was considered important because during the early post-independence era there was intense debate over various issues, including whether

the country should be based on religion or should be secular. Likewise, there was rigorous debate over the place of religious education in Indonesia. To satisfy the education demands of all major groups, the country established two parallel structures of education management: the Ministry of Education and the Ministry of Religion. The Ministry of Religion is responsible for religious educational institutions and religious education in non-religious schools (Zuhdi, 2005). The Ministry of Education, today known as the Ministry of Education and Culture, is responsible for non-religious education institutions and all other aspects of national education.

During the past 70 years of independence, Indonesia has established three education laws. The first, Law 4/1950 on Education and Teaching, was promulgated in 1950; the second, the National Education System Law, was published in 1989; while the third, Law 20/2003 on the National Educational System, was promulgated in 2003. The three main components of education covered by these laws are access, quality and religious education.

The right to education, and equality in access to education, is mandated by Article 28C of the constitution, 'Every citizen has the right to education' (Republic of Indonesia, 2002). Accordingly, the nation's education laws emphasize the importance of access to education for every Indonesian citizen. Efforts to increase access to education began during the New Order government with the construction of 148,119 new primary schools, 5,204 new lower secondary schools, and 1,370 new high schools throughout the country (Djojonegoro, 1997).¹² Subsequently, the government implemented the six-year Compulsory Education Policy in 1984 and the nine-year Compulsory Education Policy in 1990 (Djojonegoro, 1997). As a consequence of these policies, school participation rates, especially at primary school level, rose steadily and have remained high since 1994. The school participation rate for primary schools was 92.11 per cent in 1994 and 92.43 per cent in 2012 (BPS, 2014a). Likewise, the rate for secondary schools rose from 50.03 per cent in 1994 to 70.73 per cent in 2012 (BPS, 2014a). These figures indicate that the vast majority of school-aged children are able to access formal education.

Under current policy, district governments are responsible for the management and assessment of state-funded general schools (Republic of Indonesia, 2005). Private schools, most of which receive a subsidy from

12 These numbers do not include private schools and religious schools (such as madrasah).

the government, are recognized in Indonesia as long as they meet the national standards of education (Republic of Indonesia, 2012).¹³

While work needs to be done to increase the participation rate, the key issue in Indonesia's education today is the quality of education, as measured in terms of Indonesian students' academic achievement. Over the past decade, the government has set a number of strategies and policies with the aim of improving the quality of education, including the National Standards of Education, established in 2005,¹⁴ which aims to ensure that all education institutions are able to meet the educational needs of students. These standards are used as the basis for assessing the adequacy of schools all over the country. The National Standards of Education have been implemented through various policies, including teacher certification and training, the regulation of national examinations, review of the national curriculum, and the establishment of public schools with international standards.¹⁵

13 According to the Minister of Education's Regulation No. 76 Year 2012, all schools (public and private) are entitled to receive a subsidy from the government. The amount that they receive depends on the number of students that they have. The programme, called BOS (*Bantuan Operasional Sekolah*/Subsidy for School Operation) began in 2005 and since then Indonesian children have free access to a complete secondary education.

14 The regulation, known as Peraturan Pemerintah (Government Regulation) No. 19 year 2005, introduces eight standards for Indonesian education: *Standar kompetensi lulusan* (graduate competency standard), *Standar isi* (contents standard), *Standar proses* (process of teaching and learning standard), *Standar pendidik dan tenaga kependidikan* (teacher and support staff standard), *Standar sarana dan prasarana* (facilities standard), *Standar pengelolaan* (management standard), *Standar pembiayaan* (budgeting standard) and *Standar penilaian* (assessment and evaluation standard) (Republic of Indonesia, 2005).

15 The regulations are as follows: The Minister of Education's Regulation No. 24, 2006, on the Implementation of the National Standard on Educational Content, The Minister of Education's regulation No. 20, 2005, on the National Examinations, The Minister of Education's regulation No. 78, 2009, on Implementation of School with International Standards for Primary and Secondary (*Rintisan Sekolah Berstandar Internasional*, RSBI), and the Minister of Education's Regulation No. 18, 2007, on Certification for In-Service Teachers. The most controversial was the RSBI. The government has transformed a number of public schools into international standard schools, which offer special classes for selected students. This has led to issues, however, including discrimination against students of low-income families and the excessive use of English as the medium of instruction, instead of Bahasa Indonesia. Following discussion and debate, the Constitutional Court officially terminated the operation of these public schools with international standards on 8 January 2013 (Republic of Indonesia, 2013).

According to the Organization for Economic Cooperation and Development (OECD), in 2012 Indonesia ranked 64 out of 65 participating countries in the Programme for International Students Assessment (PISA) examinations, which assessed 15-year-old students on their knowledge and skills in subjects relevant to their future lives (OECD, 2012). This ranking led to a call for further reforms in education.

The government renewed its mission to reform the curriculum, improve the quality of teachers and raise students' competencies. Concerning curriculum policy, in 2014 the government began implementing the new (2013) curriculum at all levels of education throughout Indonesia.

There are four major differences between the 2013 curriculum and the previous one (2006). First, the 2013 curriculum was fully designed and developed by the Ministry of Education and Culture. Schools and teachers now only need to understand the curriculum and follow it. The previous curriculum, on the contrary, was school-based, which meant that the schools created their own curricula. The government provided competency standards that every student had to meet, and schools created their curricula based on those standards, with government guidance. Second, the 2013 curriculum introduced four core competencies: spiritual, social, intellectual and psychomotoric (Minister of Education, 2013a). All learning materials are designed to guide students to meet the minimum standards of these competencies. Third, the 2013 curriculum introduced an integrated curriculum approach for early grade students (Minister of Education, 2013a). This approach means that the curriculum is not delivered based on subjects, but rather on certain themes, through which various subjects or disciplines are introduced. For example, first grade students are introduced to a theme called 'my family'. By exploring the theme, students learn language, mathematics, geography and science. Fourth, the new curriculum has a different assessment system, one that mandates teachers to assess the four core competences through the following means: observations, self-evaluation, tests and specific tasks, and portfolios (Minister of Education, 2013b).

On 5 December 2014, the Minister of Education and Culture decided to suspend the implementation of the 2013 curriculum, except in 6,221 pilot schools (Ministry of Education and Culture, 2014a). The main reason given for the suspension was that the 2013 curriculum was implemented in a rush, and evaluated before it was implemented across the country (Ministry of Education and Culture, 2014a). Additionally, teachers were not prepared to

implement the new curriculum. As a follow up to the decision, the Ministry of Education released Regulation No. 160 (2014), which officially recognizes the two curricula (2006 and 2013) in the Indonesian school system (Ministry of Education and Culture, 2014b). Through this regulation, the ministry set a transitional period (2014–2019) during which schools can gradually move towards the implementation of the 2013 curriculum. This will allow time to carefully review both the new and old curricula and prepare the schools for the new one.

Description of the study

Given that the quality of education remains a major issue in Indonesia, this study examined how Indonesian educators are improving the quality of education, i.e. improving the academic performance of the students. In particular, this study aimed to answer the following questions: What kind of new pedagogical approaches do Indonesian educators offer to improve the quality of education? Do these approaches work and influence education quality?

In answering the above questions, this study employed a combination of field research (an observation of a training session) and interviews.

1. Observation

The observations were conducted at Surya Institute, which is located on the Surya University campus. The institute is the central location for training and development in the Gampang, Asik dan Menyenangkan (GASING) method (Easy, Fun and Enjoyable Learning method). The researcher visited Surya Institute on 22 May 2014. The date was chosen because that was a training day for parents and teachers who are interested in applying the GASING method to teach their children. The researcher observed how the method was being introduced and applied.

2. Interviews

Additionally, the researcher conducted interviews with institute staff members, to obtain further information about the method and its application.

(i) Resource Person A

Resource Person A is a senior instructor at Surya Institute. She has been working for Surya Institute since the GASING method was first introduced

to the public, which was in January 2011. The interview was conducted at Surya Institute on 22 May 2014 during the half-day visit to the institute.

(ii) Resource Person B

Resource Person B is an instructor at Surya Institute. He began working with Surya Institute before the GASING method was introduced to the public. The interview was conducted online on 10 September 2013.

In addition to observations and interviews, the researcher also conducted desk research, obtaining information and data from secondary sources, including research reports describing the implementation of the new pedagogical approaches in Indonesian contexts, and other publications on pedagogical approaches.

Findings

Prevailing pedagogical approaches in Indonesia

It is clear that education and training are essential in improving the quality of human resources in any country. With education, not only can people gain the knowledge and skills required to obtain decent work¹⁶ to earn their living but, importantly, their consciousness as human beings is increased and the quality of their lives is improved. Education today usually takes place through education institutions, but can also take place anywhere and anytime. Educational institutions systematize what people should learn and organize the process of learning in such a way as to improve the capacity of learners.

The most important aspect of the learning process in institutions is the interaction that takes place between teachers and students. In the book, *Understanding Pedagogy and Its Impact on Learning*, Chris Watkins and Peter Mortimore discuss the meaning of pedagogy and its place in education. Pedagogy, they say, 'has been understood during different periods of history in increasingly complex ways' (Watkins and Mortimore, 1999, p. 16). The complexity occurs as the understanding of teaching and learning has

16 According to the International Labour Organization (ILO), decent work "involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men" (ILO, 2015).

changed. Teaching was initially interpreted as one-way instruction from a teacher to the students. This understanding has been challenged by the new understanding of learning that requires the active acquisition of knowledge by the learner, instead of just listening and taking notes. There is ongoing debate over the best ways of learning, so discussion and research about pedagogy continue.

Putting aside the different approaches, pedagogy remains central to education. Every educator and parent expects that the students will have good learning experiences at school and build their competencies to become better individuals in many ways. The biggest challenge that any educator faces is to ensure that every student is able to learn effectively.

There are at least three characteristics of conventional Indonesian classrooms that make students unable to learn effectively and perform at their best academically. The first is the large numbers of students in the classrooms. Many schools have classes with around 40 students. Only some schools can manage to have as few as 20 to 25 students in a class. The second characteristic is the one-way teaching method. Lecturing is the most popular method of teaching, and students have very little chance to respond to what their teachers say. The third characteristic is rote-learning. This is not only related to religious education, in which children are asked to memorize religious texts, it is also applicable to most other subjects, including mathematics, science and social science. For example, in mathematics students are taught to memorize formulas instead of understanding concepts. Soedijarto notes that, in general, the learning process in Indonesia is one of 'listening, taking notes and memorizing' (2008, p. 53). This approach involves teachers treating students as passive individuals who come to school to see, listen to and take notes on whatever their teachers instruct.

The efforts to alter the way Indonesian teachers instruct students commenced in the 1980s. Through the 1984 curriculum, for instance, the government introduced a teaching-learning approach called *Cara Belajar Siswa Aktif* (CBSA), the Student Active Learning Strategy. This required teachers to facilitate students' learning through various active learning and cooperative activities (Soedijarto, 2010, p. 58). Since then, active learning has been promoted as a teaching approach that makes learning more meaningful to students. Yet, changing the way teachers teach has not been easy, and most teachers continue to use old-fashioned teaching strategies (Soedijarto, 2008, p. 53).

The conventional teaching approach persists not because teachers and schools do not understand the principles of pluralism, human rights and democracy within the education system, but because teachers face numerous obstacles to change. While teachers, especially those who have graduated from teacher-training programmes, generally understand that learning is an active process through which students construct their own understanding of concepts, it is much easier for them to just continue the conventional way of teaching.

The obstacles faced by teachers are threefold. First, the conventional way of teaching has become a culture within schools, with teachers continuing to practice this style of teaching from generation to generation. When a new teacher at a school tries to change the way of teaching, he or she becomes an outcast, not only because there is opposition from other teachers, but also because the students are not ready to become active learners, as they are not used to this kind of approach. Second, active learning strategies require that teachers prepare a number of learning materials prior to teaching. This means that the already over-burdened teachers must allocate a significant amount of time for this. The third obstacle is that the school environment (including facilities and resources) does not support changing the ways of teaching and learning. Thus, in many cases, in addition to braving the disapproval of fellow-teachers and of students, and finding the extra time needed, teachers must also find relevant teaching-learning resources on their own. Therefore, despite the fact that there have been various efforts since the 1980s to introduce new ways of teaching, the conventional approaches remain prevalent in schools in Indonesia (Soedijarto, 2010, p. 58).

Innovative pedagogical approaches

Despite the obstacles, some Indonesian educators are today leading a new movement to transform pedagogical practices. These educators aim to change the ways educators view and treat their students. This movement has led to the implementation of several new pedagogical approaches in Indonesian classrooms. Two such approaches (active learning methods) currently implemented in Indonesia are: (i) *Pembelajaran Aktif, Inovatif, Kreatif, Efektif dan Menyenangkan* (PAIKEM), Active, Innovative, Creative, Effective and Fun Learning and (ii) *Gampang, Asik dan Menyenangkan* (GASING), Easy, Fun and Enjoyable Learning.

Making active learning work

The use of active learning strategies has increased in recent years. One of the reasons for this increase is that a number of initiatives have been introduced to support teachers in changing the ways they teach (Soedijarto, 2010; Suprijono, 2013). Various studies have examined the use of active learning strategies in schools in Indonesia. Some of these are described briefly below.

- Febriyan Al-Hamidi (2012) studied the use of PAIKEM in Sekolah Menengah Pertama Negeri (SMPN 7) Public Secondary School, Semarang, Jawa-Tengah. He examined the effectiveness of conventional learning methods in studying history and compared this with the effectiveness of using the 'sucker-ball' game for the subject. This game invites students to become active participants in learning. The study found that when playing the game students' participation during the learning process was extremely high, and found that this method was more effective in enabling students to learn the required material than the lecture method.
- Kokom Komariyah (2011) analysed the use of problem-solving approaches among secondary school students in Bandung, West Java. She focused her analysis on the use of the problem-solving approach known as the Polya Model, in learning mathematics. After several stages of observation and experimentation, she concluded that this problem-solving approach was an effective way to teach students about mathematical concepts. She noted that the major difficulty that most students experienced was the lack of understanding of the relationship between one concept and another. This was heightened by the fact that students also showed a lack of apperception regarding the topic that they were going to learn, in terms of what they had learned in the past. She found that the problem-solving approach enabled students to have sufficient apperception to be able to relate one concept to another within the given problem.
- Hasanuddin (2010) wrote a thesis on the impact of the Quantum active-learning method on students' performances, and found that when teachers use this method students can achieve significant improvement in acquiring concepts and knowledge. He also found that the use of the Quantum method was able to increase students' motivation to learn and improve the outcomes of their learning.
- A teaching approach that is currently being promoted in almost all subjects in Indonesian schools is PAIKEM. This approach aims to make learning both more effective and fun (Suprijono, 2013, p. vi). Supriyono (2013) argues that

PAIKEM corresponds with cooperative learning. He defines PAIKEM as a learning process that helps students connect the information or experience that they are learning with the knowledge and experiences that they already have. Through his work, he introduces various active and cooperative learning methods, including 'jigsaw', 'make a match', 'snow-ball drilling', and 'index card match'.

Since active learning is considered an effective teaching and learning approach, the government provides in-service training for teachers and school supervisors on active learning strategies, and the Ministry of Education and Culture publishes learning materials for teachers and supervisors on active learning. One of these is a manual titled Pembelajaran Berbasis PAIKEM, published by the Directorate of Human Resources in Education. The book covers models of contextual teaching and learning, integrated learning and thematic learning.

The government has conducted various training workshops to ensure that teachers understand the PAIKEM method and are able to implement it in their schools. Although the government cannot facilitate training for all teachers, PAIKEM is currently being promoted widely (Mulyatiningsih, 2010). A challenge facing trainers is that teachers not only need to gain new skills to implement the new method in their teaching practices, but also need to change their paradigm of teaching. This means that some teachers need significant time to adjust, but the process of changing their teaching habits can be lengthy.

Making mathematics and science fun

Mathematics and science are considered very important subjects, so the teaching of these subjects is one of the most debated issues in Indonesian education. A number of Indonesian students have had great success in these subjects, becoming champions at the Mathematics and Science Olympics. Resource Person B, a teacher at Surya Institute, observed, however, that this does not reflect the average performance of Indonesian students. Data from a Trends in International Mathematics and Science Study (TIMSS) showed that in 2011 Indonesia ranked 38th in mathematics and 40th in science out of 42 countries (TIMSS, 2011). The results were alarming for many Indonesians.

Given the need for improvement, Indonesian educators have been seeking new ways to teach mathematics and science. Prof. Johannes Surya, a Physics expert and notable figure in Indonesian science education, has introduced

an active learning method for mathematics and science called GASING (Surya, 2011). According to Resource Person A, Prof. Johannes Surya found that the main reason why students find the subject of physics difficult is because they do not have sufficient ability in mathematics, a requirement for learning physics. Therefore, the Surya Institute focuses on mathematics before teaching physics.

As a teaching method, GASING has similar principles to those of PAIKEM, and tries to engage students in various learning activities to make learning fun. The difference is that the GASING method focuses on mathematics and science, while PAIKEM is applicable to almost all subjects.

The GASING method tries to minimize the phobia of learning mathematics and science. This method has two principles: start with something concrete, and ask students to think without writing (*mencongak*). Using the GASING method, teachers aim to ensure learners understand the concept rather than memorize formulas. Surya (2014) notes that when teaching physics, for example, it is important for students to understand the concepts rather than memorize and apply formulas. This is clearly relevant to the constructivist approach in teaching.

The PAIKEM and GASING methods came from the constructivist idea of learning, in which learning is defined as a process through which students use their own minds and bodies to observe and do in acquiring knowledge and understandings. According to Matthews (1994), constructivist teaching methods are different from teacher-oriented science teaching that happens in conventional classrooms because constructivist methods significantly change the classrooms. Through constructivist methods, students are able to construct their own meanings of the experiences that they undergo. To achieve this, students should be actively involved in every learning process. The role of teachers is to facilitate the process so that students gain the required understandings at the end.

With GASING, students are introduced to various mathematical and scientific concepts through several enjoyable activities. According to Resource Person B, this is very important because it improves students' motivation to learn. Once the students understand various basic concepts and begin to enjoy learning mathematics and science, they can learn easily through other methods, even through drills.

The box below presents an example of how a mathematical concept is introduced using the GASING approach.

Example:

Lesson 1: The Meaning of Multiplication

Time: 15 minutes

Teaching steps:

1. Using cards that have pictures of mangoes on them:
 - a. The teacher takes five cards, each has two mangoes.
 - b. The teacher asks the students, how many mangoes are on the cards altogether?
 - c. The teacher explains that the number of mangoes is $2+2+2+2+2$, a calculation which can be worked out by writing the number '2' five times, then adding them up.
 - d. Then the teacher simplifies that with: $5 [] 2$, and explains: there are five cards, each has 2 mangoes.
 - e. Then the teacher replaces $[]$ with \times . And explains that $5 [] 2$ can also be written as 5×2 .
 - f. So, $5 \times 2 = (2+2+2+2+2) = 10$. So, $5 \times 2 = 10$.
2. The teacher asks the students to repeat the method using different examples, such as the number of wheels of six cars, the number of wheels of eight motorcycles, and so on.

Source: Surya, 2011, p. 28.

From the observation of a GASING training session, it was found that there are various ways through which GASING is implemented in the classroom. The most common approaches use exercises and songs. In introducing a mathematical concept, the teacher finds a simple way of explaining the concept (like the picture-cards example) and asks the students to do some exercises. Another way teachers help students to understand a concept and make learning fun, is by singing a popular song and changing the lyrics to words that explain a mathematical concept.

According to Resource Person A, Surya introduced the GASING method to the public in 2011, following careful experimentation with a number of students. To further spread the method, Surya established the Surya

Institute. The foundation disseminates the method through various means, including through a website, textbooks and modules, and learning materials (Surya Institute, 2013). The mathematics books produced by the institute for students and teachers are different from ordinary textbooks because of the way they present the subjects. For instance, “GASING Mathematics 1A”, a Grade 1 level mathematics textbook, guides students to understand various basic mathematical concepts, such as numbers, time and geometry through stories, pictures, games and by finding nearby objects (Surya, 2012).

The most challenging problem in teaching mathematics and science is the competence of the teachers. Resource Person B observed that a lot of Indonesian science teachers have difficulties in mastering the learning materials and giving instruction to students. Therefore, the Surya Institute trains teachers, providing both pre-service and in-service training. In partnership with the Ministry of Education and the provincial government, the Surya Institute has conducted in-service training for teachers in their respective provinces (Surya, 2014). The institute also trains parents who have interest in learning science and mathematics, so that they can learn the GASING method and become tutors of their children at home.

While the GASING method has been shown to change the way Indonesian students learn mathematics and science, it will take much time before the method will be widespread across Indonesia and before it can have an impact on the country as a whole.

Discussion and conclusions

There have been many changes in education policies and practices in Indonesia, both at the government and school levels. While efforts in the past focused on increasing access to education, today the focus is on the issue of quality, because while the majority of Indonesian children today have access to formal education, the quality of that education is questionable.

Appropriate pedagogy is the key to good quality education. A key issue in Indonesian education is that the majority of teachers continue to use conventional ways of teaching and these teachers do not consistently practice pedagogical approaches that are relevant to the learning needs of students.

In recent years, however, there has been an increase in awareness of, and demand for, learner-centred pedagogical approaches that emphasize active

learning. Various teaching strategies have been introduced to teachers and students to make learning more fun, enjoyable and meaningful. PAIKEM (Active Learning) and GASING (Fun Learning) are two such examples.

Teaching methods such as PAIKEM and GASING require teachers to change their teaching paradigms. Using these methods, teaching can no longer be perceived as an activity that involves instructing and lecturing students, but as an activity that involves facilitating learning and assisting students to develop their own understandings.

The implementation of the PAIKEM and GASING approaches to learning, which use active and fun strategies, has been shown to improve students' acquisition of various concepts and to make learning more meaningful. It is expected that with widespread use of the new methods, Indonesian students will be able to succeed on a global level in future. The challenge is how to ensure the new methods are applied in every school in Indonesia.

These new, innovative pedagogical practices allow teachers to facilitate effective learning. However, teachers are expected to understand and master the methods in order to make them work. Furthermore, constructivist pedagogical methods such as these require teachers to have a comprehensive understanding of the subject they teach because students often have a lot of questions, opinions and even judgments. Additionally, teachers should also have access to sufficient learning materials and references to facilitate student learning. The main problem is that a vast number of teachers are not sufficiently qualified to implement new methods and do not have access to the required types of learning materials. Therefore, a key challenge in introducing new pedagogical methods is how to enable teachers to first improve their capacity, both in mastering their subjects and in gaining the new skills required to facilitate the learning of those subjects by their students.

It is very important that the government continue in its efforts to improve the quality of teachers and to make sure that the new methods of learning are implemented all over the country. This can be achieved by training teachers and ensuring that schools have the facilities and materials that are required, as well as a positive attitude to the new approaches. Additionally, it is important for every teacher to have the internal motivation to improve their own capacity and the willingness to support other teachers to adopt the new methods. Without this, the efforts of the government to improve the quality of teachers will be ineffective.

I believe that the new methods and approaches of teaching and learning have a future in Indonesia for the following reasons. First, the rapid development of information and communication technology provides an avenue for students to learn many things from various sources. As a result, teachers are no longer considered the only source of information and knowledge. Second, there is increasing awareness in Indonesian society of the importance of high quality education. When people discover that good quality schools are those that apply new methods of teaching, demand will increase for changes in teaching methods. Third, the teacher training programmes in various universities are already training future teachers in the new teaching methods. It is expected that, over time, these teachers will outnumber those who have not received training in these methods, and all teachers will then be able to apply the new methods more easily. In addition, greater awareness about the new approaches and methods of teaching and learning among teachers, as a result of further research and publications, will eventually change the culture of teaching and learning in this country.

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