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The Development of Curriculum for Girls in Saudi Arabia

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Abstract
This paper illustrates the development of curriculum for girls in Saudi Arabia and how it has changed and been challenged over time. Several factors have played important roles on impeding girls’ education. Society was the main impediment, as it used to refuse any change and fight that change. Girls in Saudi Arabia are segregated from boys in different schools, but in the past, they also had to take different subjects and curriculum that what boys were studying. There are three major challenges that girls’ education faced until they were given the same quality of education that boys received. The first challenge started during King Faisal’s era when girls were allowed to go to public schools but under different directors than boys’ institutions. The second time was in 2002, when the girls’ education was moved under the Ministry of Education. The last challenge began with King Abdullah’s project for developing education, whereupon girls received the same quality of education as men.

Keywords
Curriculum, Society, Girls’ Education, Religious Men

1. Introduction
Education is a basic need for all people in every country without consideration of their social class, race, gender, or religion. However, those groups are sometimes negatively stereotyped in the schools, as some people do not get equal education because they are threatened based on their social class, race, or gender (Steele, 1997). In Saudi Arabia, girls have struggled to get rights for receiving an education. The society oppressed girls by not giving them a chance to have the same opportunity that was given to boys. Saudi Arabia is a conservative country, which is especially true in the middle regions of the country, where the full power of society resides.

2. Official Education in Saudi Arabia

Official public education in Saudi Arabia was established in 1925, and it was placed under the Director of Knowledge. The public school was only for boys, as girls were not allowed to enroll in public school. During that time, girls were taught at home, which is called “Ktateb”, where a scholar woman taught her students at her home, covering subjects such as religious studies and language (Hamdan, 2005). At that time, some girls tried to get their education from the public school system, especially girls, who were from the west and the east coast areas of the country. Before analyzing women’s education in Saudi Arabia, it is important to know the structure of Saudi Arabian society and understand that the role of tradition and religion is vital to interpreting social change in the country, especially as it relates to women (Hamdan, 2005). Saudi Arabia is composed of five areas: east, west, south, north of the country. The east and west areas are multicultural and have people from different social classes, so they are less conservative than the other parts of the country; this means most girls who were fighting for their education were from the east and west areas of the country. This effort was confronted strongly by society, especially religious men, who thought girls should not have the same opportunity as boys. Smith states, “[w]e are not talking about prejudice or sexism as particular bias against women or a negative stereotype of women. We are talking about the consequence of women’s exclusion from a full share in the making of what becomes treated as our culture” (Smith, 1987: p. 20). In fact, there are three different explanations for why society fought girls’ education.

The first explanation is that religious men believed that by allowing girls to study at public schools, Saudi society would be exposed to the West and its culture, and then the Saudi society would be negatively affected (AlMunajjed, 1997). In fact, the religious men usually believed that any item or any idea imported from Western culture was not to be trusted, even though society might be in need of that idea.

The second explanation is that if girls were allowed to study in public school, society would be in danger, because the main role of women is to raise children and be a good mother (Hamdan, 2005). Therefore, the structure of the Saudi family would be threatened by women’s education. Unfortunately, this argument was not only used in Saudi Arabia, but it has also been prevalent in most areas of the world when women have been fighting for their education. In the United States, some communities thought the role of women is to raise children, not obtain higher education. Therefore, women struggled to find housing on campus because they were not welcome inside campus, and they did not receive what the men on campus received. Not only that, but they also did not get jobs after finishing their bachelor degrees, so they ended up staying at home as housewives or mothers (Gordon, 1987).

The third explanation is related to religion, as most men in Saudi society, especially religious men, believed women should stay at home. They are not allowed to be out of their home unless they have a convincing reason, such as seeing a doctor or buying groceries for their homes. This idea developed because religious men thought if women were allowed to leave their home, society would become corrupt because women would deal and talk with strange men, which is against religion as they believed it. Therefore, girls were fighting for their education for more than forty years to be part of the public school system. After this historical explanation, this paper will illustrate the three major challenges for girls’ education in Saudi Arabia including how the curriculum has been reformed from time to time.


Without persuading religious men in the country and getting their support, it was impossible to establish girls’ education in Saudi Arabia. Therefore, “[i]n 1959, King Saud discussed the issue of educating women in Saudi Arabia, and he sought support from religion’s scholars to start education for girls” (Alamri, 2011: p. 88). In 1960, King Faisal issued a decision that announced the establishment of girls’ public schools. In the middle of the country, especially in Buraidah, people were against the King’s decision, so they went out with their guns to close any girls’ school in their city by force (Hamdan, 2005). After that, they met the King and asked him to cancel his decision. According to Lacey, “whenever King Faisal faced resistance” He would ask, “Is there anything in the Holy Quran which forbids the education of women?” He would further state, “We have no cause for argument, God enjoins learning on every Muslim man and women” (Lacey, 1981: p. 368). At the end of the meeting, the King told them they were not obligated to enroll their girls in public school. In fact, for pacification of the religious men, the King established an education institution for girls’ education that was separate from the Ministry of Knowledge for boys. The head and director for girl’s education institution was “The Mufti of the
Country,” who was also the head of religion of the country. Therefore, these groups made the decisions regarding how girls’ education should look.

In the Girls’ Education Constitution, the religious men indicated that the purpose of educating a girl, as stated by the Directorate General, was “to bring her up in a proper Islamic way so as to perform her duty in life, be an ideal and successful housewife and a good mother, ready to do things which suit her nature as teaching, nursing, and medical treatment” (Alireza, 1987). Also, in another article, they wrote that girls must be separate from boys’ schools at all education level except kindergarten (Alireza, 1987). Those schools were guarded by men to prevent any man from entering those schools. Amani states, “Each girls’ school, college or university is assigned at least two men who are usually in their 50 s or 60 s who are responsible to check the identity of those who enter the school, deliver and pick up the mail and generally to safeguard the girls inside the school until they are picked up by their fathers or brothers” (Hamdan, 2005: p. 50).

Even though society, knowledge, and students can be a source of curriculum (Tanner, D., & Tanner, L. N., 1975), girls in Saudi Arabia were ignored and were not asked about their needs or their interests. Smith states that in regards to women’s education in Saudi Arabia, “women need to learn to relate to one another and treat each other as sources of knowledge” (Smith, 1987: p. 35). Dewey believed it is very important to relate curriculum to students’ interests and experiences (Dewey, 1902). At that period of time in Saudi Arabia, boys were the only ones who appeared to benefit from girls’ education because schools were preparing girls to be good wives for their husbands. Therefore, girls at that time were taught a different curriculum from boys because the purpose of schooling was different. According to Tanner, D., & Tanner, L. N. (1975), the purpose of school is for preparing students for him or herself, a career, and citizenship. For boys, the purpose includes all three purposes with a different balance. However, the purpose for women in Saudi Arabia was only preparing her for herself. Because girls were not allowed to work at any job or to offer anything for their country as a part of citizenship, schools only prepared them to be a good wife and mother. At that time, what was considered most worthwhile was to teach Islamic studies, Arabic language, basic math and housekeeper. The content of those curricula was totally different from what boys are taught because they are offered from different institution. The Ministry of Knowledge, which was for boys, has people who created the curriculum who were very well educated and held education degrees. On the other hand, people who created women’s curriculum were religious and did not hold a degree or have knowledge on designing curriculum. In fact, when I analyzed the language curriculum from that time, I found that I was confused when I tried to find the objective or the goals of curriculum. It appears that society was afraid to give anyone a chance to lead girls’ education except religious men. Women who graduated from public school stayed at home or received training to be a teacher for a girl’s school.

One purpose of high school is preparing students for college (Tanner, D., & Tanner, L. N., 1975). Higher education was established in Saudi in 1949 when the Islamic college started enrolling students for first time, and in 1957, King Saud University was found and started enrolling students in several colleges (Hakeem, 2012). However, higher education was only for boys, and girls were prevented from getting higher education. Therefore, boys’ schools were improved to reach the higher education criteria. In 1969, the girls’ education institution found that they had a shortage of teachers, so they decided to establish girls’ teacher colleges in order to employ those girls for their schools (Hakeem, 2012). Unfortunately, girls were not allowed to take any major as was the case for men; the only major they could study at those colleges was teaching and basic courses such as cooking. That affected the curriculum they were taught girls’ teaching colleges because it was only focused on one purpose, which was preparing for teaching and ignoring the other proposes of schooling, that are citizenship and self. From 1960 until 1969, women received some rights to attend public schools and higher education. Even thought they did not have equal opportunities compared to men, it was great improvement inside the very conservative society.

4. Girls’ Curriculum after 9/11

The situation of the isolation of the institutions of girls’ education from boys’ education was stablized for more than thirty years. Girls’ schooling in elementary, secondary, high school and university remained under the Department of Religious Guidance until 2002, while the education of boys was overseen by the Ministry of Education (Hamdan, 2005). After the attacked of 9/11, the country came under criticism, especially for women’s rights:

The Gulf Wars have also drawn world attention to the events in the Gulf nations and to the status of women in
that part of the world. Ironically, the events of 9/11 brought to light again and more powerfully than ever before the issue of women’s rights in Saudi society. In the aftermath of 9/11, the Saudi system in general and its religious education system in particular became the focus of much criticism. One question put forward by Prokop captures the essence of that criticism. Prokop asked to what extent the education system had been shaped and used by religious, political, and socioeconomic forces and interests (Hamdan, 2005: p. 56).

Most criticism centered on schools and curriculum because it might have influenced the output of terrorism. Therefore, Islamic radicalism was blamed, and many educators petitioned the Saudi government to reform its curriculum (Elyas & Picard, 2013). From that time, the battle was established between the liberalism lobby and the religious men in the terms of curriculum. Each side thought they represented society and wanted to use their agenda to develop curriculum. In 2002, the liberals found that it was a time to release girls’ education from religious men. According to Hamdan, “In 2002, the General Presidency for Girls’ Education and the Ministry of Education were amalgamated as a result of requests from both the general public and the government after a fire in March 2002 in an elementary girls’ school in Mecca resulted in the death of 15 young girls” (2005: p. 44). People were angry about that decision because they believed it was the first step to changing the society, and girls and boys could be integrated at the same schools in future.

Even though girls’ schools were now under the Ministry of Education, they were not receiving education in the same subjects as boys. The content of curriculum for girls still focused on how to be a good mother and ignored other important issues in women’s lives in Saudi Arabia, such as how to be a good leader. As an example, girls were not allowed study any sport subjects because society was afraid if girls’ were given a chance to play sports that might affect her negatively. Even thought Islam does not prevent girls from playing sports, the culture had power to prevent this because it was not acceptable for women to play sports even in closed buildings where men were not allowed to get in.

Another subject that has been disregarded for girls is citizenship education; even though boys are taught citizenship from first grade through twelfth grade, girls were not taught this subject at all. I believe that because the society still did not believed that women could serve in any role for their country as a part of their citizenship. Not only were girls prevented from taking those subjects, but also they did not have a chance to attend vocational schools even though it is as important as academic subjects (Tanner, D., & Tanner, L. N., 1975). The number of girls who enrolled in public school was almost equal to the number of boys, but girls did not receive the quality of curriculum and subject. Also, girls were not allowed to practice any kind of marketing or work in positions such as a cashier. Even though the society was changing gradually, it was still impossible for women to work beside men in public. Therefore, girls did not take any class or skills about how markets work that boys were taking. Even though girls’ education was under the Ministry of Education, it could not change the curriculum, not only for girls but also for boys, because of the expected reaction of society, especially religious men.

After 2001, women’s higher education began flourishing, and now most universities have a campus for girls. Also, girls could now major in medicine, biology, and computer science in most of those campuses. However, even though there were many campuses for girls around the country, they still were not allowed to attend every class at some colleges. For example, girls’ campuses did not have engineering colleges, and the reasoning was that even if they offered that degree, girls would not have a chance to work in that field when they graduated. Moreover, society made the decision about what girls should take and what they should not, so society did not accept that girls could take the same courses that boys were going to take. Therefore, when girls were preparing for the college level they were not prepared like boys. For example, when I asked my sisters what do they want to be after graduating from high school they said that “there is no choice for us, we are obligated to be a teacher” while my brothers could make choices to be what they wanted to. It seems girls and boys were operating differently at school. According to Lloyd, Mensch, and Clark (2000: p. 113) “[m]uch research on the determinants of school enrollment, retention, and ultimate grade attainment in developing countries has been confined to an exploration of the role of individual and family factors, often with particular attention given to the ways in which these factors may operate differently for boys and for girls”.

5. King Abdullah’s Project

The last challenge and development for girls’ education started with era of King Abdullah. In 2006, the King announced the project of development education. The aims of the project are to increase the capacity of Saudi Arabia to be competitive and to build a knowledgeable society through a variety of programs, including the fol-
lowing:
• Building an integrated system of educational standards, calendar, and accounting.
• Head the implementation of the programs for the development of education, including the following five points:
  1) Continuing professional development for all those working in education.
  2) Development of curricula and learning materials.
  3) Improve the school environment to enhance learning.
  4) Use information technology to improve learning.
  5) Develop non-classroom activities and student services.
(Mashroa Almalek Abdullah Ltatwer Atalyem, 2012).

Those aims were for both girls and boys, so the first development was that they should have the same curri-
culum and that it should be revised to meet international standards. Once again there was opposition, especially
from religious men, because they thought it was impossible for girls to study the same subjects that boys are
taking. However, the power of the religious men inside society is weaker than it was before. Also, in 2009, King
Abdullah decided to give women a chance to be Ministry Education leaders. Dr. Noura al-Fayez is Deputy Mi-
nister of Education Affairs for girls. That means that at this time girls are perceived in the same manner that
boys are. For example, now girls are allowed to play sports inside their some schools, which was impossible ten
years ago. The quality of curriculum that boys were given is the same for girls right now.

This improvement is not only at K-12 level but also at the higher education level. In 2006, King Abdullah’s
scholarship was established. The scholarship is offered for study in universities around the world. Girls are given
same chance that boys are, with more flexibility for girls. According to the Ministry of Higher Education “Cur-
rently, more than 300 higher education colleges exist for women in the country alongside universities, and
women represent more than 56.6% of the total number of Saudi university students and more than 20% of those
benefiting from overseas scholarship program.” (Ministry of Higher, 2010) With scholarship girls are allowed to
major in the same fields as are boys. For example, they can be lawyers or engineers, which was impossible for
them 10 years ago.

6. Conclusion
Girls’ education in Saudi Arabia has confronted many problems as girls have tried to establish their rights to a
quality education. Over time, girls’ curriculum was changed based on several factors, including society’s reac-
tions. The curriculum still needs considerable work in order to be developed to be appropriate for contemporary
life. The future appears bright because educators in Saudi Arabia are sharing interactions with education leaders
from countries such as the United States, Germany, and Japan: This means that Saudi Arabia educators can bene-
fit from them in order to improve its school system.

References
tion, Business and Society: Contemporary Middle Eastern Issues, 6, 31-41. http://dx.doi.org/10.1108/17537981311314709
6, 42-64.
nyan Girls and Boys. *Comparative Education Review, 44*, 113-147. http://dx.doi.org/10.1086/447600


Scoping the Possibilities: Student Preferences towards Open Textbooks Adoption for E-Learning

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Abstract

Many universities have begun implementing e-Learning systems due to their low cost. However, publishers of expensive textbooks stand in the way of e-Learning’s ability to provide a cost-effective educational delivery model. While many universities aim to overcome this opposition and replace traditional publishers’ textbooks with free open textbooks, such plans cannot be executed successfully unless students are open to their use. As such, a study into students’ preferences towards open textbook adoption is vital to provide clear indication as to their opinions regarding open textbook use. Thus, this study conducted a study of University of the South Pacific (USP) students’ preferences towards open textbook adoption for e-Learning using a survey administered during Semester 2, 2013 which generated 1077 responses. Areas examined include: Impacts of textbook costs on students’ academic careers; preferences towards open textbook adoption; perceived barriers to and motivations for adoption of open textbooks; and preferred digital features and reading devices. Results show that textbook prices adversely impact students. Furthermore, a high level of acceptance towards the adoption of open textbooks was found. The study revealed that the preference for reading printed material was the highest rated barrier to open textbook adoption, while the free availability of open textbooks was rated the greatest motivator. Study findings are being used to inform efforts to develop open textbooks at the USP and may assist other universities seeking to start similar projects.

Keywords
Open Textbook, Digital Textbook, Student Preferences, Adoption, E-Learning, The University of the South Pacific

1. Introduction

E-learning is being adopted by many universities throughout the world as a cost-effective educational delivery model for expanding and widening access to higher education for all. The University of the South Pacific (USP), a dual-mode regional university co-owned by 12 Pacific island countries (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu) is one such university, particularly due to its unique mission: To deliver cost-effective quality education online to students living in the remote Pacific islands spread across 33 million square kilometers of ocean more than three times the size of Europe. In an effort to fulfill its mission and meet the critical needs of remote students, the USP is currently working towards developing 10 online learning programs by 2018 (University of the South Pacific, 2013: p. 13).

Unfortunately, the constant rise in the price of publisher textbooks poses a major hurdle in the university’s ambition to provide cost-effective tertiary education to students studying in the most remote places in the world. In fact, the cost of publishers’ textbooks has risen a staggering 812% over the last 36 years (Perry, 2012), with growing evidence revealing that many students are unable to afford textbooks (Allen, 2011; Graydon, Urbach-Buholz, & Kohen, 2011; Rube, 2005). A recent survey (Senack, 2014) of 2039 university students reported that 65% of students decided not to purchase textbooks due to their expense. Most significantly, numerous studies have found that students who do not have their own textbook copy frequently fall behind, compromising their learning outcomes and increasing their probability of failing their course (Allen, 2011; Graydon et al., 2011; Morris-Babb & Henderson, 2012; Senack, 2014).

Though rising prices continue to affect students to the extent where some forgo purchasing textbooks, an interesting paradox exists: textbooks are often a prescribed component of courses offered at the USP. Prasad and Usagawa (2014) estimate that a USP student spends close to $200 on textbooks each semester, bringing annual textbook costs to $400 per student. Indeed, research shows that students are opting out of purchasing prescribed textbooks despite knowing that doing so would negatively affect their grades (Senack, 2014). Remarkably, prescribed textbooks account for approximately 75 to 90 percent of course discourse (Stein, Stuen, Carnine, & Long, 2001). With such a high percentage of textbook-based instruction and the fact that textbooks play a critical role in students’ achievement, the need for a cost-effective solution to the problem of textbook affordability is urgently required at USP.

Recently, several textbook researchers (Allen, 2008b; Hilton & Wiley, 2011; Okamoto, 2013; Senack, 2014) have asserted the potential of open textbooks as a solution to expensive commercially published textbooks. Senack estimates that open textbooks could save students around $100 per course, a plausible assessment. For instance, British Columbia’s open textbooks project has already saved students an average of $146 each on their textbook costs (Government of British Columbia, 2014). Most importantly, research has shown that students who study with open textbooks perform as well on tests as do their peers who use traditional textbooks (Wiley, Hilton, Ellington, & Hall, 2012). In the context of tertiary education, a traditional “textbook” is commonly understood as being instructional material used within tertiary education, delivered to the user on paper, in the form and binding produced and distributed by a publisher (Education for Change Ltd. & University of Stirling, 2003: p. 11). Open textbooks “are similar to traditional textbooks in terms of content; however, they are generally available for free in digital format, along with low-cost print copies” (Hilton, Gaudet, Clark, Robinson, & Wiley, 2013: p. 38). However, while open textbooks are digital textbooks, not all digital textbooks are open textbooks (i.e. free textbooks in digital formats). The term “digital” in “digital textbooks” means a textbook that is available in digital (or electronic) format such as HTML, EPUB, MOBI, OPF or PDF. Normally, digital textbooks are “consumed on a screen rather than on paper” (Nelson, 2008: p. 42).

It is important to point out that textbooks in digital formats are not merely digitized replicas of printed textbooks. With recent developments in new and affordable educational technologies, textbooks in digital forms increasingly enable positive impacts on publishing, delivery, learning and teaching. As such, open textbooks not only possess the strong advantage of being free, but they also offer further advantages over traditional printed textbooks such as:

- More features-open textbooks may include interactive learning functions such as bookmarks, highlighting, annotations, text searching, quizzes, and hyperlinks; multiple digital media such as text, pictures, audio, video, animation, and interactive simulation; and options to synchronize offline and online learning data, which may be used to analyze students’ reading patterns to enable subsequent improvement of the text and pedagogical methods.
• Better accessibility-open textbooks may be developed in a range of formats such as Web, EPub, PDF. This results in reduced physical size and weight, enabling increased portability and mobility, and provides options to print, read online and download for offline reading on various hardware devices such as a dedicated hand-held device, a personal digital assistance (PDA), a mobile phone, or a desktop or laptop computer. The digital format reduces production and distribution time, and consequently facilities expeditious availability of texts that further support access.

• Greater flexibility-open textbooks may be updated quickly and provide access to the latest content. It “could be updated, say, to incorporate new knowledge. It could be improved as students and teachers develop better ways of expressing concepts or ordering learning objects. It could be localized or customized for a variety of learners, whether in different cultures or at different levels of education” (Matkin, 2009: p. 3).

Despite the abovementioned benefits, the adoption of digital textbooks has reportedly been much slower than anticipated (Allen, 2008a; Guthrie, 2012; Lee, 2010; Oliveira, 2012; Thomas, 2007). The reasons for this slow adoption vary, but 3 principal reasons emerge from literature.

To begin with, numerous studies have shown that students’ attitudes and preferences toward printed books were more positive than toward digital textbooks (Armatus, Holt, & Rice, 2003; Armstrong, 2008; Buzzetto-More, Sweat-Guy, & Elobaid, 2007; Folb, Wessel, & Czechowski, 2011; Levine-Clark, 2006; Li, Poe, Potter, Quigley, & Wilson, 2011; McKnight & Dearnley, 2003; Spencer, 2006; Woody, Daniel, & Baker, 2010). Cuillier and Dewland (2014), for example, in their pilot study of digital textbook integration into a business course, found that almost 64% (23 out of 36) survey respondents preferred to read textbooks in print. Several themes consistently appear in literature on preferences for print format. These include less visual fatigue; more retention; greater comfort and relaxation; less anxiety; faster reading; and dependability and ease of use. However, unlike most commercial digital textbooks, open textbooks can be printed, thus resolving the concerns of those who prefer print format.

Next is the issue of digital textbook compatibility with hardware and software (Lee, Messom, & Yau, 2013). A digital textbook has three elements: the digital textbook content file, software to read the file, and a hardware device to view it on (Cavanaugh, 2002). Compatibility depends on these three elements; in other words, “you need the right software to read the right format, and you need that software installed on a compatible hardware device” (Nix, 2010: para. 9). Actually, digital textbook content in various file formats should be accessible on various hardware devices (for example, PC, laptop, PDA, or a dedicated hand-held reading device) to suit students’ reading preferences. However, not all devices are compatible with all digital textbook format options (Buell, 2013: para. 2). Anuradha and Usha (2006) claim that digital textbook adoption rates have been slow because of its availability over disparate formats which are often “incompatible and non-interoperable” (p. 49). In the same vein, Landoni and Hanlon (2007) and Nelson (2008) acknowledged the possibility that compatibility problems may be a major force in slowing digital textbook adoption. This view has been confirmed by several studies. For example, in their interview study of 180 students and 20 academic staff members eliciting opinions about the challenges facing digital textbook adoption across schools in Bandar Sunway in Malaysia, Lee et al., (2013) found the most common perceptions about digital textbook use were related to difficulties associated with compatibility of digital books technology. Teachers in their study commented, “E-textbook reader device and content format incompatibility will be a problem,” and “[the ‘format’ war for e-textbooks is a hurdle that must be overcome”, while one student commented that “I won’t buy anything if it’s not compatible with all of my devices” (p. 35).

Third is the problem driven by students’ lack of contentment with digital textbook features. Brahme and Gabriel (2012) surveyed graduate students’ experiences and preferences regarding digital textbooks. They reported that lack of digital textbook features such as note-taking and highlighting caused frustration to 63% of their participants. Brahme and Gabriel (2012) asserted that students are often frustrated with digital textbook features that do not satisfy their needs. In another major study of how students use browser-based digital books (not necessarily textbooks), Berg, Hoffmann, and Dawson (2010) found that many students were frustrated with the structure and functionality of digital book features as they did not function according to their expectation. The authors concluded that, while interactive features are an advantage digital books have over printed books, these features must function well and be easily understood by the users for digital books to be more widely accepted.

To conclude, the three root causes for the current slow adoption of digital textbooks are: Greater preferences for reading printed textbooks over digital ones; incompatibility with students preferred reading device(s); and incongruence of digital textbook features with students’ expectations. Taken together, these findings indicate
that successful adoption of digital textbooks is primarily dependent on student preferences.

How to apply the findings from these studies to the adoption and acceptance of open textbooks among students, however, remains unclear, as most previous studies have only focused on adoption of commercial digital textbooks, not open textbooks. Such findings are thus not applicable, especially since open textbooks are free and printable; cost savings and printing options may encourage students to choose open textbooks over traditional textbooks. Moreover, open textbook publishing currently lacks the established vigorous editorial mechanisms found in traditional publishing models, eliciting uncertainties about accuracy and reliability of the content (Educause, 2011), which may cause students to lean towards traditional textbooks. As such, students’ preferences towards open textbook adoption-as opposed to commercial digital textbooks-remain unclear.

At the moment, USP is investigating possibilities to integrate open textbooks to its online courses in an effort to provide students with more affordable, interactive and flexible textbooks. In order to implement open textbooks effectively, it is vital for USP to craft clear strategies for the adoption of open textbooks for e-Learning. In this vein, prior consultation with students themselves is required as their preferences towards open textbook adoption and factors influencing their choices will provide valuable information in predicting their acceptance of open textbooks. Awareness of student preferences is also crucial since their academic success is at stake. With these concerns in mind, this study addressed four factors:

1) What are the implications of textbook costs on students’ academic careers?
2) What are students’ preferences and motivations for, and barriers against, open textbook adoption?
3) What are students’ most desired digital features in open textbooks?
4) What are students’ most preferred devices for accessing open textbooks?

2. Methodology

The positivist paradigm was adopted to answer the above research questions. A quantitative Web-based survey questionnaire partly making use of questions from 2012 Florida Student Textbook Survey (Florida Virtual Campus, 2012) was constructed in five sections: 1) demographics; 2) impacts of textbook costs; 3) open textbook adoption; 4) desired digital features; and 5) desired reading devices. Three experts verified content validity of the questionnaire, with the questionnaire modified based on their responses and comments. A conditional question was included in Section 3: If the respondent answered “yes for some of my courses” or “yes for all my courses” to open textbook adoption questions, they were taken to motivator question, while a “no”, “maybe” or “undecided” response took them to barrier questions. A variety of question formats was used: forced choice, multiple choice, multiple select, rating, skip-logic, and Likert scale. The final questionnaire included 18 questions. To ensure reliability of the final version, test-retest reliability with a two-week interval was conducted on 7 students. The results obtained were subjected as “undeliverable” were removed from the sample size. The total number of students able to see the invitation to complete the survey was approximately 13,000. 1138 questionnaires were received, and after rejecting 61 partially filled-in questionnaires, 1077 remained available for analysis. Thus, the response rate was 8%. The data gathered via Google Forms were exported to MS-Excel for analysis based on the research questions. The results of the study are discussed in the next section.

3. Results

To ensure accurate interpretation, the Hilton et al., (2013: p. 38) definition of an open textbook as cited in the introduction to this paper was provided to respondents in the invitation e-mail to participate as well as in the survey. The data from the survey’s quantitative questions were analyzed and are presented below.

3.1. Demographics

Of 1077 respondents, 45% were male (n = 489) and 55% were female (n = 588). The majority of the respon-
students, 90% \((n = 970)\), were undergraduate students, with only 10% \((n = 107)\) being postgraduate students. Of the total respondents, 82% \((n = 888)\) were full-time and 18% \((n = 189)\) were part-time students. 70% of the respondents were less than 25 years old, 26% were between 26 and 40 years old, and the remaining 4% represented age groups older than 41. The students were categorized by their disciplines based on three different faculties in the USP, with the majority of students \((n = 429)\) from Faculty of Business and Economics followed by Faculty of Science, Technology and Environment \((n = 372)\), and Faculty of Arts, Law and Education \((n = 276)\).

### 3.2. Frequency of Buying Prescribed Textbooks

Students were asked to give an indication of how often they bought prescribed textbooks. As Table 1 demonstrates, 484 of the 1077 respondents reported purchases very frequently or frequently, 331 bought occasionally, 183 rarely bought, and 79 reported that they never purchased prescribed textbooks.

### 3.3. Number of Prescribed Textbooks Bought in Semester 2, 2013

All the respondents \((n = 1077)\) were asked how many prescribed textbooks they purchased for Semester 2, 2013. 74% \((n = 793)\) reported buying at least one prescribed textbook, while 284 (26%) students indicated that they did not purchase any textbook for Semester 2, 2013. Table 2 presents a breakdown of textbooks purchased in Semester 2, 2013. As illustrated, 793 students purchased a total of 1970 books. The number of textbooks bought by an individual ranged from 1 to 5 textbooks, with the mode falling in 2.

### 3.4. Textbook Expenditure for Semester 2, 2013

Those students \((n = 793)\) who reported textbook purchase were asked to estimate the total Fijian dollar \((1FJD = 0.55\text{ USD})\) amount of their purchase for Semester 2, 2013. Table 3 demonstrates the respondents’ replies, in

---

**Table 1.** Prescribed textbook purchase frequency.

<table>
<thead>
<tr>
<th>How often do you buy prescribed textbooks?</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very frequently</td>
<td>191</td>
</tr>
<tr>
<td>Frequently</td>
<td>293</td>
</tr>
<tr>
<td>Occasionally</td>
<td>331</td>
</tr>
<tr>
<td>Rarely</td>
<td>183</td>
</tr>
<tr>
<td>Never</td>
<td>79</td>
</tr>
</tbody>
</table>

**Table 2.** Number of prescribed textbooks purchased.

<table>
<thead>
<tr>
<th>How many prescribed textbooks did you buy for Semester 2, 2013?</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>284</td>
<td>26</td>
</tr>
<tr>
<td>One</td>
<td>186</td>
<td>17</td>
</tr>
<tr>
<td>Two</td>
<td>227</td>
<td>21</td>
</tr>
<tr>
<td>Three</td>
<td>216</td>
<td>20</td>
</tr>
<tr>
<td>Four</td>
<td>138</td>
<td>13</td>
</tr>
<tr>
<td>Five</td>
<td>26</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 3.** Semester 2, 2013 textbook expenses.

<table>
<thead>
<tr>
<th>How much did you spend on your textbooks for Semester 2, 2013?</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FJD000-100</td>
<td>247</td>
<td>31</td>
</tr>
<tr>
<td>FJD101-200</td>
<td>132</td>
<td>17</td>
</tr>
<tr>
<td>FJD201-300</td>
<td>177</td>
<td>22</td>
</tr>
<tr>
<td>FJD301-400</td>
<td>106</td>
<td>13</td>
</tr>
<tr>
<td>FJD401-500</td>
<td>116</td>
<td>15</td>
</tr>
<tr>
<td>More than FJD500</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>
terms of frequency and percentage of students by expenditure category. According to the results, 69% of the students reported spending over FJD200 on textbooks during Semester 2, 2013. The three most common expenditure categories were FJD000-100 (31%), followed by FJD201-300 (22%), and, in third place, FJD101-200 range chosen by 17% (n = 132) of respondents. The most striking result to emerge from the data is that 30% (n = 237) of the respondents spent more than FJD300 on textbooks.

3.5. Scholarship for Textbook Expenses

Those students (n = 793) who had purchased textbooks were asked to clarify whether they were on scholarship during Semester 2, 2013. Remarkably, 650 (82%) of the 793 students who had bought textbooks reported that they were on scholarship during the second semester of 2013. Scholarship recipients (n = 650) were then asked to indicate the percentage of their textbook costs covered by the scholarship. 22% reported that their scholarship did not cover any of the textbook costs, 23% said that all their textbooks costs was covered by the scholarship, and 57% indicated that a portion of their textbooks costs was covered by the scholarship (Table 4).

3.6. Methods of Textbook Purchase

Students (n = 793) who had purchased textbooks were asked to select their methods of textbook purchase. Taking into account that an individual would buy more than one text (see Table 2), multiple-select was allowed. The results, as shown in Table 5, indicate that the most common method of purchase was buying new, printed textbooks from the campus bookshop (64%), which was followed by buying used printed textbooks (21%). The least popular methods of purchase were buying digital textbook with permanent access (8%) and buying digital versions with temporary access (7%). The single most striking observation to emerge from the data comparison was that 85% of the students purchased printed textbooks, while only 15% opted for digital versions.

3.7. Reasons for Not Buying a Textbook

Those students (n = 284) who reported not purchasing a textbook were asked to select cause(s) from a prepared list of reasons for not doing so. The list of reasons, frequency, and percentage is presented in Table 6. As illustrated, the four most commonly cited reasons for not buying a textbook were unaffordability (42%), no textbooks prescribed (15%), using a classmate’s copy (14%), and photocopying required chapters from the textbook (10%).

Table 4. Percentage of textbook expense covered by scholarship.

<table>
<thead>
<tr>
<th>What percentage of your textbook expense was covered by scholarship for Semester 2, 2013?</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>140</td>
<td>22</td>
</tr>
<tr>
<td>Less than 25%</td>
<td>120</td>
<td>18</td>
</tr>
<tr>
<td>26% to 50%</td>
<td>130</td>
<td>20</td>
</tr>
<tr>
<td>51% to 75%</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td>76% to 99%</td>
<td>46</td>
<td>7</td>
</tr>
<tr>
<td>All textbook expense</td>
<td>147</td>
<td>23</td>
</tr>
</tbody>
</table>

Table 5. Textbook purchase method.

<table>
<thead>
<tr>
<th>For Semester 2, 2013, how did you purchase your textbooks? Please select all that apply.</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I purchased new print versions from the campus bookshop.</td>
<td>707</td>
<td>64</td>
</tr>
<tr>
<td>I purchased used print versions from former students.</td>
<td>231</td>
<td>21</td>
</tr>
<tr>
<td>I purchased digital textbooks-temporary ownership license.</td>
<td>75</td>
<td>7</td>
</tr>
<tr>
<td>I purchased digital textbooks-permanent access.</td>
<td>90</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 6. Reasons for not buying a textbook.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not prescribed for the course(s) I took.</td>
<td>56</td>
<td>15</td>
</tr>
<tr>
<td>Too expensive; not able to afford it.</td>
<td>160</td>
<td>42</td>
</tr>
<tr>
<td>Borrowed the textbook from my classmates.</td>
<td>52</td>
<td>14</td>
</tr>
<tr>
<td>Borrowed the textbook from the campus library reserve shelf.</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Photocopied the whole textbook.</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td>Photocopied the required chapters from the textbook.</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>The textbooks were sold out in campus bookshop.</td>
<td>17</td>
<td>5</td>
</tr>
</tbody>
</table>

3.8. Textbook Cost Consequences

The respondents \((n = 1077)\) were asked to rate the effects of high textbook costs on their academic career (see Table 7). As shown, students indicated that the high cost of textbooks has caused them to, frequently, occasionally, or seldom: not purchase prescribed textbook (65%), submit assigned activities late (57%), earn poor grade (56%), take fewer courses (44%), fail a course (39%), not register for a course (31%), drop a course (28%), or withdraw from a course (26%).

3.9. Actions Taken to Reduce Textbook Cost

Table 8 shows the various actions respondents \((n = 1077)\) took in order to reduce costs of textbooks. The vast majority of the students (72.2%) reported taking one or more measures to reduce the costs of their textbooks. Among the 10 actions to reduce textbook costs, the 3 most frequently reported were: buying used copies from former students (81.7%), using a reserve copy from the campus library (81.2%), and sharing books with classmates (81.1%).

3.10. Intention to Adopt Open Textbooks

Table 9 presents the distribution of student responses on their willingness to use open textbooks in the future given the choice of free access to digital versions and/or print at your own cost. Of the 1077 students who responded to the survey, 69\% \((n = 743)\) said they would use open textbooks for some or all of their courses, while only 3\% \((36/1077)\) reported that they had no intention of using open textbooks. The combined total of 28\%: “maybe” (21\%) and “undecided” (7\%), indicated respondents’ indecisiveness on whether they would use open textbooks in the future.

3.11. Motivations for Adopting Open Textbooks

Only those students \((n = 743)\) who intended to use open textbooks for some or all of their courses were asked to rate motives that influenced their decision. These students were asked to rate 10 motivator items on a 5-point Likert-type scale ranging from 0 to 4 for each of the motivator items, where 0 represented a motive that had “no influence” on their decision and 4 represented a “very influential” motive. Each score on the Likert scale was then converted to a mean motivator score \((0 = 0, 1 = 25, 2 = 50, 3 = 75, 4 = 100)\), so that higher scores indicated stronger motivation. Table 10 illustrates the rank order and motivator strength (mean) of these 10 motivators. As illustrated, the motivator strength ranged from a high of 89.0 for the item ‘They are freely available’ to a low of 58.1 for the item “They are visually appealing”.

3.12. Barriers to Adopting Open Textbooks

Those indecisive students \((n = 298)\) and the students who were not interested \((n = 36)\) in using open textbooks were asked to rate the strength of each barrier from a set of 6 potential barriers to open textbooks adoption on a Likert-type scale with scores ranging from 0 (no influence) to 4 (very influential). All the scores were transformed to a 0 - 100 scale \((0 = 0, 1 = 25, 2 = 50, 3 = 75, 4 = 100)\). Table 11 shows the rank order and barrier
Table 7. Textbook cost consequences.

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Take a fewer courses.</td>
<td>603</td>
<td>56</td>
<td>151</td>
<td>14</td>
</tr>
<tr>
<td>Not to register for a specific course.</td>
<td>743</td>
<td>69</td>
<td>129</td>
<td>12</td>
</tr>
<tr>
<td>Drop a course.</td>
<td>775</td>
<td>72</td>
<td>140</td>
<td>13</td>
</tr>
<tr>
<td>Withdraw from a course.</td>
<td>797</td>
<td>74</td>
<td>118</td>
<td>11</td>
</tr>
<tr>
<td>Earn a poor grade because I could not afford the textbook.</td>
<td>474</td>
<td>44</td>
<td>183</td>
<td>17</td>
</tr>
<tr>
<td>Fail a course because I could not afford the textbook.</td>
<td>657</td>
<td>61</td>
<td>162</td>
<td>15</td>
</tr>
<tr>
<td>Submit my assigned activities late because I did not have the prescribed textbook.</td>
<td>463</td>
<td>43</td>
<td>151</td>
<td>14</td>
</tr>
<tr>
<td>Not purchase the required textbook.</td>
<td>377</td>
<td>35</td>
<td>129</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 8. Actions taken to reduce textbook costs.

<table>
<thead>
<tr>
<th>Action</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make no attempt to reduce textbook cost.</td>
<td>299</td>
<td>778</td>
</tr>
<tr>
<td>Share books with classmates.</td>
<td>873</td>
<td>204</td>
</tr>
<tr>
<td>Buy used or new books online from a source other than the campus bookshop</td>
<td>657</td>
<td>420</td>
</tr>
<tr>
<td>Buy a digital version of a textbook.</td>
<td>585</td>
<td>492</td>
</tr>
<tr>
<td>Buy used copies from former students.</td>
<td>880</td>
<td>197</td>
</tr>
<tr>
<td>Do not purchase the prescribed textbook.</td>
<td>790</td>
<td>287</td>
</tr>
<tr>
<td>Use a reserve copy from the campus library.</td>
<td>875</td>
<td>202</td>
</tr>
<tr>
<td>Photocopy only the chapters needed for the course.</td>
<td>798</td>
<td>279</td>
</tr>
<tr>
<td>Photocopy the whole textbook.</td>
<td>524</td>
<td>553</td>
</tr>
<tr>
<td>Sell used books.</td>
<td>753</td>
<td>324</td>
</tr>
</tbody>
</table>

Table 9. Intention to use open textbooks.

<table>
<thead>
<tr>
<th>Intention to use open textbook in the future</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Maybe</td>
<td>227</td>
<td>21</td>
</tr>
<tr>
<td>Undecided</td>
<td>71</td>
<td>7</td>
</tr>
<tr>
<td>Yes, for some of my courses</td>
<td>345</td>
<td>32</td>
</tr>
<tr>
<td>Yes, for all my courses</td>
<td>398</td>
<td>37</td>
</tr>
</tbody>
</table>

strength (mean) of these items.

3.13. Preferred Digital Features

To elucidate the most preferred digital features in open textbooks, all those students (n = 743) who had indicated their willingness to use open textbooks for some or all their courses were asked to rate the preference of 10 features on a 5-point Likert scale (where a score of “0” was “least preferred” and “5” “most preferred”). Mean was calculated by converting all the scores to a 0 - 100 scale, in a manner that higher mean scores indicate greater preference. Table 12 depicts the rank and mean of the 10 digital features provided in the list.
Table 10. Motivators to use open textbooks.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Motivators</th>
<th>Motivator strength (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>They are freely available.</td>
<td>89.0</td>
</tr>
<tr>
<td>2</td>
<td>They can be self-printed and read.</td>
<td>87.2</td>
</tr>
<tr>
<td>3</td>
<td>They have interactive features that are not available in printed books (e.g. search functions).</td>
<td>83.5</td>
</tr>
<tr>
<td>4</td>
<td>They have features which are in printed books but easier to use in digital version (e.g. hyperlinked table of contents).</td>
<td>78.3</td>
</tr>
<tr>
<td>5</td>
<td>They have greater mobility and are convenient to carry.</td>
<td>77.6</td>
</tr>
<tr>
<td>6</td>
<td>They are easily portable and can be read on various reading devices.</td>
<td>76.6</td>
</tr>
<tr>
<td>7</td>
<td>They can be downloaded to a personal device and read offline.</td>
<td>75.7</td>
</tr>
<tr>
<td>8</td>
<td>They can be read online.</td>
<td>74.3</td>
</tr>
<tr>
<td>9</td>
<td>They are easy to use.</td>
<td>70.3</td>
</tr>
<tr>
<td>10</td>
<td>They are visually appealing.</td>
<td>58.1</td>
</tr>
</tbody>
</table>

Table 11. Barriers to use open textbooks.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Barriers</th>
<th>Barrier strength (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer reading printed materials.</td>
<td>71.3</td>
</tr>
<tr>
<td>2</td>
<td>I am afraid digital textbooks may not be compatible with all my reading devices.</td>
<td>63.7</td>
</tr>
<tr>
<td>3</td>
<td>I am worried about the quality of content.</td>
<td>63.3</td>
</tr>
<tr>
<td>4</td>
<td>I do not have experience in using digital textbooks.</td>
<td>62.7</td>
</tr>
<tr>
<td>5</td>
<td>I am not confident with using digital textbooks.</td>
<td>56.6</td>
</tr>
<tr>
<td>6</td>
<td>I do not have access to technology required to take advantage of digital textbooks.</td>
<td>43.6</td>
</tr>
</tbody>
</table>

Table 12. Preferred digital features.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Features</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hyperlinked table of contents</td>
<td>81.5</td>
</tr>
<tr>
<td>2</td>
<td>Adding notes</td>
<td>81.2</td>
</tr>
<tr>
<td>3</td>
<td>Bookmarking</td>
<td>80.5</td>
</tr>
<tr>
<td>4</td>
<td>Searching within the textbook</td>
<td>80.3</td>
</tr>
<tr>
<td>5</td>
<td>Provides links to websites</td>
<td>80.1</td>
</tr>
<tr>
<td>6</td>
<td>Copying and pasting</td>
<td>79.0</td>
</tr>
<tr>
<td>7</td>
<td>Incorporates videos, figures, diagrams, or images</td>
<td>77.9</td>
</tr>
<tr>
<td>8</td>
<td>Highlighting</td>
<td>76.5</td>
</tr>
<tr>
<td>9</td>
<td>Printing</td>
<td>71.6</td>
</tr>
<tr>
<td>10</td>
<td>Text size control</td>
<td>67.7</td>
</tr>
</tbody>
</table>

3.14. Preferred Reading Devices

Table 13 shows preferences for reading devices for open textbooks as expressed by those students (n = 743) who were in favor of using open textbooks for some or all their courses in the future. As shown, from a prespecified list of 4 common reading devices, the largest proportion of students (64%) preferred laptops; when combined with other mobile devices such as tablets (15%) and mobile phones (2%), 81% of the students preferred to access open textbooks through a mobile device.
Table 13. Most preferred reading device.

<table>
<thead>
<tr>
<th>Device</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>476</td>
<td>64</td>
</tr>
<tr>
<td>Desktop computer</td>
<td>141</td>
<td>19</td>
</tr>
<tr>
<td>Tablet (iPad, Galaxy, other)</td>
<td>111</td>
<td>15</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

4. Discussion

This study surveyed three factors affecting USP students’ prescribed textbook buying behaviors and their preferences towards open textbooks adoption in place of traditional publisher texts as prescribed textbooks for their online courses: Cost, digital features, and preferred reading devices. The current study found that 814 of the 1077 students very frequently, frequently or occasionally bought prescribed textbooks. Similarly, in an earlier study by Carpenter, Bullock, and Potter (2006), almost three quarters of students reported buying textbooks that had been prescribed to them. As a result of their research, they concluded that the probability of a student buying a prescribed textbook depends on the strength of the endorsement given by their course lecturers. This also seems to be a determinant of USP students’ purchase decisions for prescribed textbooks. Of the 1077 students who took part in the survey, the majority, 74% (n = 793), indicated buying at least one prescribed textbook during Semester 2, 2013. The purchasing quantity ranged from 1 to 5 prescribed textbooks, with the mode falling in 2. In part, this wide array of purchases may be due to the number of courses taken by each student. The textbook expenditure reported for Semester 2, 2013, ranged from FJD000-100 category to over FJD500, with approximately one-third of those who made purchase spent over FJD300. Interestingly, 650 out of 793 students who bought textbooks were on scholarship. From the 650 scholarship recipients, 23% received full funding for textbook expenses, 57% got partial grant, and only 22% did not receive any financial aid for their textbook expenses. What is surprising is that amongst those students (n = 793) who purchased textbooks, the majority of them (64%) received some financial grant towards their textbook expenses. The data suggest that students who do not receive any financial support towards textbook expenses are less likely to purchase textbooks. It is perhaps not surprising that 42% of those students who reported not buying a textbook said they had not purchased one or more textbooks because the cost was too high. Three other common reasons for not buying a textbook included: textbook not required for a course (15%), borrowing a classmate’s textbook (14%), and photocopying required chapters from the textbook (10%). The five most detrimental effects expensive textbooks had on students’ academic careers were revealed as inability to purchase prescribed textbooks, late submission of assigned activities due to no personal copy of prescribed text, poor grades, fewer courses, and course failure. This clearly indicates that high textbook costs have a negative impact of students’ academic careers. Given the adverse effects of expensive textbooks, students were asked if they did anything to reduce their textbook expenses. It is not surprising that a large majority (72.2%) of respondents indicated that they used more than one strategy to save money on textbook cost. The most popular method reported was buying used textbooks, with 81.7% of respondents indicating that they utilized this method. This is in line with the recent finding by the AdHoc Senate Committee on Student Textbook Savings, where 81.4% of the respondents reported buying used textbooks (AdHoc, 2014). The three most popular methods reported were sharing classmate’s books, using a library copy, and buying used textbooks.

In response to the question of whether the students are willing to use open textbooks in the future for their online courses, the majority responded in the positive, “Yes, for some of my courses” (32%) or “Yes, for all my courses” (37%). These results showed that free availability of open textbooks was the highest rated motive behind these willing students’ intention to use open textbooks in the future. This was expected since reduced cost is the most commonly reported benefit of open textbooks (Hilton, Robinson, Wiley, & Ackerman, 2014; Wiley et al., 2012). The next most highly rated motivator was ability to self-print. Again, this comes as no surprise as most previous studies have consistently found that students prefer to read printed rather than on-screen materials (Buzzetto-More et al., 2007; Spencer, 2006; Woody et al., 2010). Interactive features, which are not available in printed books, were ranked at third position. Concerning barriers to open textbooks adoption: Preference for reading printed materials, concerns about compatibility, and worries about quality of content were ranked as the
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The top-three barriers to adoption of open textbooks by those students who were not in favor or undecided about using open textbooks. The top two barriers are commonly cited barriers to adoption of textbooks in digital formats (as identified in the introduction to this paper); however, concerns regarding quality of content have also emerged as a strong barrier that may overshadow open textbooks free of price. In connection with quality, Cragun (2007) asked his students if they preferred a more developed textbook that costs money or a free textbook that covered just what they needed to know for the course. Students preferred using a free textbook. Cragun remarked that free does not always mean the open textbook is good, but he recognized quality is important and that more people collaborating in development will help ensure this. In the final part of the paper, he writes: “My students clearly liked the text, despite its flaws, but this was likely due-in large part-to the text being free” (Cragun, 2007: p. 11). The results of Cragun’s study showed that students liked the zero dollar cost and did not worry that the textbook was incomplete as long as the textbook covered the course learning contents.

With regard to student preferences for digital features, hyperlinked table of contents was the most preferred feature with a mean of 81.5. The next most preferred features, in descending order, were adding notes, bookmarking, searching within the textbook, and links to websites (all these features have mean above 80). Several research studies (Behler & Lush, 2010; Chong, Lim, & Ling, 2009; Cuillier & Dewland, 2014) have shown that these features were atop the wish list of students. That the majority of students in this and other studies strongly prefer these features substantiates making these features richer and standardized across digital textbook technology. According to Behler and Lush (2010), digital textbook features are far from where they need to be to allow digital textbooks to replace traditional books. Concurring with Behler and Lush (2010), Philip and Moon (2013) purported that there is a need for significant improvements in the features of digital textbooks for them to be widely adopted. This further validates the call for the development of better and consistent digital textbook features.

On the question of students’ most preferred device for reading open textbooks, most (64%) indicated laptops, 19% desktop computers, 15% tablets, and 2% mobile phones; consequently, 81% of the students preferred to access open textbooks through a mobile device. This finding is consistent with recent studies of digital textbooks such as Rockinson-Szapkiw, Courduff, Carter, and Bennett (2013), Cuillier and Dewland (2014), and Hwang, Kim, Lee, and Kim (2014). The current study found that the least preferred device was mobile phone. This finding is not surprising given results from prior studies that have found this type of technology has not shown great popularity for the purpose of digital textbook reading (Croft & Davis, 2010; Zimerman, 2011). Some authors (e.g. Zimerman, 2011) have speculated that, with appropriate software, mobile phones could double as a viable reading device, particularly since most students have mobile phones. As such, it is important to develop platform-independent open textbooks that are accessible through any reading device with a simple browser-based interface. Finally, the response rate to the survey was limited and much lower than anticipated, which might limit the generalizability of findings to the target population. However, the study was feasible to conduct as a starting point for further work.

5. Conclusion and Future Directions

This study was concerned with USP students’ preferences towards adoption of open textbooks for online courses; however, the results should be applicable also to other USP course modes (blended, print and face-to-face). The results of the current study are extremely encouraging, with a good percentage (69%) of the surveyed students indicating their willingness to use open textbooks for some or all of their courses, though not all students were keen in using open textbooks. But like any other technological innovation in education, with continued usage, students are likely to gradually get more familiar and confident in using textbooks in digital formats. Hoseth and Merinda (2012) in their paper similarly concluded that participants in their study clearly expressed the need to adapt to change and switch to digital textbook formats, and successively becoming more familiar with them over time. This is in consonance with Chou (2014: p. 16) when he concludes that, “When students are given time and opportunities to read e-books, they are likely to develop e-book reading habits. It would be a pity if we gave up providing students e-books merely because of their initial negative attitudes.”

In consideration of the above findings, the study recommends the viability of open textbooks. Expensive traditional textbooks will need to be replaced with open textbooks as prescribed textbooks for USP courses. Clearly, this will be no mean feat. Future work will involve: 1) Identifying USP teachers willing to collaborate with the primary author in the development of custom-built OER derived open textbooks; 2) Developing an open text-
book learning analytics system; 3) Piloting an open textbook over a semester; 4) Evaluating an open textbook and the analytics system; 5) Documenting the development processes; and 6) Disseminating the outcomes through conferences and journals as well as focused events and workshops within USP. Considering the convincing results and suggested research directions, there is hope that open textbooks will replace their traditional counterparts as prescribed texts and in process benefit USP students.

Acknowledgements

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References


Variability of Transition Rate and Gender Parity in Rural Primary School Level in Gopiballavpur Circle (West), Paschim Medinipur, West Bengal: A Case Specific Study

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Abstract

This paper assesses variability of transition rate and gender parity in rural primary school level in Gopiballavpur Circle (West), Paschim Medinipur, West Bengal. With respect to 2003-2012 (ten academic sessions) registered enrolment record in two primary schools, the variability of transition rates was calculated for each school using actual values of measurable parameters relating to study. Thus, a transition rates was assigned to each of the schools according to the degree of transition rates. Similarly, gender parity for each school was derived from male and female registered pupils. The ratio of female and male was used to calculate the gender parity for the schools, which was then multiplied by the percent of value occurrences to obtain the gender parity index (GPI). This analysis was used to divide the transition rate into four assigned threshold including on the basis of positive and negative numeric a) very low transition rate (0% - 25%); b) medium transition rate (26% - 50%); c) high transition rate (51% - 75%); and d) very high transition rate (76% - 100%). Whereas, gender parity divided into three assigned attributes (a) gender parity index (=1) for parity between females and males pupils; (b) gender parity index (<1) disparity in favour of male pupils; and (c) gender parity index (>1) disparity in favour of female pupils. However, the interpretation should be the other way rounded for indicators that should ideally approach tends

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Overall, this type of transition rates and gender parity assessment may prove useful for future school planning and management programs in rural primary school.

**Keywords**

Transition Rates, Gender Parity, Rural Primary School, Academic Year

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### 1. Introduction

This literature focuses on several key issues at the heart of the current debate over the quality of elementary education system (Alspaugh, 1998a; Anderson et al., 2000). Trends in elementary education system achievement and course taking are examined first, both as system outputs and as the context for current reform efforts by transition rate and gender parity. Maintaining the elementary education system pipeline and preparing all young people for an increasingly technological society are two goals driving reforms targeted to raise the academic bar for students and improve the quality of teaching in a particular society (Alspaugh, 1998d; Anderson et al., 2000). The desire to raise the academic expectations for all students has led states to both adopt standards specifying what students should know and be able to do and to implement new testing mechanisms to measure what students actually know.

Although it is widely recognized that education reforms cannot be successful without actively engaging teachers, comprehensive, valid measures of change in teacher quality are difficult to come by, leaving us to rely on currently available data. Indicators of teacher credentials, experience, and participation in professional development activities are presented, as well as data on how new teachers are being inducted into the professional signature on flow transition and in parity or disparity in favour of males pupils as well as females ones (Blyth et al., 1983; Breen & Buchman, 2002). This several study emphasizes variation in both access to education resources (by school poverty level and minority concentration) and performance (by sex, race/ethnicity, and family background) as data availability allows. A distinction is also made between mathematics and science when the policy implications of data are different or the data tell different stories (Breen & Buchman, 2002; Bruner, 1996).

Free and compulsory education to all children up to the age of fourteen years is our Constitutional commitment. The Government of India has initiated a number of programmes to achieve the goal of universalization of Elementary Education (UEE) among which the Sarva Shiksha Abhiyan (SSA) is the most recent one. It aims at achieving universal primary education by 2007 and universal elementary education by 2010. Achieving universalization means achieving universal access, universal enrolment, universal retention and universal quality of education. Though indicators to monitor progress towards universal access, enrolment and quality are well defined but the general perception about same is not clear in case of indicators of universal retention. In simple terms, universal retention at primary level means every child enter into the system through Class I should retain in the system up to Class IV (Campbell, 2001). Universal retention under SSA by 2007 means that all children enrolled in Class I in 2002-03 should retain in the system and move up to Class IV in 2007. Depending upon the availability of data and understanding of concept of transition rate, indicators of gender parity are computed and analysed.

Keeping in view availability of data, an attempt has been made in the present note to assess computation procedure of a variety of transition rate and gender parity. Since recent class-specific enrolment and repeaters data are available school registered book and from District Information System for Education (DISE), the same is used to construct indicators of gender parity.

In view of availability of enrolment and repeaters data, a particular method for assessing drop-out and retention is applied. However, it is the transition rate which presents true picture of retaining capacity of the system. A number of states have initiated child-tracking studies across the country but in view of resource and time constraints the same is not an easy task to undertake gender parity annually. Each and every enrolled child in a school is tracked/monitored over a period of five years or till a child remains in the system. The research studies undertaken in the recent past tracked child for five years to measure gender parity, completion rate; thus presents percentage of children those who completed primary level exactly in five years (Campbell, 2001; Dubois et al., 2002; Bruner, 1996).
This presents incomplete completion rate as a number of children still remain in the system even after five years because of repetition. The system should be monitored till the last child remains in the system (Dubois et al., 1994). If resources are available, child-tracking is the only way through which gender parity, drop-out, retention, survival and completion rates should be analysed. School registers for five years are used to track a group of children those who enter into the system together. A few states have designed their own formats and even developed software for the purpose. If tracked for different cohorts and separately for male and female, the same can help in monitoring progress towards retaining capacity of the system as well as assessing completion rate.

Depending upon availability of data, an indicator to measure drop-out rate should be developed (Bruner, 1996; Campbell, 2001). If resources available, true-cohort study where each and every enrolled child is tracked should be undertaken which can be used for both assessing drop-out as well as completion rate. If resources are not available and data available, retention rate by using enrolment and repeaters data over a period of five years should only be utilized to assess retaining capacity of an education system. The transition rate so obtained is subtracted from 100 to obtain drop-out rate at an educational level (Alspaugh & Harting, 1995). To know real cause of low retention/high transition rate, it is essential that the same be calculated and analysed at disaggregated levels and if data available, separately for male and female, rural and urban areas and for schedule caste (SC) and schedule tribe (ST) children (Alspaugh, 1998).

The root cause of high transition rate can be identified by calculating class-to-class flow rates such as, promotion, drop-out and repetition rate (Alspaugh, 1998c; Bryk & Thum, 1989). This will help a district/state in identifying in which class there is high incidence of drop-out and repetition and also in knowing whether the same is because of male/female SC/ST children. The class-to-class drop-out rates can also be used in assessing average transition rate and repetition during intermediary year. The average indicate quantum of transition rate as well as gender parity during intermediary year in relation to total enrolment in primary classes (Frymier, 1996; Gardner et al., 2000). Average transition rate can also be used to examine trends in transition rate and gender parity over a period of time but the same is different than the retention rate which is based upon enrolment data over a period of five years where as average transition rate is simply based upon enrolment and repeaters data of only two years. As has been demonstrated in this note, class-to-class transition rates can also be used to do construct indicators of internal efficiency of education system (Kaplan et al., 1996; Lee & Smith, 1997; Phelan, 1992).

By just quantifying transition rate, the situation will not improve automatically for that purpose the first major exercise is to know reasons of low promotion and high transition rate and repetition (Rumberger, 1987; Dev, 1995). This should necessarily follow by reason and area specific strategies without which no improvement is expected. This should form part of Annual Work Plan and Budget under Sarva Shiksha Abhiyan SSA and the Project Approval Board should rigorously monitor it. Year 2010 is approaching fast and we cannot sit hoping that situation (with regard to transition rate and gender parity) will improve automatically. Still we have more four years to more optimally and rigorously utilize provisions made under SSA to work towards achieving universal elementary education in transition rate and gender parity (Vaidyanathan & Nair, 2001).

2. Materials and Methods

2.1. Materials

The total sample size decided to be covered under the study was two schools. The simple circular systematic procedure was used which implicitly maintained the same proportion in the subsample as that of in the sampling frame. For selection of ‘Schools with lower primary classes only’ within Gopiballavpur Circle (West), Paschim Medinipur, the list of all such schools was first arranged in ascending order on the basis of total enrolment (Classes I-IV). In case the total enrolment in a school was less than 10, it was excluded. With the help of this list, two schools (which are falls into more inaccessible and backward area than other schools within circle) were selected by circular systematic sampling method (Aikara, 1997). However, Researchers have used enrolment records collected from daily attendance book, considered for study from both school. The considered data period ranges from 2003 to 2013 (ten academic sessions) and the data are continuous without any missing data. Those data were organized and then reduced to class wise for further study shown in Table 1. Statistically processed by student t test $p < 0.05$, the critical value of $t$ at 0.05 significance level with 8 degree of freedom is 2.31. Thus, as $t_{0.05} < 2.61$ and $t_{0.05} < 2.51$ the value of correlation coefficient ($r$) are significant in Table 2.
Table 1. School wise student enrolments at base year class (i.e. first academic session 2003-04).

| School | Academic Year | Class-I | | | | Class-II | | | | | | Class-III | | | | | | Class-IV | | | | | | Total |
|-------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|       |               | Male    | Female  | Male    | Female  | Male    | Female  | Male    | Female  | Male    | Female  |
|       |               |         |         |         |         |         |         |         |         |         |         |
|       |               | 2003-04 | 12      | 25      | 10      | 11      | 6       | 5       | 9       | 3       | 81      |
|       |               | 2004-05 | 15      | 14      | 12      | 25      | 9       | 11      | 6       | 5       | 97      |
|       |               | 2005-06 | 15      | 19      | 15      | 14      | 12      | 24      | 9       | 11      | 119     |
|       |               | 2006-07 | 7       | 5       | 15      | 18      | 15      | 13      | 11      | 23      | 107     |
|       |               | 2007-08 | 11      | 13      | 7       | 5       | 13      | 17      | 14      | 13      | 93      |
|       |               | 2008-09 | 16      | 14      | 11      | 12      | 7       | 5       | 13      | 17      | 95      |
|       |               | 2009-10 | 20      | 17      | 16      | 13      | 11      | 12      | 7       | 5       | 101     |
|       |               | 2010-11 | 11      | 13      | 19      | 16      | 15      | 13      | 11      | 12      | 110     |
|       |               | 2011-12 | 9       | 7       | 11      | 13      | 19      | 16      | 14      | 12      | 101     |
|       |               | 2012-13 | 17      | 11      | 9       | 7       | 11      | 12      | 18      | 15      | 100     |

Table 2. Statistically processed data reduced to class wise testing for significance between male and female.

<table>
<thead>
<tr>
<th>School</th>
<th>Class</th>
<th>Male Correlation Coefficient (r)</th>
<th>Male t Value</th>
<th>Female Correlation Coefficient (r)</th>
<th>Female t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class-I</td>
<td>0.14</td>
<td>0.40</td>
<td>0.53</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Class-II</td>
<td>0.10</td>
<td>0.28</td>
<td>0.38</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>Class-III</td>
<td>0.52</td>
<td>1.72</td>
<td>0.10</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>Class-IV</td>
<td>0.68*</td>
<td>2.61</td>
<td>0.33</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Class-I</td>
<td>0.36</td>
<td>1.09</td>
<td>0.66*</td>
<td>2.51</td>
</tr>
<tr>
<td></td>
<td>Class-II</td>
<td>0.45</td>
<td>1.41</td>
<td>0.43</td>
<td>1.37</td>
</tr>
<tr>
<td></td>
<td>Class-III</td>
<td>0.56</td>
<td>1.94</td>
<td>0.39</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>Class-IV</td>
<td>0.10</td>
<td>0.28</td>
<td>0.26</td>
<td>0.78</td>
</tr>
</tbody>
</table>

*For $H_0: p < 0$, the critical value of $t$ at 0.05 significance level with 8 degree of freedom is 2.31. Thus, as $t_{0.05} < 2.61$ and $t_{0.05} < 2.51$ the value of correlation coefficient (r) are significant.

2.2. Methods

2.2.1. Transition Rate (TR)

The number of pupils (or students) admitted to the first class of a higher level of education in a given year, expressed as a percentage of the number of pupils (or students) enrolled in the final class of the lower level of
education in the previous year. To convey information on the degree of access or transition from one cycle or level of education to higher levels (Bajpai, 2003). Viewed from the lower cycle or level of education, it is considered as an output indicator, viewed from the higher educational cycle or level, it constitutes an indicator of access. It can also help in assessing the relative selectivity of an education system, which can be due to pedagogical or financial requirements. Divide the number of new entrants in the first class of the specified higher cycle or level of education by the number of pupils who were enrolled in the final class of the preceding cycle or level of education in the previous school year, and multiply by 100.

\[
TR_{h,h+1}' = \frac{E_{h+1,1} - R_{h+1,1}}{E_{h,n}} \times 100
\]

where,
- \( TR_{h,h+1}' \) = Transition rate (from cycle or level of education \( h \) to \( h + 1 \) in school year \( t \));
- \( E_{h+1,1} \) = Number of pupils enrolled in the first class at level of education \( h + 1 \) in school year \( t + 1 \);
- \( R_{h+1,1} \) = Number of pupils repeating the first class at level of education \( h + 1 \) in school year \( t + 1 \);
- \( E_{h,n} \) = Number of pupils enrolled in final class \( n \) at level of education \( h \) in school year \( t \).

High transition rates indicate a high level of access or transition from one level of education to the next (Clayton, 2006). They also reflect the intake capacity of the next level of education. Inversely, low transition rates can signal problems in the bridging between two cycles or levels of education, due to either deficiencies in the examination system, or inadequate admission capacity in the higher cycle or level of education, or both. This indicator can be distorted by incorrect distinction between new entrants and repeaters, especially in the first class of the specified higher level of education. Students who interrupted their studies for one or more years after having completed the lower level of education, together with the migrant students, could also affect the quality of this indicator.

2.2.2. Gender Parity Index (GPI)
Gender parity (GPI) ratio of female to male values of a given indicator is generally known as gender parity index (Dreze & Sen, 2002; Lathika & Kumar, 2008). The GPI measures progress towards gender parity in education participation and/or learning opportunities available for women in relation to those available to men. It also reflects the level of women’s empowerment in society. Divide the female value of a given indicator by that of the male.

\[
GPI_{i} = \frac{F_{i}}{M_{i}}
\]

where,
- \( GPI_{i} \) = Gender parity index of a given indicator \( i \) in year \( t \);
- \( F_{i} \) = Female value of a given indicator \( i \) in year \( t \);
- \( M_{i} \) = Male value of the same indicator \( i \) in year \( t \).

A GPI equal to 1 indicates parity between females and males. In general, a value less than 1 indicates disparity in favour of male and a value greater than 1 indicates disparity in favour of female. However, the interpretation should be the other way round for indicators that should ideally approach 0% (e.g. repetition, dropout, illiteracy rates, etc.). In these cases, a GPI of less than 1 indicates a disparity in favour of female and a value greater than 1 indicates a disparity in favour of male. The index does not show whether improvement or regression is due to the performance of one of the gender groups. Interpretation requires trend analysis of the underlying indicators (World Bank, 2003; Subrahmanian, 2003b).

3. Results and Discussion
In this study, authors investigated how transition rates and gender parity vary between two backward rural primary schools in Gopiballavpur Circle (West), Paschim Medinipur, West Bengal. All of two schools in this study were classified into intermediate classes to a very transition rates and gender parity. With respect to 2003-2013 (ten academic sessions) registered enrolment record in two primary schools, the variability of transition rates
was calculated for each school using actual values of measurable parameters relating to study. Thus, a transition rates was assigned to each of the schools according to the degree of transition rates. Similarly, gender parity for each school was derived from male and female registered pupils. The ratio of female and male was used to calculate the gender parity for the schools, which was then multiplied by the percent of value occurrences to obtain the gender parity index (GPI).

This analysis was used to divide the transition rate into four assigned threshold including on the basis of positive and negative numeric 1) very low transition rate (0% - 25%); 2) medium transition rate (26% - 50%); 3) high transition rate (51% - 75%); 4) very high transition rate (76% - 100%). Whereas, gender parity divided into three assigned attributes a) gender parity index (=1) for parity between females and males pupils; b) gender parity index (<1) disparity in favor of male pupils; and c) gender parity index (<1) disparity in favor of female pupils. However, the interpretation should be the other way round for indicators that should ideally approach 0% (e.g. repetition, dropout, illiteracy rates, etc. Overall, this type of transition rates and gender parity assessment may prove useful for future school planning and management programs in rural primary school (Ramachandran, 2004a; Jain & Arora, 1995).

3.1. Transition Rate (TR)

One of the important indicators on which the expansion of upper primary education depends is transition rate from primary to upper primary level of education (Ministry of Human Resource Development, 1992). The transition rate presented in Table 3 and Figure 1 shows total enrolment in each class i.e. Class I to Class IV and

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolment in Class I</th>
<th>Enrolment in Class II</th>
<th>Enrolment in Class III</th>
<th>Enrolment in Class IV</th>
<th>Transition Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Total</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>2003-04</td>
<td>12 25 37</td>
<td>10 11 21</td>
<td>6 5 11</td>
<td>9 3 12</td>
<td>43.24</td>
</tr>
<tr>
<td>2004-05</td>
<td>15 14 29</td>
<td>12 25 37</td>
<td>9 11 20</td>
<td>6 5 11</td>
<td>-27.59</td>
</tr>
<tr>
<td>2005-06</td>
<td>15 19 34</td>
<td>15 14 29</td>
<td>12 24 36</td>
<td>9 11 20</td>
<td>14.71</td>
</tr>
<tr>
<td>2006-07</td>
<td>9 9 18</td>
<td>15 18 33</td>
<td>15 13 28</td>
<td>11 23 34</td>
<td>-83.33</td>
</tr>
<tr>
<td>2007-08</td>
<td>11 13 24</td>
<td>7 10 17</td>
<td>13 17 30</td>
<td>14 13 27</td>
<td>29.16</td>
</tr>
<tr>
<td>2008-09</td>
<td>16 14 30</td>
<td>11 12 23</td>
<td>7 9 16</td>
<td>13 17 30</td>
<td>23.33</td>
</tr>
<tr>
<td>2009-10</td>
<td>20 17 37</td>
<td>16 13 29</td>
<td>11 12 23</td>
<td>7 5 12</td>
<td>21.62</td>
</tr>
<tr>
<td>2010-11</td>
<td>11 13 24</td>
<td>19 16 35</td>
<td>15 13 28</td>
<td>11 12 23</td>
<td>-45.83</td>
</tr>
<tr>
<td>2011-12</td>
<td>9 7 16</td>
<td>11 13 24</td>
<td>19 16 35</td>
<td>14 12 26</td>
<td>-50</td>
</tr>
<tr>
<td>2012-13</td>
<td>17 11 28</td>
<td>9 7 16</td>
<td>11 12 23</td>
<td>18 15 33</td>
<td>42.85</td>
</tr>
<tr>
<td>2003-04</td>
<td>5 5 10</td>
<td>7 9 16</td>
<td>5 8 13</td>
<td>10 6 16</td>
<td>-60</td>
</tr>
<tr>
<td>2004-05</td>
<td>8 4 12</td>
<td>5 7 12</td>
<td>7 8 15</td>
<td>5 8 13</td>
<td>0</td>
</tr>
<tr>
<td>2005-06</td>
<td>7 8 15</td>
<td>8 3 11</td>
<td>5 6 11</td>
<td>7 8 15</td>
<td>26.66</td>
</tr>
<tr>
<td>2006-07</td>
<td>5 4 9</td>
<td>7 8 15</td>
<td>9 2 11</td>
<td>4 2 6</td>
<td>-66.66</td>
</tr>
<tr>
<td>2007-08</td>
<td>9 14 23</td>
<td>5 4 9</td>
<td>7 8 15</td>
<td>9 2 11</td>
<td>60.86</td>
</tr>
<tr>
<td>2008-09</td>
<td>13 9 22</td>
<td>8 13 21</td>
<td>5 4 9</td>
<td>7 7 14</td>
<td>4.5</td>
</tr>
<tr>
<td>2009-10</td>
<td>7 8 15</td>
<td>13 9 22</td>
<td>8 12 20</td>
<td>6 3 9</td>
<td>-46.66</td>
</tr>
<tr>
<td>2010-11</td>
<td>11 9 20</td>
<td>6 9 15</td>
<td>10 8 18</td>
<td>8 12 20</td>
<td>25</td>
</tr>
<tr>
<td>2011-12</td>
<td>10 8 18</td>
<td>10 9 19</td>
<td>6 9 15</td>
<td>10 8 18</td>
<td>-5.55</td>
</tr>
<tr>
<td>2012-13</td>
<td>7 12 19</td>
<td>9 8 17</td>
<td>10 9 19</td>
<td>6 8 14</td>
<td>10.52</td>
</tr>
</tbody>
</table>

N.B M Stands male and F stands female.
improvement over the previous year, i.e. 2003-2013 (through ten academic years) based on data of two schools. The average of Madansol Primary School (MSPS) suggests that more than 29.15% (in case of positive transition) and 51.69% (in case of negative transition) children in 2003-2013 transited from Class I to Class II primary level of education against 24.24% and 53.39% respectively during the previous last ten years. Similarly, upgradation from Class II to Class III reveals the averaged combined together from 2003-13 is 29.97% (in case of positive transition) and 47.55% (in case of negative transition) were found against 26.32% and 49.29% respectively during the previous last ten years. In case of final level, i.e. Class III to Class IV provides a vivid scenario between interim periods from 2003-2013 and taken together or taken the academics years averaged by 31.80% (in case of positive transition) and 40.37% (in case of negative transition) also tend to found against 27.59% and 34.79% respectively during the previous last ten years. But, occurrence of maximum and minimum transition has to be found in 2003-04 for Class II to Class III transition (47.61%) and −83.33% found for Class I to Class II in 2006-07 academic year respectively shown in Table 4.

While, the average of Baital Para Primary school (BPS) suggests that more than 25.51% (in case of positive transition) and 44.72% (in case of negative transition) children in 2003-13 transited from Class I to Class II primary level of education against 26.64% and 51.26% respectively during the previous last ten years. Similarly, progression from Class II to Class III reveals the averaged combined together from 2003-13 is 26.54% (in case of
Table 4. Transition rate from Class I to Class IV through Class II and Class III for total enrolment for two schools with their academic years.

<table>
<thead>
<tr>
<th>School</th>
<th>Positive value (%)</th>
<th>Transition</th>
<th>Class I to II</th>
<th>Class II to III</th>
<th>Class III to IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>M S P S</td>
<td>76 - 100</td>
<td>Very high</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>B P S</td>
<td>76 - 100</td>
<td>Very high</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>51 - 75</td>
<td>High</td>
<td>2007-08</td>
<td>2008-09</td>
<td>2009-10</td>
</tr>
</tbody>
</table>

Table 5 shows Transition rate from Class I to Class IV through Class II and Class III for total enrolment for two schools with their academic years.

<table>
<thead>
<tr>
<th>School</th>
<th>Negative value (%)</th>
<th>Transition</th>
<th>Class I to II</th>
<th>Class II to III</th>
<th>Class III to IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>M S P S</td>
<td>−76 to −100</td>
<td>Very high</td>
<td>2006-07</td>
<td>2007-08</td>
<td>2008-09</td>
</tr>
<tr>
<td></td>
<td>−51 to −75</td>
<td>High</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>−26 to −50</td>
<td>Medium</td>
<td>2011-12</td>
<td>2011-12, 2012-13</td>
<td>2012-13</td>
</tr>
<tr>
<td>B P S</td>
<td>−76 to −100</td>
<td>Very high</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>−51 to −75</td>
<td>High</td>
<td>2003-04, 2006-07</td>
<td>2007-08</td>
<td>2008-09</td>
</tr>
<tr>
<td></td>
<td>−26 to −50</td>
<td>Medium</td>
<td>2009-10</td>
<td>Nil</td>
<td>2005-06</td>
</tr>
</tbody>
</table>

positive transition) and −30.86% (in case of negative transition) were found against 24.29% and 44.21% respectively during the previous last ten years. In case of final level, i.e. Class III to Class IV provides a vivid scenario between interim periods from 2003-13 and taken together averaged by 33.35% (in case of positive transition) and 19.96 (in case of negative transition) also be likely to be found against 25.34% and 37.35% respectively during the preceding last ten years. In case of course transition rate tends to be zero between Classes I to II and Class II to III for the academic year of 2004-05 and 2005-06 respectively. Due to internal efficiency of school shall remain unchanged to the zero transitions e.g. repetition, dropout, illiteracy rates, new entrances etc. But, incidence of maximum and minimum transition has to be found in 2007-08 for Class I to Class II transition (60.86%) and −66.66 found for Class I to II and Class II to III in 2006-07 and 2007-08 academic years respectively. Table 5 shows Transition rate from Class I to Class IV through Class II and Class III for total enrolment for two schools with their academic years. Figure 2 also shows transition rate on or after Class I to Class IV through Class II and Class III for total enrolment for 1) Madansol Primary School and 2) Baital Para Primary School through their academic years.

In case of positive transition rate Madansol Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (26% - 50%) for three sessions (2003-04, 2007-08, 2012-13), three sessions (2003-04, 2004-05, 2008-09) and four sessions (2004-05, 2005-06, 2009-10, 2011-12) respectively and so on for other low transition class. But no classes fell into high and very high transition class. Despite the fact that, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the Low transition class (0% - 25%) for four sessions (2004-05, 2008-09, 2010-11, 2012-13), three sessions (2003-04, 2005-06, 2009-10, 2011-12) and one session (2004-05) respectively in case of Baital Para Primary School and so on. In this circumstance, no successive class promotion has experienced very high transition Table 6.

In case of negative transition rate Madansol Primary School, Class I to Class II, Class II to Class III, and
Class III to Class IV fell into the very high transition class (−76% to −100%) for one session (2006-07), one session (2007-08) and one session (2008-09) respectively and so on for other remaining transition classes. But no classes fell into high transition class. While, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (26% - 50%) for three sessions (2007-08, 2011-12) respectively and so on for other remaining transition classes. But no classes fell into very high transition class. Despite the fact that, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (26% - 50%) for two sessions (2005-06, 2012-13), one session (2006-07) and one session (2003-04, 2007-08) respectively in case of female positive transition rate in Madansol Primary School.

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolment in Class-I</th>
<th>Enrolment in Class-II</th>
<th>Enrolment in Class-III</th>
<th>Enrolment in Class-IV</th>
<th>Transition Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Total</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>2003-04</td>
<td>12</td>
<td>25</td>
<td>37</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>2004-05</td>
<td>15</td>
<td>14</td>
<td>29</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>2005-06</td>
<td>15</td>
<td>19</td>
<td>34</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>2006-07</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>2007-08</td>
<td>11</td>
<td>13</td>
<td>24</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>2008-09</td>
<td>16</td>
<td>14</td>
<td>30</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2009-10</td>
<td>20</td>
<td>17</td>
<td>37</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>2011-12</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>2012-13</td>
<td>17</td>
<td>11</td>
<td>28</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>2003-04</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>2004-05</td>
<td>8</td>
<td>4</td>
<td>12</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>2005-06</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>2006-07</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2007-08</td>
<td>9</td>
<td>14</td>
<td>23</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>2008-09</td>
<td>13</td>
<td>9</td>
<td>22</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>2009-10</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>2010-11</td>
<td>11</td>
<td>9</td>
<td>20</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>2011-12</td>
<td>10</td>
<td>8</td>
<td>18</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>2012-13</td>
<td>7</td>
<td>12</td>
<td>19</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

N:B M Stands male and F stands female.
Table 6. Transition rate from Class I to Class IV through Class II and Class III for male and female enrolment for two schools with their academic years.

<table>
<thead>
<tr>
<th>School</th>
<th>Positive value (+)</th>
<th>Transition</th>
<th>Class I to II</th>
<th>Class II to III</th>
<th>Class III to IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>MSPS</td>
<td>76 - 100</td>
<td>Very high</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>BPS</td>
<td>76 - 100</td>
<td>Very high</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School</th>
<th>Negative value (+)</th>
<th>Transition</th>
<th>Class I to II</th>
<th>Class II to III</th>
<th>Class III to IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>−26 to −50</td>
<td>Medium</td>
<td>Nil</td>
<td>2012-13</td>
<td>2012-13</td>
</tr>
<tr>
<td></td>
<td>−51 to −75</td>
<td>High</td>
<td>Nil</td>
<td>2004-05</td>
<td>2010-11</td>
</tr>
</tbody>
</table>

N:B M Stands male and F stands female.

In case of male positive transition rate in Baital Para Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition Class (26% - 50%) for four sessions (2004-05, 2007-08, 2008-09, 2010-11), three sessions (2003-04, 2005-06, 2008-09, 2009-10) and two sessions (2004-05, 2012-13) respectively and so on for other low transition class. But no classes fell into very high transition class in case male. In spite of the fact that, only Class I to Class II, fell into the medium transition class (26% -
Figure 2. The transition rate from Class I to Class IV through Class II and Class III for male/female for (left) Madansol Primary School viz. (a) Class I to II, (b) Class II to III and (c) Class III to IV and (right) Baital Para Primary school viz. (a) Class I to II, (b) Class II to III and (c) Class III to IV with their academic years.

50%) for one session (2012-13), respectively in case of female positive transition rate in Baital Para Primary School and so on. In this circumstance, no successive class promotion has experienced very high transition for male but female Class II to III and Class III to Class IV have attained those in the academic years of 2006-07 and 2009-10 respectively. In the study all academic classes have attained normally in medium transition rate.

In case of male negative transition rate brought in Madansol Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (−26% to −50%) for entire period is negligible respectively and so on for other low transition class and only each single academic years posses the same. Despite the fact that, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the negative medium transition class (−26% to −50%) for three sessions (2003-04, 2006-07, 2012-13), three sessions (2004-05, 2006-07, 2007-08) and three sessions (2005-06, 2007-08, 2008-09) respectively in case of male negative transition rate in Madansol Primary School and so on. In this circumstance, rest successive class promotion has experienced very high transition to low.

In case of male negative transition rate brought in Baital Para Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (−26% to −50%) for entire period is negligible respectively and so on for other low transition class and only each single academic years posses the same. Despite the fact that, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the negative medium transition class (−26% to −50%) for three sessions (2003-04, 2006-07, 2012-13), three sessions (2004-05, 2006-07, 2007-08) and three sessions (2005-06, 2007-08, 2008-09) respectively in case of male negative transition rate in Madansol Primary School and so on. In this circumstance, rest successive class promotion has experienced very high transition to low.

In case of female negative transition rate brought in Madansol Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (−26% to −50%) for entire period is neg-
ligible respectively and so on for other low transition class and only each single academic years posses the same. Despite the fact that, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the negative low transition Class (<−25%) for one session (2010-11), one session (2012-13) and one session (2012-13) respectively in case of female negative transition rate in Madansol Primary School and so on. In this circumstance, rest successive class promotion has experienced very high transition to low.

In case of female negative transition rate brought in Baital Para Primary School, Class I to Class II, Class II to Class III, and Class III to Class IV fell into the medium transition class (−26% to −50%) for entire period is negligible respectively and so on for other low transition class and only each single academic years posses the same. Despite the fact that, Class II to Class III, and Class III to Class IV fell into the negative medium transition class (−26% to −50%) for one session (2009-10), and two sessions (2010-11, 2005-06) respectively in case of female negative transition rate in Baital Para Primary School and so on. In this circumstance, rest successive class promotion has experienced very high transition to low.

Against 69.96% males, about 65.36% females transited from Class I to Class II level of education in 2004 against 66.01% males and 61.98% females during the previous year, i.e. 2003. Though transition rate from Class I to Class II level shows improvement but still about 22% children drop-out in transition which may play significant role towards moving goal of universalization of elementary education.

Further, a significant deviation is noticed when school-specific transition rates are analyzed which is presented in Table 6. As against a low transition rate of 57.62% in Baital Para Primary School, the same is very high in case of a few classes of Madansol Primary School. As it seems that the goal of universal elementary education in these schools may not be realized in the near future if transition rates are not improved significantly. By conducting studies, the schools should know reasons of low transition, which should be followed by incorporation of reason-specific strategies in the Annual Work Plan and Budget. Over all scenario has been put on transition rate from Class I to Class IV through Class II and Class III for male/female for (left) Madansol Primary School viz. 1) Classes I to II, 2) Classes II to III and 3) Classes III to IV and (right) Baital Para Primary School and so on. In this circumstance, rest successive class promotion has experienced very high transition to low.

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Further, a significant deviation is noticed when school-specific transition rates are analyzed which is presented in Table 6. As against a low transition rate of 57.62% in Baital Para Primary School, the same is very high in case of a few classes of Madansol Primary School. As it seems that the goal of universal elementary education in these schools may not be realized in the near future if transition rates are not improved significantly. By conducting studies, the schools should know reasons of low transition, which should be followed by incorporation of reason-specific strategies in the Annual Work Plan and Budget. Over all scenario has been put on transition rate from Class I to Class IV through Class II and Class III for male/female for (left) Madansol Primary School viz. 1) Classes I to II, 2) Classes II to III and 3) Classes III to IV and (right) Baital Para Primary School viz. (a) Classes I to II, (b) Classes II to III and (c) Classes III to IV with their academic years in Figure 2.

### 3.2. Gender Parity Index (GPI)

Despite the critical progress in bridging gender gaps, persistent inequalities remain in many regions and at different Primary levels of education. Table 7 and Figure 3 highlight the varying rate in gender parity at different primary education levels at two schools. The gender parity index shows that only Madansol Primary School and the Baital Para School has reached or is close to gender parity in all levels of primary education. Almost Baital Para School are closer to gender parity at the primary level than at any other level of education, except for the Madansol Primary School where primary education is closest to a position of parity. The majority of countries fall short of achieving the first step towards the gender goal. Similarly, gender parity for each school was derived from male and female registered pupils. The ratio of female and male was used to calculate the gender parity for the schools, which was then multiplied by the percent of value occurrences to obtain the gender parity index (GPI). Gender parity divided into three assigned attributes 1) gender parity index (=1) for parity between females and males pupils; 2) gender parity index (<1) disparity in favour of male pupils; and 3) gender parity index (>1) disparity in favour of female pupils. However, the interpretation should be the other way round for indicators that should ideally approach 0% (e.g. repetition, dropout, illiteracy rates, etc. In case Madansol primary school gender disparity tends to have slight disparity in favour of female pupils for the periods from 2003-2013 viz. Class I, Class II, Class III and Class IV with values of gender disparity 1.07, 1.14, 1.14 and 1.02 respectively in Table 7.

But only parity exists in 2006-07 session at class level. On the other hand, In case Baital Para School gender disparity tends to have also slight disparity in favour of female pupils for the periods from 2003-2013 viz. Class I, Class II, and Class III with values of gender disparity 1.01, 1.01, and 1.08 respectively. While, Class IV having gender parity score 0.95, reveals disparity in favour of male pupils. But parity exists in session of 2003-04 and 2008-09 at Class I and Class II level with 2.5% for both classes respectively in Table 8. Moreover, 12% - 14% out of total considered period comprises gender parity value ranges between <1 to >1. Hence the disparity in favour of male or female has to be changed in high at Madansol Primary School then Baital Para Primary School. Figure 3 showing the gender parity index (GPI) and their class wise assigned attributes with
Table 7. Gender parity index (GPI) as socioeconomic index usually designed to measure the relative access to education of males and females in two schools.

<table>
<thead>
<tr>
<th>Years</th>
<th>Enrolment in Class I</th>
<th>Enrolment in Class II</th>
<th>Enrolment in Class III</th>
<th>Enrolment in Class IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>GPI</td>
<td>M</td>
</tr>
<tr>
<td>2003-04</td>
<td>12</td>
<td>25</td>
<td>2.08</td>
<td>10</td>
</tr>
<tr>
<td>2004-05</td>
<td>15</td>
<td>14</td>
<td>0.93</td>
<td>12</td>
</tr>
<tr>
<td>2005-06</td>
<td>15</td>
<td>19</td>
<td>1.26</td>
<td>15</td>
</tr>
<tr>
<td>2006-07</td>
<td>9</td>
<td>9</td>
<td>1.00</td>
<td>15</td>
</tr>
<tr>
<td>2007-08</td>
<td>11</td>
<td>13</td>
<td>1.18</td>
<td>7</td>
</tr>
<tr>
<td>2008-09</td>
<td>16</td>
<td>14</td>
<td>0.87</td>
<td>11</td>
</tr>
<tr>
<td>2009-10</td>
<td>20</td>
<td>17</td>
<td>0.85</td>
<td>16</td>
</tr>
<tr>
<td>2010-11</td>
<td>11</td>
<td>13</td>
<td>1.18</td>
<td>19</td>
</tr>
<tr>
<td>2011-12</td>
<td>9</td>
<td>7</td>
<td>0.77</td>
<td>11</td>
</tr>
<tr>
<td>2012-13</td>
<td>17</td>
<td>11</td>
<td>0.64</td>
<td>7</td>
</tr>
</tbody>
</table>

N:B M Stands male and F stands female.

Table 8. Gender parity index (GPI) and their class wise assigned attributes with different academic years.

<table>
<thead>
<tr>
<th>School</th>
<th>Index</th>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
<th>Class IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPI = 1</td>
<td>2006-07</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

| GPI = 1| 2003-04 | Nil | Nil | 2008-09 |
different academic years for 1) Madansol Primary School and 2) Baital Para Primary School with their respective academic years.

4. Conclusion

In summary, more is known than ever before about the forces that help students stay on track or lead them to transition rate of school. There is a great deal that states, school districts, and schools can do to bolster the holding power of primary schools. There is much more that can be done, starting with clarifying what transition rate and gender parity is and how the Transition rate and gender parity phenomenon is best measured so that early warning and accountability systems can be put into place. Transition rate and gender parity prevention strategies need to address both school-level and community-level issues. Effective efforts will reflect not only risk factors, but also the factors that foster resiliency and help students stay on track despite difficulties.

Transition rate at the primary stage was 87.5% for the year 2008-09 and it decreased marginally to 87.2% in 2009-10. West Bengal recorded the lowest transition rate (80.9%) in 2008-09. The study had the following recommendations that are greater budgetary allocation should be made to the education sector and it should place a greater emphasis on the financing of rural primary school education to cater not only for the tuition but other allied accompanying costs like boarding fees. This will greatly bring down the costs and help make the rural primary school education more affordable and have a wider access to it by the many citizens missing out owing to the element of the costs involved. More focus should be placed on the rural economies in the quest to improve them. This can be by way of having industrialization programmes and activities meant to spur eco-
onomic growth and bridge the inequalities between the rural and urban spheres. This will greatly impact on the levels of exposures the populace’s disposable incomes and greatly impact on the capacity to pay for education programmes in rural primary school and at higher levels. Parents should be sensitized on the need to have their children progressing and attaining high levels and standards of education. This should be done by way of involvement of community levels and opinion leaders from all spheres so as to shape the community’s thinking and have a change of attitudes to attaching a higher value and premium to education. Communities should always seek to take change and intervene in situations threatening the livelihood and futures of young learners. Several aspects were noticed in the study which should be adopted by the head teachers, teachers, community, parents, stakeholders and the government in order to reduce transition rate and gender parity among female students from secondary schools. The following recommendations were made:

- The government through the West Bengal Board of Primary Education (WBBPE) should continue to develop and implement policies to ensure that female who drop out of primary school due to uncontrolled enroll back to school. The schools should create an enabling environment for female to enhance retention and smooth transition.
- The school management should enhance guidance and counselling in schools so as to address the challenges facing the female students like relationships, peer influence, drugs and substance abuse. This will enhance retention of the female students.
- The WBBPE should provide capacity building for head teachers and teachers in areas like guidance and counselling and efficiency management of schools particularly studied schools.
- The WBBPE should ensure that schools set realistic and achievable academic pass marks for students. This will address the issue of forced repetition and hence enhance smooth transition.

Acknowledgements

We would like to express our gratitude to the students of both schools for providing us valuable information on various socio-economic aspects of dropout. For this work we would also indebted to the Head Master of both primary schools for helping in collecting quantitative and qualitative data. We would express our gratitude to all whose names have not been mentioned individually but have helped us in this work.

References


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The Use of Social Media in Medical Education: A Literature Review*

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Abstract

Social networks are frequently used by university students, as well as by the rest of the population worldwide to communicate, collect information, and share information and images. The aim of this report was to determine if there was substantial evidence in the literature that demonstrated the benefits of using social networks to enhance the learning process, as measured by students’ performance on examinations. The main outcome measures were any measurable difference between students who used social networks as part of their education compared to those who did not. A systemic literature search was performed in the PubMed database using predefined search terms, exclusion/inclusion criteria, and primary/secondary criteria. The results disclosed in total, 636 publications were identified; however, only 77 articles met the criteria for inclusion and exclusion. After applying secondary filter criteria, 18 publications were identified that included randomized comparative studies, review articles, and meta-analyses. A review of the list of references in these publications revealed an additional seven articles. The findings demonstrate that although social media represents an important source of medical information that is widely used in education and in everyday lives, no studies have reported that it has a significant impact in enhancing the learning process. Additional comparative studies are needed on this topic.

Keywords
Medical Education, Social Media, Learning, Outcome, Examinations, Feedback, Reading

1. Introduction

University students regularly use smartphones, tablets, and computers to instantly retrieve necessary medical information, read the literature necessary for their courses, and collect, communicate, and share information and

*This paper was written for a pedagogic course: "Perspective on learning", which was held at Lund University in Sweden from September 22 through October 3, 2014.

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imaging. Indeed, some students systematically use social media in their education as well as in their everyday lives (Cartledge, Miller, & Phillips, 2013; Guarino, Leopardi, Sorrenti, De Antoni, Catania, & Alagaratnam, 2014; Hollinderbäumer, Hartz, & Uckert, 2013; Paton, Bamidis, Eysenbach, Hansen, & Cabrer, 2011; Paton, Bamidis, Eysenbach, Hansen, & Cabrer, 2011; Svinicki & McKeachie, 2011). The use of social networks and the internet are well-established tools in education that may strengthen the learning process and enhance professional development (Crossley, Humphris, & Jolly, 2002; Farooq & White, 2014). However, it is debatable if social network tools are truly equally or even more effective than other educational tools used for educational purposes (Crossley, Humphris, & Jolly, 2002). We determined if there was substantial evidence in the literature on medical education demonstrating the benefits of using social networks to enhance the learning process, as measured by students’ performance on examinations. To the best of our knowledge, this is the first study of its kind.

2. Methods

2.1. Search Strategy

A systemic literature search was conducted. The PubMed database was searched with predefined search terms, inclusion/exclusion criteria, and primary/secondary criteria; data were retrieved according to the active query filter in PubMed. All potential publications from PubMed between September 2010 and August 2014 were identified. The following terms were used in the search: “medical education” AND “social media”. The search provided 637 results from PubMed; only reports written in the English language, free full-text articles, and reports in humans were included. The query filter included the 5-year period studied, which resulted in 77 publications; when the secondary filter criteria were applied, 18 publications were identified as randomized comparative studies, review articles, and meta-analyses. The references were reviewed in these articles to find additional publications.

2.2. Inclusion Criteria

Comparative studies of examination outcomes between students who used social media and those who did not were selected. The primary outcome measures were examination results, and the endpoint was the examination at the end of the course.

2.3. Data Extraction

Retrieved articles were assessed for eligibility, after which data were extracted on student learning outcomes, as determined by examination results, and the methodological quality of the report.

2.4. Methodological Quality of the Studies

The methodological details of the included studies were extracted from the published data.

2.5. Statistical Analysis

The intention was to use Review Manager 5.1.6 software by the Cochrane Collaboration for statistical analysis. For dichotomous variables, the odds ratio (OR) and associated confidence interval were calculated. For continuous outcomes, the results were expressed as the mean and its calculated standard deviation. Meta-analyses of pooled data from the comparative studies, performed by using a fixed effect model, were not included in the study.

3. Results

Description and Quality of the Studies

The results of the systematic search in PubMed, which was performed in September 26, 2014, identified 637 publications. All but 77 were excluded after filtering for the following primary criteria:
- Humans;
- Free full-text articles;
We analysed the data from comparative studies to determine if students who use social media in their learning process have better examination outcomes. However, we did not find any publications that reported a significant learning advantage in university students who used social networks as part of their education, as measured by students’ performance on examinations. A single recent report on the subject did not have measurable students’ performance on examinations as an endpoint of the study (Cheston, Flickinger, & Chisolm, 2013). It is plausible that people accept new technologies without demanding evidence of their superiority, regarding enhancing the learning process, compared to time-honoured strategies. Frankly, social media has many other advantages that make people’s lives easier and more comfortable.

The importance of feedback in medical education has been described (Hattie & Timperley, 2007), and can easily and comfortably be achieved using social media. The question that arises is whether students’ communication through social media benefits their learning process, and improves their knowledge, motivation, and outcome on examinations compared to their peers who do not use these tools. There certainly are methods to measure differences between students who consistently use social media and those who do not, so why have these methods not been used? One possible reason is that a randomised or even comparative study would be difficult to perform since social media is now an integral part of people’s lives. Thus, it would be challenging to compare two groups of students over a considerable period of time, in which one group systematically uses social media as part of their learning process, while the other group does not. The latter group would have to be excluded from using something that is most likely already an indispensable part of their lives and daily routines.

It is tempting to think that social media can provide students with all of the necessary support to pursue their educational goals, such as reading materials, which can be easily be obtained and read on smart phones or tab-
lets. In addition, the text found on the internet can be updated frequently, contrary to what occurs for textbooks. Thus, one of the main goals of making reading an active part of student teaching can be achieved (Svinicki & McKeachie, 2011).

Teaching online or from a distance is well-described in the literature, and its pros and cons have been thoroughly discussed, leaving us with the recommendation to use technical resources to advance student learning (Svinicki & McKeachie, 2011). If a course is carefully designed, and the goals and measurable learning objectives are properly defined, social media can be an important enhancement tool. However, it should be linked to meaningful activities that help students reach their learning objectives. Furthermore, social media is an important and easily used for delivery of instructions, communication, and interaction, as well as for assessment of the learning process (Svinicki & McKeachie, 2011).

The literature describes the use of online groups for synchronous and asynchronous communication that is performed more easily using social media (Svinicki & McKeachie, 2011). This can easily be achieved by using social media and is already discovered by students using social media for all kinds of communications. Teaching students how to learn through discussion is an important part of medical education (Svinicki & McKeachie, 2011). This includes the ability to clearly convey information and a willingness to effectively communicate with their teachers and peers. It is also important to plan for discussions and build upon others’ ideas. Furthermore, a necessary skill is being able to evaluate what is said during a discussion, and having sensitivity towards the feelings of other members in the group (Svinicki & McKeachie, 2011).

This study was biased by the fact that it was based on literature published during a very short period of time, 5 years, and only drew from two databases. Furthermore, it concentrated on publications in the English language and in open access journals. The latter were considered the most accessible information available on the subject.

5. Conclusion

There are lacks of randomised comparative studies on the outcome of examinations in students who use social media for the learning process compared to those who do not. Therefore, further studies are needed, and databases should also be searched over a longer time period. Social media is now a natural part of people’s everyday lives. Its existence is not questioned. Thus, the key question to ask is not if social media will improve the student learning process, but rather, how much more could the student learning process improve through the use of social media?

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Conflicts of Interest

The author has no conflicts of interest to disclose.

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Department of Pediatric Surgery, Skane University Hospital, Lund, Sweden.

References


Paton, C., Bamidis, P., Eysenbach, G., Hansen, M. M., & Cabrér, M. (2011). Experience in the Use of Social Media in Medical and Health Education. Nursing and Health Professions Faculty Research. Paper 6. [http://repository.usfca.edu/nursing_fac/6](http://repository.usfca.edu/nursing_fac/6)


The Adoption of Instructional Techniques and Educational Technologies among Teaching

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Abstract

The development of technology in daily life continues to show its effects on the behavior of human beings. Their integration in the field of education is an asset to the effectiveness of learning for both the teacher and the learner. However, some people tend to confuse instructional technics with educational technologies, while these concepts are different and have their roles in the process of learning. This paper first defines the three concepts in education namely instructional technics, educational technologies and learning theories, and highlights their characteristics. It also introduces the influence of educational technologies in instructional techniques, their advantages and inconvenience and ends with suggestions to improve them to be more suitable and profitable.

Keywords

Instructional Technics, ICT, Technologies, Learning

1. Introduction

The development of any country relies entirely on good education. To solve a large number of problems that this sector faces, educators, philosophers, sociologists, psychologists and actors involved in education draw techniques and methods to meet the educational requirements of learning in the time and space. Thus, with the new technologies, which the speed of evolution is beginning to worry experts, who fear that one day, the teacher

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could lose his role as the main mediator between knowledge and learners. Of course, other support full integration of these technologies in education and consider them as motivating ways to make learning much easier, and therefore make them as “partners” in instructional techniques.

Those who support the full integration of these new technologies in the field of education believe that they are created in order to develop this sector and to achieve the teaching goals set by the education policies of each country.

However, those who criticize the integration of these technologies are against because they can lead to financial difficulties by high cost, the equipment and the training of teachers apart other problems. Certainly they have many advantages, but we have to take in account their disadvantages too.

In both cases, we cannot reject the new technologies and we cannot either drop out the old educational techniques. Therefore, it is necessary to combine and complete both (new educational technologies and old educational techniques) at the same time in order to evolve the educational system and the development on this sector.

This paper is a review of articles. It firstly introduces the concepts of instructional techniques, educational technologies and learning theory, the relationship between teaching and the technologies before showing the advantages and disadvantages of these new technologies in the field of education. And finally, it provides suggestions about how to improve these technologies in order to integrate them properly in learning.

2. Definitions

2.1. Definition of Instructional Technique

The word technique means all systematic processes based on scientific knowledge and employed in production (Josianne, 2005). This brief definition let to define educational technology as the implementation of process, in a certain order, to convey messages, knowledge to another person. It is a reasoned action resulting from reflection and choice. It is used by the teacher to awaken in the trainee a set of well-defined learning behaviors. It represents a set of formalized procedures and applies following defined principles to acquire skills consistent with the educational objectives.

Teaching methods can be defined as means of organizing the cognitive activity of students to let them to acquire some knowledge and skills and bring them gradually through the various stages of the learning process (UNESCO, 1966). It consists of rules and procedures to implement a master teaching or student learning, in a theoretical or practical way. It is used to manage, explain, discover and evaluate. They are classified depending on the objectives, contents and targets; and represented in the form of typology.

2.2. The Evolution and Development of Instructional Technique

(Gary, 1991) classified the historical periods of the development of teaching techniques:

- The first step in the evolution of educational technology is mainly based on knowledge and practical knowledge taught to students. It was the birth of an empirical knowledge base for education in 1920. The third decade of the century was marked by the maturation of several ideas that are fundamental to instructional development. Most prominent among these are educational objectives and individualized instruction.

- Behavioral Objectives and Formative Evaluation in 1930. This step insisted on the student’s behavior and refined the procedure for writing instructional objectives. The study confirmed that objectives could be clarified if written in terms of student behavior, to ensure that the alternative curricula were implemented as planned.

- The period 1940-1950 has been marked by instructional media and research and development, and programmed instruction and task analysis. There has been successively to other changes and developments in teaching techniques are characterized by the use of media for educational purposes, research and development in the education sector and the education program.

- 1960-1970 has been for instructional systems development and instructional development (ID) models and maturation. In that period the evolution has started to grow fast and accelerated the years of the Renaissance so after the war. Instructional development acquired the accoutrements of a profession as ID scholars and practitioners sought to define and describe more thoroughly the process they advocated.

- 1980-1995, it was the time for microcomputers and performance technology. Organizations, more flexible, less vertical and more complex modes of management emerge when changing teaching techniques took a different form from those already passed. A new form has changed the process of teaching techniques with the in-
integration of new technologies in education: The instructional applications of microcomputers have come to dominate much of the literature of instructional design. There is little consensus regarding the meaning of this powerful technology to instructional development.

2.3. Definition of Educational Technologies

The term technology depends on the field in which it is used. Originally, it comes from the Greek word “teknēlogia” meaning treaty or a dissertation on art. Technology is a rational discipline designed to assure the mastery of man over physical nature, through the application of scientifically determined laws. But in empirical meaning, it refers fundamentally to systems of rationalized control over large groups of men, events, and machines by small groups of technically skilled men operating through an organized hierarchy (Gary, 1991).

In the field of education, it is defined as a field of knowledge and activities to design and build objects and systems (Josianne, 2005). The National Academy of Engineering’s Instructional Technology Committee on Education defines educational technology as the body of knowledge resulting and from the implementation of the science of teaching and learning to the real world of the classroom, together with the tools and methodologies developed to assist in thesis applications (Gary, 1991). Specifically, educational technology is a combination of the processes and tools involved in addressing educational needs and problems, with an emphasis on applying the most current tools: Their computers and related technology (Roblyer, 2003).

2.4. Different Kinds of Educational Technologies

New technologies are an extension of existing technologies. As an example, the first instructional videos that looked like filmed courses. Indeed, very often people tend to believe that educational technology is limited only to the Internet; but through what has already been mentioned above, this is not the case. The new educational technology includes several other technologies including cognitive tools that contain the semantic organization tools (building semantic databases), dynamic modeling tools (spreadsheets, micro world, etc.), interpretation tools (information retrieval tools, visualization tools), tools for building the knowledge and conversation tools (synchronous or asynchronous conferencing) (Josianne, 2005). It also includes educational television and radio.

Moreover, these new educational technologies comprise a set of tools, machines and devices all based on digital electronics:

1) Audiovisual features:
   - Educational television in closed-circuit within the same institution where educational programs are broadcast on ultra-shortwave or wire. It can also be in opened-circuit where educational programs are broadcast to students in the classroom or at home;
   - Broadcasting which plays an important role in literacy, language teaching science, arts, etc.;
   - Language laboratories with equipment such as tape recorders, CD players, microphones and headsets;
   - Educational films or cartoon;
   - Video conferencing.

2) Information technology (IT) are based on computer technology, microelectronics, telecommunications (including networks), logo (nowadays almost disappeared), word processing software, simulation-modeling, computer algebra software, geometric construction and lexicographical analysis of text. But the arrival of the internet, which is today’s greatest innovation, has facilitated access to resources and databases from anywhere on earth and has contributed to develop the distance learning (e-learning) and online libraries.

3) Telematics: Telematics refers to the transmission of information and telecommunications over a distance, include several types of media, interactive kiosks, vehicular technologies and robotics.

Telematics is the use of various combinations of telecommunications, television, multimedia and information technologies (IT) (Hilary Perraton & Charlotte Creed, 2000). In addition, telematics-based products and service can retrieve, store, process and communicate information as voice, sound, text, graphics, images and videos. The possibility of the use of telematics in the field of education has diversified related to, include computer-mediated communication (CMC), computer-supported collaborative work (CSCW) and computer-supported cooperative learning (CSCL). Telematics may be used in conventional, flexible and distance education to support teaching and learning which is one-to-one, one-to-many and many-to-many (Patrick Dillon, 1998).

4) Robotics: Robotics can be grouped in telematics category. The use of robotics in education is very useful at many purposes such as engineering, science and computer science. Indeed, there are many kinds of use robotics
in the field of education as Jacek Malee (2001) demonstrated the use of LEGO robots, RoboCup. Jeonghye Han (2008) describes also the use of IROBI, a companion robot which recently introduce in Korea educational system. IROBI is both an educational robot and child companion at home and contains many features. A longtime USA has experienced the use of robotics course in school and university of Washington for language program. Even in Britain, the use of Lego-based robotics for teaching language, using Legos Mind storm kits for teaching science and technology, as well as in Sweden, Denmark and other developed countries. The educational use of robotics in Japan is focusing on English language learning with using ROBOVIE program. On the other hand, Canada uses educational robotics for health and hygiene in schools and the use of interactive robot to teach children fitness ad healthy living. As in Korea, using the home tutor robot IROBI and the teaching assistant robot TIRO is becoming familiar (Jeonghye, 2008).

5) Another category of telematics in education such as: Blogs, Forums, Communities, Webcast, Podcast, User Groups, Picasa and Flickr, W3 Schools.com, Webopidia, Wikis, Web Conferencing, Videoconference, Chat, Email, Instant Messaging, Bulletin, Board, VOIP, Data Conference, Shout Box, Image Board, You Tube, Slide Share, etc., also including TECH types such as calculators, engagement devices, portable ICT devices, virtual learning, multimedia projectors, tablets and e-readers.

3. Characteristic of Instructional Technique and Educational Technologies

3.1. Difference between the Three Concepts: Instructional Technique, Educational Technologies and Learning Theories

The concepts of instructional technology, educational technology and learning theory can create confusion in the meaning whereas they are individually distinct. Technical education is understood as a set of teaching techniques used efficiently and to improve the performance of education systems (Baron, 1998). It is synonymous with teaching method and describes the educational tool adopted by the teacher in the use of educational technologies that are available to facilitate him tasks and achieve his educational goals.

As for the theory of learning, it attempts to answer the question: How people learn? It is a design of what a person has in mind about how learning occurs and that any teacher should have whether conscious or not. This is reflected in his teaching plan, actions and behavior in the classroom and the way he evaluates his students. Finally, this is a design that would promote educational intentions, that is a better match between what the teacher wants the students to learn and the paths taken to reach this goal. Having said that, educational technologies are used in instructional technique, which depends on how teacher conceives, plans and runs his teaching activities (theory of learning).

3.2. Advantages and Inconvenience of Educational Technologies in Education

There is no doubt that new technologies have many advantages over old teaching techniques through the major role they play in the education sector; as they also have disadvantages in this area. Thus we can classify these advantages and disadvantages in the relationships between the three agents of learning:

Advantages:
• In the relationship between learning and knowledge: there is no doubt that educational technologies, both in developed countries than in developing countries, contribute to the development of this sector. These new educational facilities are extremely important because they have a less abstract character than the printed materials that are traditionally used. They put students in direct contact with more experience and combine this experience to the subject studied. As well as the judicious use of modern teaching techniques can make instruction more effective in helping students to better understand the phenomena, stimulating their interest, engaging eyes and ears, more actively, etc. (UNESCO, 1966). It is now established that the audio and video broadcasting can make teaching livelier, more concrete and richer in meaning.

They also allow interactivity. It is through the interactive capabilities of ICT that the user can be more active and that the roles of actors in the process of communication become interchangeable. Computers are commonly believed to change how effectively we do traditional tasks, amplifying or extending our capacities, with the assumption that these tasks stay fundamentally the same. A primary role for computers is changing the tasks we do by reorganizing our mental functioning, not only by amplifying it (Basque, 2005).

It is also important to mention the aspect of motivation that these technologies have made or strengthened.
The computer and software became a mirror of practice, cement of collaborations and leverage to help change the school. It also becomes, with networks, an opened gate to the world and a way to access culture as told in his speech, the King of the Belgians Albert II in 1996 “Computer technologies have unleashed the research opportunities of information and interactive equipment and multimedia provide students an inexhaustible mine of information...” (Duchateau, 1996). Technology might help to address the cognitive, motivational, and social needs of at-risk student (Roblyer, 2005). With the explosion of technology that’s revolutionizing education around the country, many students are now eager to stay after school, competing for access to all the high-tech equipment that’s opening up so many new opportunities to them (Torr, 2003).

- In the relationship between the learner and the teacher: the use of technology is a motivating factor for students and teachers: interest of the task, potential wealth of skills to exercise, computer support in realizing (Lebrun, 2000). From this viewpoint, educational technology was seen not just as a medium for communicating instructional information, but as a systematic approach to designing, developing, and delivering instruction matched to carefully identified needs motivating students to learn, to enjoy learning, and to want to learn more has assumed greater importance in recent years (Roblyer, 2005).

- Similarly, these new educational technologies have expanded the old techniques and methods with the emergence of distance education. This has contributed greatly to the expansion of the educational program in the world. It not doubt contributed to the early interest in programmed instruction, often enough without much consideration of its basis in behaviorist learning theory, the use of audiovisual media, computers and technology generally (Osborne, 1982/1983).

- In the relationship between the teacher and the new educational technologies: for teachers, the new educational technologies facilitate the transmission of knowledge to students. They also allow to search, store, process, select, create, classify and to calculate to transmit information (Josianne, 2005). The purpose of instructional technology is to make education more productive and more individual, to give instruction a more scientific base, and to make instruction more powerful, learning more immediate and access more equal (Anglin, 1991). Techniques and teaching methods place the teacher as a mediator between students and the teaching through which he supposed to pass knowledge. This is also the case of network technologies which are first and foremost a tool of mediation. In their educational uses, the new educational devices can be a function not only as a carrier of educational messages, but also symbolic systems, cognitive tool and mediation tool between people, objects and ideas (Basque, 2005).

Educational technology is also intended to improve education for the 21st century learner by:

- Using robotics at home and school which, their simple facial expressions have been proven to make an important impact on children’s learning.

- As well as the use of social networking has helped build greater relationship among students and students/teachers also (Eric, 2009).

- Using games as educational technology is really one potential application of distributed intelligence to the learning process. Games can help children to learn about nation-building and international diplomacy (Henry).

- Other researchers found also that games improve skills in communication and collaboration, problem-solving and various number-related skills (Eric, 2009).

Disadvantages:

- The use of ICT as a vehicle for educational messages may explain, in large part, the fear expressed by some teachers to see the teacher, who should be the main if not the only transmitter of knowledge, replaced by ICT in learning. Much remains to be done before ICT to become for universities teachers, not substitutes but real educational partners (Basque, 2005).

- According to a study conducted by the European Union in July 1996 in the context of the working group “educational software and multimedia”: multimedia has demonstrated its effectiveness in teaching through several pilot experiences. Its integration into practice will not however be realized without innovative teaching approaches being well accepted institutionally and socially. Thus it finds its place in the general context of changing educational systems (Lebrun, 2000). But the passivity of students obviously may be a disadvantage.

- Also among the disadvantages of these technologies, they do not put the learner to be the center of learning as the old techniques did. It is time to put into perspective that promotes the use of educative technologies, which will be an anthropocentric perspective (centered on humans) (Simonian, 2007).
• It is also important to consider that the computer’s learning environments emphasize a stable transition of knowledge, constituting the background of the activity to a continuous navigation in a learning environment. Today, knowledge appears as mobile. This mobility leads to instability in the relationship between a learner and content but also and especially in the relationship between the learner and the teacher.

• The distance education is the greatest invention of new educational technologies. It was noted that the main disadvantages of distance education are the lack of human mediation, the isolation of the learner and too encyclopedic content (Simonian, 2007).

• It’s clear that interactive telematics teaching is a 21st century response to learner-teacher support. Even advanced communication technologies such as videotext, video disc and computers, being sophisticated and expensive are not frequently used in developing countries.

• The high cost of these technologies and the need for teacher training to learn how to use requires an enormous funding. Indeed the introduction of these techniques in all branches of education depends largely on the ability to recruit teachers able to solve many problems that arise constantly depending on local conditions. The training of such personnel therefore becomes important (UNESCO, 1966). However, technical difficulties and the high cost of production and broadcasts hinder the use of television as a medium of instruction in many areas and it would be particularly useful, especially in developing countries.

4. Relationship between Teaching and Educational Technologies

Designations were assigned to technologies in the field of education such as New Technologies in Education (NTE) or Information and Communication Technology for Education (ICTE). But whatever the designation, the new educational technologies establish a connection between the three agents of learning: the teacher, the learner and the content (the curriculum) (Figure 1).

For teachers, educational technology, although facilitate his task, are hiding behind complexity. The teacher himself must master these technologies before applying them in learning. Indeed, would be faced with the difficulty of their application, especially if he was using traditional teaching techniques, characterized by specificity, stability and transparency. However, the latest digital technologies in education, such as computers, software and other applications, are protean and can be used in many different ways, unstable as they evolve rapidly and opaque. In addition, what complicates the teaching with these technologies is that they are neither neutral nor impartial. Similarly, social and contextual factors also complicate the relationship between learning and technology (Koehler & Mishra, 2009). Consequently, learning can change when certain technologies are used in a particular way. Technology has revolutionized the way we work and is now set to transform education (Watson, 2001). Add to that the need to properly train teachers for effective use of technology in learning.

About the content or curriculum, technology is a catalyst in creating change in the content, because the computerized systems are artificial universe, complex and without a stable rule (Duchateau, 1996). Hence need to change the curriculum of education in order to integrate these new technologies. There is no one best way to integrate technology into curriculum. Honoring the idea that teaching with technology is a complex, ill-structured task; we propose that understanding approaches to successful technology integration requires educators to develop new ways of comprehending and accommodating this complexity (Koehler & Mishra, 2009). 

![Figure 1. Relationship between learning agents and the educational technologies.](image-url)
son, 2001) places the teacher at the heart of the success or failure of education changes. But he also asserts that if change is to happen, it requires teachers to understand themselves and to be understood by others. Curriculum change theories have generally asserted that once small cohorts of innovators emerge, their adoption of the innovation cascades through their peer group of subject teachers.

And finally this change and complexity will affect students negatively and positively. On the one hand, educational technologies motivate students through their effective use, but also make them lazy. For example, today for a simple algebraic calculation, the student prefers to use his calculator. Also, the speed in which they operate, causing a delay to some students especially those in less developed countries. Through the use of the ITs in the curriculum, schools will also be helping pupils become knowledgeable about the nature of information, comfortable with the new technology and able to exploit its potential. To enrich and extend learning throughout the curriculum, and to help young people acquire confidence and pleasure using IT, become familiar with some everyday applications.

5. Integrating Educational Technology into Teaching

The development of new teaching techniques in the improvement of teaching constantly worries in the world, experts in the fields of education, psychology, specialists in mass media, scholars, etc. However, to overcome all the problems and difficulties caused by the new educational technologies and facilitate their integration, several solutions have been proposed including:

1) The role changing of the school:

(Duchateau, 1996) proposes to “change schools” if we want teachers work in school and do not go there just to teach and if we want students to come to school to learn and not just to sit in classrooms. We need architects to make school, a place where teachers work and students learn. It needs offices for teachers, large-scale space with variable functions such as multimedia rooms for student. Local networks can help to develop access to new technologies, provide information resources and boost information research.

It should also make teaching a common work for teachers to collaborate between them: for some activities not it better three teachers for teaching sixty students rather than three classes, each with one teacher and his group of twenty students? This collaboration and teamwork are encouraged during periods or teachers accompany the students, but also for the rest of their time working in the school (Poyet, 2009). It mentioned that the creative integration of ICT in schools is likely to fundamentally change the way schools work. It is a culture of cooperation to promote learning. It is also essential to give teachers a mastery of time; so that he could use small available time and these technologies in practice.

In addition, it is necessary that the public service in relation to education and cares deeply about improving everything about the ongoing teacher training, dissemination of the work of teachers, available to teams, essential information resources etc.

Finally, the teaching profession must cease to be leisurely without progress. It is necessary that prospects are offered to teachers. Currently, the good promotions can usually be obtained by leaving the world of education. It needs to promote teaching and encourage teachers, expected to use these technologies, not let technologies teach themselves.

2) The role changing of the teachers:

It is necessary to change the role of the teacher or assign him other roles more than a scholar whose expertise and knowledge come only from him. Students are accustomed to search information through ICTs so that they do not work as it should take to learn effectively. But ICTs are an admirable indication of the need for this extension of the expected roles of the teacher: guide, accomplice, facilitator and co-explorer. The software tool allows the development of teaching strategies based on the development and autonomy in the construction of knowledge, interactions between students and metacognitive activities. The teacher can fully play his role as a mediator and adopt a reflexive posture to deal with the difficulties of teaching (Poyet, 2009).

It is also important for teachers to know how to change, combine, and try to apply old techniques accompanied with the new ones. This system of integrated use of various teaching aids has been recommended in March 1962 during an international meeting of experts on the development and use of new methods and techniques of education, and approved by the General Conference of UNESCO at its twelfth session: the need to combine new technologies with traditional ones. The effectiveness of each new teaching aid, so great it may be, is greatly enhanced when we use several at once. It is therefore essential to produce them simultaneously in the context of an
overall plan that must have a specific objective defined in operational terms whenever possible (UNESCO, 1966).

3) The arrangement changing of the curriculum:
Naturally we have to enter in school spaces of freedom, beyond the partitioning of disciplines and the fragmentation in tight times. It’s also needed to introduce in the overall training program for new activities around research and information processing. It should also provide opportunities for learners to define and lead team projects and give meaning to what is proposed. The continual introduction of techniques and tools will be able to transform the educational context and refine the relationships within the classroom and outside school.

6. Conclusion

Our dependence on new technology has reached a level where we can qualify them as the winners on our behavior and our daily life. In the field of education, we can only seek to well incorporate them to not let them taking the role of the teacher, but to be his technical partners. In addition, a number of measures remain to be done so that the school becomes a part of learning where teacher works well and focuses on students and not even him seek to understand new educational tools. Finally, these technologies must be combined with old techniques of education to be qualified as educational means and not goals or targets of learning.

But we cannot globalize these new technologies that the developing countries did not even ensure access to a quality education, the lack of infrastructure and pedagogical materials, lack of qualified teachers has stronger reason to purchase these technologies.

By the way, our goal is to improve the educational system as a whole, adopt educational policies that take into account the reality of each country, the cultural aspect and the population needs. Certainly these new technologies can help us to achieve this goal if the International Organizations will deploy efforts in the improvement of these technologies and alleviate their very high cost. It will be also necessary to change the way we manage our schools to succeed in introducing and integrate them into our schools.

References


http://www.telelearning-pds.org/doc_eer/demarrage_classe/outillage1.html


http://fileadmin.cs.lth.se/cs/Personal/Jacek_Malec/psfiles/aaai01rae.pdf


nology and Teacher Education, 9, 61-66.
http://www.marcprensky.com/writing/Prensky-The_Role_of_Technology-ET-11-12-08.pdf
http://www.brookings.edu/~/media/research/files/papers/2012/1/education%20technology%20winthrop/01_education_technology_shearer.pdf
A Proposal for the Development of Pre-Primary Education in Saudi Arabia Based on the Experiences of Malaysia and South Korea (A Comparative Study)

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Abstract

This study aims to identify the most important key features of pre-primary education in South Korea and Malaysia and the possibility of benefiting from their experiences in the development of this phase of education in Saudi Arabia, given certain circumstances and possibilities. This study identifies the similarities and differences through a review of the experiences of South Korea and Malaysia with respect to pre-primary education. The study subsequently analyzes and compares the results with the status of pre-primary education in Saudi Arabia to conceive a proposal for the development of a pre-primary education program in Saudi Arabia. The results of this study indicate that many factors have delayed the progress of pre-primary education in Saudi Arabia, including cultural factors and the unexpected and unplanned economic boom. The study suggests increasing the complementary relationship with the private sector through the granting of facilities to invest in the creation of excellent programs and pilot projects in kindergarten. In addition, the study suggests maintaining the quality of programs offered by enriching the integration of technology into the curriculum and directing pre-primary education curricula to focus on children’s self-respect and on teaching through play, cooperative learning, and role-playing. The study further suggests that Saudi Arabia can benefit from the creative approach incorporated in Malaysia and South Korea based on the educational philosophy to meet the needs of children. The outcome of this study is a proposal for the development of a pre-primary stage education program.

Keywords
Curriculum, Development, Pre-Primary

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1. Introduction

The acceleration in scientific developments, the explosion of knowledge and the progress in technology are considered major characteristics of our time. As such, they influence the bodies concerned with education in both the developed and developing countries that are seeking to create and adopt modern technology through change and through the continual search of that which would lead to the country’s greater efficiency and effectiveness. Thus, based on a deep belief that the education component is the most efficient in the promotion of communities and in keeping pace with advancements and developments, education is the key factor in meeting the needs of this era, and accordingly, the demands of this component must be fulfilled.

These changes and advancements in technology have influenced many countries around the world to review their educational systems and to take the necessary steps to reform, develop, and enhance them. Education and learning along with the development of human resources are considered the essential foundations of sustainable development (Mohammed, 2002: p. 39).

States and countries differ in their philosophies, objectives, plans and strategies related to education. On the one hand, some states and countries are concerned only with developing or enhancing their organizations, plans, human cadres and materials. On the other hand, there are those states and countries that are focused on improving education and its development to raise the efficiency of their organizations administratively, technically and procedurally. Accordingly, countries must develop polices in response to external and internal changes to improve performance, enhance the working environment and increase production efficiency so that their organizations are flexible, renewable and have the ability to absorb new knowledge to the point where they can occupy pioneer levels in many fields. The conscious perception to change is the key factor behind the success of educational institutions and educational excellence. By treating educational systems as social systems that are scalable for growth and development, the educational systems will be better able to meet the challenges and adapt to rapid changes.

If the development of education in developed countries is a major priority, then it is essential that the development of education in Arab countries be given higher priority and be awarded greater political and financial support than any other development. Furthermore, the emphasis on education development and its curriculum must not be limited to the state alone, but rather, it must be a shared responsibility that includes all stakeholders—the students, families, society, private sector and civil institutions—that are affected by the outcomes and outputs of the education system.

The countries of the world are aimed at upgrading the educational process and consider the level of attention given to the preparation of the learner’s education a measure of the civilization of the nation. Many educators perceive the improvement of education as the best investment in comprehensive human development. This improvement begins with the investment of human capital that possesses capabilities, skills and competencies.

Motivation for the Study

The motivation behind this research as is detailed.

- The educational systems in various developed and developing countries struggle as the result of changes caused by continual advancements in science and technology. These changes influence modifications and give rise to new concerns for pre-primary education, thus necessitating the need to access various international experiences in this field.

- Economic, social, cultural and technical changes have resulted in changes in attitudes, expectations and human needs. Therefore, it is essential that mechanisms to change the administrative structures, operational methods, curriculum content and teaching methodologies and techniques in educational establishments be adopted so these educational institutions can function efficiently and effectively.

- There is an urgent need to study the educational aspects of Asian communities as most of the studies and research available in the extant literature focuses on economic and political aspects of education and ignores other aspects (Salim, 1995: p. 85).

- The last three decades have increased awareness and interest in the importance of pre-primary education and its implications academically, mentally, psychologically and socially with respect to the development of the child. This increased awareness has encouraged research in all countries of the world, including those countries compared in this study, to examine the role of this pre-primary stage in the formation of the child, specifically with respect to the forming of the child’s identity and the degree to which it prepares the child for future stages.
of development. Table 1 presents some of these studies.

Many Arabic educational research studies focus on studying Western educational models, in particular Britain, the United States, France and Germany, which may suggest that these models are perceived as distinguished and are therefore worthy of imitation and simulation. Systems and models of educational excellence from other countries, such as Malaysia and South Korea, however, have also experienced progress and success. Most of the educational comparison studies conducted in the Arab world that dealt with the pre-primary education stage (kindergarten) focused on educational, technical or administrative aspects and concentrated on comparing these aspects with Western models, particularly American and European models. The following is a list of some of these studies.

The study conducted by Abu Bakr and Ali (2013) focuses on a comparison of the requirements for the development of a kindergarten program in Egypt in light of the experiences of the United States and France.


The global goals for kindergarten programs necessitate the need to change the direction of educational research and examine the relevant educational experiences of countries, particularly Asian countries such as South Korea and Malaysia, due to the social, cultural and educational progress. Furthermore, it is important, to identify the factors that contributed to the countries’ social, economic, human and technological development and progress and to understand the role of education in this progress to benefit from their experiences. The intent of the study is to identify the elements of excellence given that both developed and developing countries today are in a downward spiral and are struggling with the economic, social and cultural changes caused by the tremendous advances in science, technology.

The study by Abdul-Halim (2002) investigates the development of a training system for kindergarten teachers in light of the experiences of certain developed western countries.

2. Literature Review

“Many educational approaches appear to be looking toward a better future and strive toward improving the educational processes as a whole; certain of these famous trends are quality future schools that incorporate moral and ethical trends in the educational process. Kindergarten in general and teacher preparation in particular are given special attention. Most countries require a university education for kindergarten teacher preparation. The International Union of Education in Early Childhood and the National Association for The Education of Young Children (NAEYC) recommend that kindergarten teachers must have university level preparation with a study period in a college program that is between four to six years” (Sasila, 2008).

Given that the trend towards the adoption of a culture of quality is one of the most important and prevalent tracks in modern education, the concept of quality evolved to address the following aspects such as overall quality, overall quality management, quality assurance, accreditation in higher education institutions and other terms and concepts that emerged from the adoption of quality in education. Quality is defined as a description or a degree of the exceptional excellence of a product (Al-Mahyawi, 2007: p. 140), and thus, quality in education

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<td>France</td>
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means to judge the level of achievement with respect to the goals and values of this achievement, the activities associated with this provision and the outputs that include the features and characteristics regarding certain approved standards (Hussein, 2005: p. 150).

Fraiwan defines a quality higher educational institution as one that has the ability to plan policies and accomplish tasks that would develop creative and innovative learners, thus allowing the Arab nation to keep pace with current advancements and changes (Fraiwan, 2007: p. 243). The adoption of the concepts of quality education can only be achieved through informed interactions about educational experiences in other states and communities. The extrapolated excellence and features of success achieved in some countries, including Asian countries, especially countries that have achieved distinguished educational successes such as South Korea and Malaysia, call for scientific research in the field of educational studies to determine the comparative success points in these countries’ experiences.

A number of developments evolved during the twentieth century have had an impact on the family and the role the family plays in the upbringing of their children prior to pre-primary education. The expansion of the opening of nurseries and kindergartens to care for children during this early stage of life on behalf of their families or in cooperation with their families has supported the existence of the role of pre-schools and kindergartens as evidenced by scientific studies of children enrolled in primary education at the age of six regarding the benefits accrued by children enrolled in these institutions compared to children not enrolled in these institutions (Al-Shayji, 2013).

The present study aims to clarify the pre-primary (kindergarten) education offered in Malaysia and South Korea, to identify certain rules and principles that can guide the evaluation of this stage in Saudi Arabia and to facilitate in the development of a proposal regarding the establishment of pre-primary education in Saudi Arabia.

“Education is no longer isolated from what is happening in today’s world of transformations and changes, but it is undoubtedly influenced by these changes and it also has an effect on these changes according to its flexibility and openness. There are global trends that impose their influence on many areas and activities of life. Education is one of those areas. It is the most sensitive and the area most affected by changes happening around it. Thus, innovations in the education system are a necessity and not an education luxury or an option than can be ignored under any circumstance (Al-Aqeel, 1426: p. 220). The human being is the developmental tool and the real investment behind the achievement of economic and social growth; therefore, it is important that educational systems raise their level of performance and continue the quest for education reform and development” (Hamed, 1426: p. 305).

Recent attention has been directed towards educational reforms in various aspects of the educational system in the Arab world. Thus, it is consistent with the current advancements and accelerating developments of the time. Hence, some countries have initiated the development of the educational process, as well as educational ladders for the different stages of education, including pre-primary education (kindergarten) with respect to curriculum content, teaching methodologies and techniques, learning activities and associated materials.

John Dewey called for the development of programs, activities and methodologies that can be adapted to the child’s interests and abilities and, in turn, will enhance the child’s social skills and human relations (Badran, 2000: p. 121).

The last two decades have seen a growing interest in this pre-primary stage with the active movement towards establishing kindergartens in the Arab world, particularly in the area of curriculum design, which targets the development of the child in the first two years of schooling.

English author and thinker George Bernard Shaw says, “What we want to see is the child in pursuit of knowledge, not knowledge in pursuit of the child”. In addition, Shaw emphasizes the importance of childhood and the enhancement of knowledge in the child. The early stage of childhood education is integral for the growth and development of children, especially with respect to the development of the brain, which is directly influenced by the quantity and quality of stimuli and early experiences to which the child is exposed, especially in the early years.

Multiple studies have shown that children in their first five years of life who have been introduced to experiences and stimuli designed for academic intent exhibit increased motivation, a desire to learn; and an appreciation for themselves that exceeds that of children who were not exposed in early childhood to such planned programs and experiences. Others believe that experiences children have in early childhood are critical and important for the development of the brain and the interdependence of cell-based networking, which help in the learning and thinking processes. Moreover, these early childhood programs whether in the family or in pre-school
children institutions, definitely help prepare children for success in subsequent stages of education (Meisels, 1999).

There are efforts being made to develop and upgrade this important educational stage in Saudi Arabia, including the adoption of new curriculum developed for kindergarten children. This new curriculum includes important values as well as basic life and learning skills. It also includes the implementation of a national strategic plan for early childhood education. These efforts are the results of the challenges that dictated changes and developments in this era and of the developments in the cognitive, cultural, demographic aspects of specialized studies and research in the areas of childhood and education.

Hence, the importance of comparative studies, according to the requirements of the current technology and in light of the rapid scientific developments, is that they allow access to international experiences in education, and thus, this study examines the elements of excellence to develop educational practices and improve mechanisms for working in the field of educational.

3. Methodology

The present study examines the pre-primary education programs in South Korea and Malaysia with the intent to improve and develop mechanisms for this educational stage in Saudi Arabia. The goal is to propose a suitable plan for improving pre-primary education in Saudi Arabia.

The problem statement of this study is defined through the following questions:
How can Saudi Arabia develop a pre-primary education program based on an examination of the experiences of Malaysia and South Korea?

This overarching question gives rise to the following sub-questions:
- What are the attributes and features of pre-primary education in South Korea?
- What are the attributes and features of pre-primary education in Malaysia?
- What are the similarities and differences between the pre-primary education programs in South Korea and Malaysia?
- What factors from the South Korean and Malaysian programs should be incorporated in the proposal for the development of pre-primary education in Saudi Arabia?

This comparative study analyzes and interprets the various aspects and formulas for pre-primary education in both South Korea and Malaysia. Given the cultures of these two countries, a proposal can be conceived for the development of this stage of education in Saudi Arabia. Hence, this study makes the following contributions.

1) This study will add to the extant comparisons of educational research and thus benefit professionals and researchers in the field.
2) This study will provide a definitive answer to the research problem.
3) This study may cause certain aspects of pre-primary education to be reconsidered and perhaps revised.

There are several limits associated with this study.
- Geographical boundaries (spatial): the study was limited to an examination of pre-primary education only in South Korea and Malaysia.
- Objective limits: The comparison study of pre-primary education was limited to the following themes:
  1) Community political, economic and social features.
  2) The educational and organizational structures of different stages of public education.
  3) Pre-primary education.
- Time limits: 2012/2013 academic year.

There is consensus among specialists in education that the pre-primary phase of education be called “kindergarten”, which is the educational stage that precedes the primary stage. However, there are also multiple denominations within this pre-primary stage such as kindergarten, nursery, early childhood education and pre-school education. Accordingly, all of these terms suggest that kindergarten, which receives children who are at least three years of age, promotes the welfare of children, takes care of their physical, mental and psychological growth, and facilitates their transition from home life to school education (Al-Fayez, 1418: p. 3).
A dictionary of education terms further defines kindergarten as “an educational institution dedicated to the education of young children between the ages of 3 and 6 years and is characterized by several activities designed to give children an education, social values, opportunities for self-expression and training on how to work and live together” (Al-Rashed, 1419: p. 9).

The author of this study procedurally defines the term pre-primary education as the educational stage attended by children from the age of 4 to 6 years that precedes the first stage of basic education (primary). It is also known as kindergarten.

This comparative study considers the most suitable and meaningful approaches incorporated in the curriculum and used in comparative education. The comparative approach is a comparative study that identifies the similarities and differences in the curricula that extend beyond the acquisition of precise knowledge. Herein, the experiences of South Korea and Malaysia with respect to their pre-primary education programs will be reviewed and analyzed, and the results will then be compared with the reality of implementing a pre-primary education program in Saudi Arabia. A proposal for the development of pre-primary education in Saudi Arabia will then be visualized. The comparative approach is considered the axis of the scientific method from which inferred similarities and differences can be observed as can the correlative variations in the incidences and causes with reasonable grounds for comparisons that result in a better understanding of the phenomenon being studied (Al-Rashidi, 2000: p. 79).

4. An Analytical Study of Pre-Primary Education in South Korea and Malaysia

4.1. South Korea

South Korea occupies the southern half of the Korean peninsula in Southeast Asia and covers an area that is 965 km in length and 217 km in width. Of this area, 75% is mountains (Fathi et al., 1996: p. 211). Its coastline is rocky and steep, and it has a continental climate. Due to its climate and difficult terrain, South Korea encountered enormous challenges in the twentieth century. Because it was controlled by Japan for more than thirty-five years, there has been a strong link in education between the two countries imposed by Japan’s control of the relationship. While the roots of education in Korea can be traced back to the establishment of the first regular school in 372 AD, the current modern educational and organizational structure has existed for less than fifty years. Thus, the administrative system in South Korea is based on many foundations and principles derived from its long history and heritage of this early education that was inherited through the reforms carried out by King Tiggo, the first king of the new ruling family (Fathi et al., 1996: p. 216).

4.1.1. Education in South Korea

The education system in South Korea is a modern system that focuses on enhancing learners’ skills and basic capabilities and is dedicated to the qualitative development of scientific education. It emphasizes modern culture and shares a significant role in the development of creative, conscientious, hard-working, ethical individuals. The educational system itself is committed to improving the prominence of education as it is concerned with raising children, building their bodies; developing their language skills, intelligence and social adjustment; instilling values in them; and influencing their behaviors (Al-Hamundy, 2010).

Not surprisingly, South Korea is ranked as the tenth richest country in the world, and it ranks third among the largest economies in Asia after Japan and China. This is in sharp contrast to its being ranked the third poorest country in Asia in the mid-1900s. South Korea, a nation with few natural resources and a high population, considers education to be the key to success, both in the present and in the future. Accordingly, it considers the investing in human resources as its most important investment and has achieved tremendous success due to this strategic vision. The Korean society realizes that the best way to advance vocationally and practically is through education.

The Korean education system was built by borrowing from other modern educational systems and by creating harmony between these modern concepts and the ever-present Confucian teachings and philosophy of education that is deeply rooted in the culture of educators. As the Confucian philosophy considers education to be the only key to success in the present and the future, exceptional attention has been given to education.

The author believes that the upholding of learning as a value, the interest in the development of modern education, and the philosophical underpinnings are the tools that led to the superiority of South Korea’s education system and that have allowed South Korea to keep pace with global developments in the various fields.
4.1.2. The Structure of the Education System in South Korea

1) Kindergarten enrolls children between the ages of four and six. As these institutions are not public, they are not mandatory. The aim of these institutions is to elevate children by building their bodies, developing their language abilities, their intelligence and their emotional growth, and instilling the values necessary for their social adjustment and behavioral growth.

2) Universal primary education is a compulsory six-year educational program. It is free to all children between the ages of six and twelve and is provided by the State. Primary education is the beginning of free compulsory education and 99.8% of the children who have reached the age of six years are enrolled in this system (Khalil, 2002: pp. 135-136).

3) Middle school education is compulsory. It is a three-year program for children between the ages of twelve and fifteen years. Thus, children in South Korea are required to attend school for nine years, that is, between the ages of six and fifteen years (Khalil, 2002: pp. 136-137).

4) Secondary education consists of three years and is attended by students between the ages of fifteen to eighteen years. While it is not mandatory, it is free. Even though high school/secondary education is not mandatory, the proportion of students who complete middle school and enroll in high school is 94%. This indicates the status that education holds among the people of South Korea who consider secondary education a specialized stage.

Senior secondary schools in South Korea are divided into two types: academic and vocational. However, there are also comprehensive schools, marine schools and crafts schools (Khalil, 2002: pp. 137-138; Korean Overseas Information’s Service, 2004).

4.1.3. Pre-Primary Education in South Korea

South Korea has faced significant challenges in the twentieth century while its people were under the control of Japan for more than 35 years. As a result of Japan’s control, many of South Korea’s experiences are similar to those of Japan. For example, Japan’s basic education system targets “gaining skills, promoting basic capabilities, developing qualitative practical education, expanding modern culture, participating in the development processes through the building of conscientious creative humans committed to productivity and characterized by noble morality”. Furthermore, the beginning of achieving these goals does not start at the primary level, but rather at kindergarten as it is here where children are introduced to the basic building blocks necessary to build the personal characteristics that will lead the child to future success. Table 2 provides a summary of kindergarten education in South Korea.

4.2. Malaysia

Malaysia, which is located in Southeast Asia, is a federal kingdom consisting of the Malaysian peninsula that includes 11 federal states known as West Malaysia and East Malaysia. The total area of Malaysia is 329,758 km². Both the eastern and western portions are located in Southeast Asia near the equator, and as such, it includes a large area of land on the sea route from India to China, which mediates the distance between them. As most of its territory is surrounded by water, the length of the coast of Malaysia is 3000 miles from the Indian Ocean to the South China Sea. The length of the coast of Sarawak and Sabah, i.e., East Malaysia, is approximately 1400 miles. With respect to demographics, Malaysia’s population is 27,757,000 according to the 2008 census. This represents 0.41% of the total world population. Malaysia was aware of the importance of addressing the problem of population out of fear of its continuing increase. Therefore, through different educational programs and curricula, Malaysia attempted to address this crisis by incorporating concepts of population education programs in the training and preparation of teachers (Al-Zaki, 2010).

The population consists of several races that migrated to this part of Southeast Asia during ancient historical

<table>
<thead>
<tr>
<th>Table 2: Kindergarten in South Korea.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legal age</strong></td>
</tr>
<tr>
<td><strong>Main interest</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>Role</strong></td>
</tr>
</tbody>
</table>
times. The Malawians, who belong to the Mughal genus, make up 46% of the total population and are considered the most important race. This is followed by the Chinese in second place, as they comprise approximately 37% of the population of Malaysia. The Indians and Pakistanis account for approximately 9% of the population, while the remaining 8% of the population is made up of Arabs, Japanese, and various European ethnic groups. Because the different races have different religions, the Malaysian constitution guarantees the freedom to worship for all (Abdul-Aal, 2006).

The official national language of Malaysia is Malay, the language of education since 1967. The Malayan language is written using the Latin or Arabic alphabet, and it contains many Arabic words. However, there are other languages and dialects used by people in various regions of Malaysia because of the different ethnic groups. The Chinese, for example, speak various Chinese dialects; the Indians speak Tamil and Hindustani among others, and the English language, which is a compulsory subject in Malaysian schools, is widely used in government departments, industries and trade. Accordingly, the Malaysian language is the language of learning at all stages of public education while English is learned as a second language. With respect to its economy, Malaysia’s, one of the strongest in Southeast Asia, depends largely on the production of oil, rubber, timber, tin and several different agricultural crops (Global Arabic Encyclopedia 1416, Part 22: p. 139).

Since its independence in 1957, the economy began a structural transformation from a heavy reliance on tin mining and rubber plantations to an economy dependent on industry, quality work performance, and worker productivity. This transformation significantly influenced the development and quality of the educational sector as well as the depth of knowledge being taught. “Malaysia identified the year 2020 as the deadline to become a developed country, and it has already begun to actualize huge annual rates of progress by encouraging certain industries to become the mainstays of Malaysia’s economy” (Bashir, 2003).

Three decades ago, Malaysia started on its journey toward economic development. The financial crisis of August 1997, however, reduced its currency to half its value. Malaysia quickly recovered from this recession and became the strongest economy in Southeast Asia. This distinct Malaysian experience was a breakthrough in the development and advancement of the country. The economic situation is directly reflected in the country’s education system through the provision of educational funds to provide free basic education. Accordingly, there are several economic factors that have contributed to the development of education in Malaysia.

1) The provision of skilled labor to keep pace with the country’s economy, i.e., an economy that shifted from the traditional agricultural sector to the industrial sector. This transition called for a strong and active educational system.

2) The need for a highly skilled productive labor force compelled Malaysia to endorse college education to serve the economy and create programs for the development of modern higher education as well as public education in all branches and at all levels (Bashir, 2003).

3) The need for the government of Malaysia to create an ambitious plan for the country to be part of the information society by 2020. This goal forced the government to focus on developing and improving education by keeping up with technological advancements and requirements (Al-Warthan, 2011).

4.2.1. Education in Malaysia

The current Malaysian education system was influenced by many factors, including geographic, demographic, linguistic, social, religious, economic, among others, that have contributed to the formation of the Malaysian education system in its current form. Since its independence in 1957 from British occupation, education has become an integral part of its development policy. Therefore, the education sector went through ongoing and lasting changes and development processes during those years, while over the last thirty years, the state’s efforts have mainly focused on uniting all segments of society through a uniform educational system that includes a national curriculum and an emphasis on a the use of national language for teaching and communication. This thirty-year period also saw a significant increase in enrollment in the various stages of education (Bashir, 2003). The State of Malaysia developed a strong educational system that met the needs of the skilled and active labor force, thus contributing to the economic transformation from the traditional agricultural economy to an industrial economy. Malaysia could not have achieved this sustained economic growth without investing in the human element, which is the most valuable asset owned by nations. An economy cannot grow unless it intensely invests in the human element, which has become the most important element in the production process of the information technology era as the development of a strong economy and civilization is contingent upon technological
To create a quality educational program, the Malaysian government reformed the curriculum and increased the use of educational technology. The result was an effective and efficient administrative education system that ensured greater focus on the educational process within the classroom and on various administrative aspects in the educational system with an emphasis on the teacher. It is expected that further reforms and developments in the education and training systems in Malaysia are planned to achieve its many objectives. The most important objective is to ensure the creation of quality in education and training for all Malaysian citizens and to provide them with the knowledge and skills necessary for Malaysia to become a developed nation by 2020 (Al-Zaki, 2010).

The author believes that the education system in Malaysia is the story of successes and struggles experienced by the Malaysian society in the last few decades and that it is the result of strong-will, ambition, careful planning and quick effective action. Malaysia was once a country confronted with multi-ethnic troubles, colonial greed and conflicting interests from many directions. However, due to the development of its unique educational system, Malaysia achieved national unity and sustainable economic growth, which is clearly reflected by its investment in the human element, the most precious wealth possessed by a nation. Thus, Malaysia’s success in establishing a strong education system has helped to meet the need for a skilled labor force, which contributed to the effective economic transformation from a traditional agricultural economy to a modern industrial economy. Today, Malaysia is employing education as a tool to achieve a decisive phase in the knowledge economy that is based on information and communication technology.

The Malaysian government pursued several important educational policies (Bashir, 2003).
1) The government’s commitment to free primary education.
2) The pursuit of pre-primary education (kindergarten).
3) A focus on primary education and a basic knowledge of national identity.
4) A direct secondary education focused on the service of national goals.
5) The establishment of teacher training institutes and industrial training programs.
6) A focus on achieving compatibility between technical developments and informatics.
7) A focus on the relationship between college education and the economy.
8) The establishment of a link between education and research activities.
9) The opening up of advanced educational systems.
10) A focus on educating females.

As stated in the Guide to Malaysian Studies (2003: p. 23), Malaysia’s strategic plan for 2020 call for making education a creative productive sector of the current economy, which will propel Malaysia into the information age. The official start of the school year in Malaysia is the first of January and it runs until the third week of November, thus allowing for a minimum of 190 school days in a single school year. As the Department of Education in Malaysia is national and centralized, it falls under the purview of the federal government (Malaysian Consulate, 2003).

Education, according to the philosophy of the Department of Education in Malaysia aims to prepare citizens in a dynamic, productive and humane way to face the challenges of the times. It also aims to prepare individuals mentally, spiritually, emotionally and physically based on a faith in God and obedience to Him. The educational curriculum provides students with the knowledge and skills necessary to contribute to the nation’s development as the nation strives to advance its industrial sector and promote unity and prosperity of the family, community and nation (Ministry of Education, 2004).

Initially, education in Malaysia was free but not compulsory, though most schools in the country were government schools or received government support. Accordingly, Bashir (2003) argued that state mandated education is a logical consequence of the support and facilities that are provided by the government. Hence, today, education in Malaysia has become one of the things that is indisputable, and parents who do not send their children to school are subject to punishment under Malaysian law.

4.2.2. The Organizational Structure of the Education System in Malaysia

Education begins at the pre-primary level and continues through the general education program, which consists of two phases-primary and secondary. The educational system in Malaysia is organized according to a 6, 3, 2 scheme, that is, six years of primary education followed by three years of lower secondary education. At the end of this level, students take an exam and those who pass enter a two-year upper secondary school (Malaysian
A. N. Al-Mogbel

Consulate, 2003).

- Pre-primary education (kindergarten)

According to the Education Act of 1996, kindergarten in Malaysia is part of the national education system, and it is attended by children between the ages of four to six years (Ministry of Education, 2004).

- Primary education

Primary education is free but not compulsory; however, approximately 99% of the target age group attends the primary stage. These are children between the ages of six and twelve. This is a six-year stage that is divided into two, three-year periods. The first period goes from grade one to grade three and the second is from grade four to grade six. The focus of education during this six-year stage is to teach students to read, write and become familiar with basic knowledge in arithmetic and science. It also directs students towards science and technology through the two courses-human and the environment and active skills-that are offered beginning in grade four (Ministry of Education, 2004).

- Secondary education

The secondary education program in Malaysia consists of two phases:

1) Lower secondary school

Lower secondary school or middle school extends for a period of three years, with an additional year added for Chinese and Tamil students to help them master the Malay language, as it is the language of instruction at the secondary level (Al-Zaki, 2010).

2) Upper secondary education

Upon completion of middle school, students prepare for their final exam. A passing score on this exam qualifies them to attend a two-year upper secondary school. This level of education is provided by a group of academic, technical, professional, and religious schools, and students are placed into one of three tracks based on their performance on the lower secondary final exams (Fathi et al., 1996).

4.2.3. Pre-Primary Education in Malaysia

The implementation of pre-primary education is the responsibility of three ministries—education, rural development, and social affairs—in addition to certain private institutions. However, in spite of the diversity of bodies responsible for these institutions, all of the pre-primary institutions follow the curricula designed by the Ministry of Education whose aim it is to elevate the child in all aspects of life. Pre-school education is spread throughout the country with more than six thousand centers (kindergartens), all of which are required to be registered with the Malaysian Ministry of Education.

The Education Act of 1996 considered pre-school to be part of the federal education system, and as such, the government has focused on pre-school education, requiring all kindergartens to be registered with the Ministry of Education and to apply the curricula as prescribed by the Ministry of Education. The curricula, which outlines the general objectives of kindergartens, include teaching using the official language of the country while also permitting the use of English and other ethnic languages such as Chinese and Indian, teaching methodology, teaching methods of educational supervision and providing social and religious guidance. Pre-school education in Malaysia is free and is provided by many government agencies, private organizations and charitable organizations. In 1996, the percentage of children enrolled in kindergarten was 70% of all students enrolled in the first year of primary school (Fathi et al., 1996).

Children are enrolled in kindergarten between the ages of four and six years. Thus, pre-school education has become part of the national education system whereby all kindergartens in Malaysia are committed to teach the curricula offered by the Ministry of Education.

This approach is commensurate with the age group of these children and is consistent with the stage of their development, interests and needs. The curriculum is dynamic. It focuses on children, and it is sensitive to and compatible with the different races that may exist in one class. The objectives of the pre-school curricula emphasize the understanding of attributes and characteristics of children by linking them to their local environment and strengthens the link between school and home.

The objectives of a pre-school education in Malaysia are many. For example, the child who attends kindergarten in Malaysia will

- develop a love for country,
- follow the religious teachings in life,
- practice noble values,
-respect the national language,
-acquire English as a second language,
-develop self-esteem and a sense of appreciation and,
-encourage curiosity, creativity and an appreciation for beauty.

To achieve these objectives, kindergartens offer a variety of courses, namely, citizenship, Islamic studies, moral education, use of the national language, English education, language development, physical development, social development, emotional development, cognitive development, and creative and aesthetic development (Ministry of Education, 2004).

In general, the maximum teaching hours in kindergarten are three and a half hours per day, five days per week. While there are many schools that are managed by government agencies, organizations or the private sector, the best known agency providing pre-school education services is the union government pre-school agency, which has been offering its services since 1960. According to the Malaysian Ministry of Education statistics (Bashir, 2003), the Malaysian union government agency has been building kindergartens throughout the cities and urban areas since 1976. Table 3 provides statistics on Malaysian kindergartens.

5. Comparison between Pre-Primary Education in South Korea and Malaysia

Table 4 shows the differences between Malaysia and South Korea in pre-primary education. Malaysia and South Korea’s approach to education is that the future begins with effective learning. Therefore, both countries direct their interest to the human, physical and technical capabilities as they build their educational systems. The education in both countries emphasizes building the human capacity from early childhood by enrolling them in pre-primary/kindergarten institutions. The study further shows a strong indication of increased interest in this educational stage as the number of kindergartens in these two countries continues to grow rapidly. This rapid growth in pre-school education has been followed by changes in the administrative and technical sectors of the education system. The vision of these supervising and organizing sectors with respect to education, in both countries, takes into account the unique aspects of the kindergarten stage. Accordingly, the administrative sectors recognize the need to focus on improving the components of the educational system-curricula, students, teachers, buildings, resources-at this important stage.


<table>
<thead>
<tr>
<th>Item</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public kindergartens</td>
<td>1076</td>
</tr>
<tr>
<td>Number of children</td>
<td>27,883</td>
</tr>
<tr>
<td>Number of classes</td>
<td>1189</td>
</tr>
<tr>
<td>Number of teachers</td>
<td>1699</td>
</tr>
<tr>
<td>Private kindergartens</td>
<td>2161</td>
</tr>
</tbody>
</table>

Table 4. Comparison of pre-primary education in South Korea and Malaysia.

<table>
<thead>
<tr>
<th>The most prominent points of comparison</th>
<th>South Korea</th>
<th>Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>State sovereignty</td>
<td>Controlled by Japan</td>
<td>Occupied by Britain</td>
</tr>
<tr>
<td>Legal age</td>
<td>Age 4 - 6 years</td>
<td>Age 4 - 6 years</td>
</tr>
<tr>
<td>Language spoken</td>
<td>Korean</td>
<td>Malaysian</td>
</tr>
<tr>
<td>Supervisory responsibility</td>
<td>Non-governmental agencies</td>
<td>Government, private and charitable organizations</td>
</tr>
<tr>
<td>Law</td>
<td>Currently not compulsory</td>
<td>Not compulsory</td>
</tr>
<tr>
<td>Education</td>
<td>Free 20% (private schools)</td>
<td>Free for all</td>
</tr>
<tr>
<td>Objectives</td>
<td>Enhance skills, promote basic capabilities</td>
<td>Elevate the child in all aspects</td>
</tr>
<tr>
<td>Aspects of the curriculum</td>
<td>Physical growth; linguistics; emotional growth; general intelligence; social adjustment</td>
<td>Address all aspects of the child’s emotional, physical and social development</td>
</tr>
</tbody>
</table>
5.1. Basic Features of the Community

Many researchers conclude that the culture, traditions and moral values play an important role in the success of the economic development in Asian countries. For instance, the launch of the name “Asian Dragon” on the economies of the region suggests the role of cultural factors.

The teachings of the moral values of Confucianism that prevail in Southeast Asia has served as the foundation for all experiences of growth in those countries as it has created a culture committed to the values of hard work, respect for authority, honesty, and loyalty to the homeland. In addition, these teachings have contributed to the social and political stability in light of noticeable ethnographic, religious and cultural differences, and they have always promoted cooperation and collective participation while denouncing rivalry, divisiveness and mediocrity (Bashir, 2003). The most prominent moral values and traditions that are similar to both South Korea and Malaysia and that played an active and supportive role in the success of the development of the countries in general and in education in particular are as follows:

- Constructive modeling: Japan is the best example and preeminent role model for all developing and growing East Asian countries. Both Malaysia and Korea drafted the content of their strategies by mimicking, to some degree, those of Japan. The Japanese occupation of both countries has had a role in the spread of qualitative values and Japanese culture, including the positive aspects, especially those relating to perfection and persistence when striving to improve at a professional level (Abdul-Aal, 2006).

- Rules, literature and culture: These include simplicity and moderation in consumption. These values contributed to promoting other values such as the need to protect the national wealth, the proper use and employment of resources, and a respect and appreciation towards the elderly. This last moral value is reflected in the respect that people show towards authorities at all levels. Thus, the law governs public life and compels people to obey the state policies without impeding or opposing them (Abdul-Aal, 2006).

- Tolerance and ethnic homogeneity: Harmony among the different races in the countries studied in this work is dominant. This is particularly true with respect to the Malaysian people. Malaysia has three ethnic groups: Malays comprise approximately 50% of the population. While the Muslims and Chinese believe in Buddhism, the majority of Indians are Hindu. Regardless of the ethnic and religious differences, however, the country is marked by social and religious tolerance and a respect for the country’s constitution (Al-Zaki, 2010).

5.2. Organizational Structure of Education

The two countries have a similar educational ladder. The public education systems, as explained herein, consist of the following stages.

South Korea: Kindergartens are non-mandatory, non-government institutions that enroll children between the ages of four and six years. Primary education requires six years of study and enrolls children between the ages of six and twelve years. It is free and compulsory. Middle school education consists of three years and enrolls children between the ages of twelve to fifteen years. While it is not mandatory throughout the country, it is required in some in some coastal (fishing) areas and agricultural areas. Secondary school consists of three years and is attended by students between the ages of fifteen and eighteen years. It, too, is free and non-mandatory.

The Malaysian and South Korean educational systems are similar in the initial phase of study, that is, the primary stage, but they differ in the secondary phase in that Malaysia’s program is two years while South Korea’s is three years.

5.3. Pre-Primary Education

Malaysia and South Korea’s philosophy toward education is that the future begins with effective learning. Therefore, both countries focus their interests on the human, physical and technical capabilities as they develop
their education systems. The education in both countries emphasized the development of the individual from early childhood through pre-school and kindergarten institutions. The study shows a strong indication of increased interest towards this educational stage as the number of kindergartens continues to grow rapidly in both countries. This rapid growth in pre-school education was followed by changes in the administrative and technical sectors of the education system. The vision of these supervising and organizing sectors with respect to education, in both countries, takes into account the unique needs at the kindergarten stage. Accordingly, the efforts during this important stage must focus on specific components of the educational system—curricula, students, teachers, buildings, resources.

The administrative and supervisory institutions in both Malaysia and South Korea show a movement toward developing educational policies that focus on the economic, educational and social investments at the pre-primary stage as this is the foundation for the formation of the personality of the human being of tomorrow. The current educational plans consider it an essential stage in the hierarchy of basic education as evidenced by the buildings and the autonomous budget for pre-primary institutions as it is these institutions that will provide the appropriate learning environment for the growth and development of the children. Thus, the focus of the educational goals for pre-primary education in these countries is on the mental growth and development of the child. While it is noted that there is an emphasis on the cognitive growth at this stage, the focus is not only on these objectives but also on the procedural goals, which must keep pace with the technological developments and scientific discoveries appropriate for this stage. Accordingly, the educational components and methodologies implemented in this phase must be specifically designed for the pre-primary child.

The pre-primary education (kindergarten) programs in both South Korea and Malaysia have adopted new goals intended to enhance the quality of education and care afforded the children in the pre-primary stage of education.

Based on the comparison conducted in this study, kindergarten plays an important role in the psychological, educational and social development of children. For this reason, the governments of the two countries studied herein allocate huge budgets to ensure the enrollment of children in quality, integrated kindergarten programs.

As previously noted, there has been increasing interest since the 1990s in both South Korea and Malaysia with respect to the reform, development, and advancement of the educational systems. The growing interest in pre-primary education was the result of a combination of factors that were active during that decade, most notably the rising tide of economic globalization and market liberalization. These events were quickly followed by the adoption of reform programs and educational advancements focused on creating productive, conscientious and creative individuals. This goal can be achieved by developing policies and strategies that reconsider and reevaluate the many educational practices and activities of the educational process and that place an emphasis on human development.

6. The Relationship between Pre-Primary Education in South Korea and Malaysia and the Experience of Saudi Arabia

The pre-primary education level must be continuously reviewed in terms of the teaching, preparation, curriculum, and equipment provided in the learning environment as should all related aspects of this important stage in a child’s life. Any development during this phase must be translated to new responsibilities, specific skills and an effective system to manage and assess growth. This, in turn, will translate the mechanisms and the development agenda into operational plans, practical reality and clear responsibilities that take into account the advancements in scientific research directed towards education, thus reinforcing the importance of this stage of education. There is a deep understanding and consensus among decision makers in Saudi Arabia regarding the importance of kindergarten and its effect on the child’s psychological, educational and social development, as is the case in the countries studied herein. Through the project of King Abdullah bin Abdul-Aziz, the government of Saudi Arabia allocates a large budget for the development of all stages of public education, including pre-primary education, as is the case with the governments of Malaysia and South Korea, both of which allocate huge budgets to ensure that their children are enrolled in kindergarten programs.

The reform and development of the educational systems in South Korea and Malaysia have experienced a surge of interest since the 1990s. Similarly, there has been a noted increase in interest in Saudi Arabia. In response to this growing interest, Saudi Arabia adopted a systematic, integrated program that consists of educational projects. This was ultimately the result of a specialized company created specifically to develop programs
and projects that will advance education in Saudi Arabia. The company is called Tatweer.

The plan of the Ministry of Education in Saudi Arabia is to invest in early childhood care as such an investment is an investment in a child’s life, and as such, it has great returns for the community in all stages of life. The importance of pre-primary education lies in its being the foundational stage for all other stages, wherein the ability to learn, to control movement, to control thoughts, to express emotions and to adjust socially are the basis for future education. In spite of the efforts of public education, it has been determined that by the age of eight, it is too late to attend to the educational needs of children as most of the cerebral basic links, linguistic preparations, and cognitive and physical abilities have already matured. Hence, early childhood care and nurturing play a crucial role in preparing the child for learning. The kingdom’s decree No. (7/b/5388) on 03/03/1423 AH emphasized this importance by making kindergarten an independent program in its buildings and separating it from the other educational stages, by developing a time line for the development plans to establish kindergartens throughout the kingdom, by involving the private sector in this goal, and by developing dynamic educational curricula for kindergarten to achieve the objectives of this stage (Ministry of Education, Saudi Arabia, 2013).

Pre-primary teaching received great attention and support from the Ministry of Education in the Eighth Development Plan where the kingdom’s decree No. (7/b/5388) dated 03/03/1423 AH (2002) directed the Ministry of Education to develop a plan and timetable that aligns with the development plan for the kingdom and that aims to create the gradual expansion of kindergartens throughout the kingdom in collaboration with the private sector and with the agreement to build an effective educational curriculum for kindergartens. As a result of this interest, the number of children enrolled in kindergartens has increased from approximately 96,000 in 2004 to 100,030,000 in 2008. In addition, the eighth development plan saw the release of Cabinet Resolution No. (60) on 28/02/1430 (2009). As evidenced in the minutes of the Ministerial Committee for Administrative Organizations, it was proposed to study the increase in women’s employment opportunities in suitable areas within government agencies. Such a proposal emphasizes the need to make kindergarten an integral part of the education track and eliminate restrictions on employment of women (Ministry of Economy and Planning, 2013). Table 5 shows the evolution of kindergarten under the eighth development plan of Saudi Arabia.

There are many similarities noted between Saudi Arabia and the two countries compared herein, which call for Saudi Arabia to adopt curriculum reforms and development all stages of education, including the pre-primary stage. In addition to economic prosperity, economic globalization and market liberalization, all three countries—South Korea, Malaysia and Saudi Arabia—have adopted economic and educational reform programs to keep up with the current advancements and innovations in preparation for creating active, productive, skilled individuals who can contribute to the labor force.

Educational and Social Aspects of the Study

Despite these similarities, there are some differences in the social factors between Saudi Arabia and the two countries studied herein. The Saudi society, for example, is much more private than Malaysian and South Korean societies. Furthermore, the Saudi community is more attached to its culture, traditions and heritage, and accordingly, is more cautious when dealing with changes and new developments, especially when they do not converge with the traditional culture and customs. Therefore, the development of curricula for the pre-primary education stage must customized so it aligns with the culture and traditions of the Saudi society. Privacy, for instance, must be valued at the kindergarten stage as this is the first educational and social institution with which the child comes in contact come into contact. However, it is also essential that Saudi kindergarten intersects in its curricula and functions with the curricula and functions of the Malaysian and South Korean kindergartens in

<table>
<thead>
<tr>
<th>Table 5. The evolution of kindergarten under the eighth development plan of Saudi Arabia (*)</th>
<th>2004</th>
<th>2008</th>
<th>Average Annual Percentage Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>1396</td>
<td>1472</td>
<td>3.1</td>
</tr>
<tr>
<td>Classes</td>
<td>5514</td>
<td>6568</td>
<td>5.4</td>
</tr>
<tr>
<td>No. of Children Enrolled</td>
<td>96,073</td>
<td>103,125</td>
<td>8.1</td>
</tr>
<tr>
<td>No. of Teachers</td>
<td>10,049</td>
<td>10,184</td>
<td>3</td>
</tr>
</tbody>
</table>

its quest to achieve the following objectives.

1) Develop the child’s personality, teach the child new skills and provide the child with learning experiences.

2) Build healthy habits with respect to the child’s educational and properly prepare the child for primary school enrollment.

These objectives can only be achieved by offering a modern curriculum that considers the child to be the center of all its activities and that adopts practical experiences, elements of discovery, awareness and self-contained intellectual creativity and skills as part of its strategy. This is the case in the curricula of both the South Korean and the Malaysian kindergartens, which employ excellent educational cadres to teach this educational stage and which adopt a clear educational philosophy and clear behavioral, psychological and procedural objectives that are based on science.

The significance of this educational stage is the result of a deep belief in its importance and in the educational goal that the way to a child for the next stage in his development is to provide him with sound cultural and social experiences that are commensurate with the child’s abilities and aptitudes (Al-Aqeel, 1426: p. 53). This goal can be achieved by providing the child rich educational activities and social experiences such as sports; visits to cultural activities; acting opportunities; lessons in morals, ethics, art education, crafts, and music and basic skills in reading, writing and arithmetic (Al-Aqeel, 1426: p. 55).

Therefore, it is important to provide a rich learning environment that is conducive to supporting the children’s growth and development. Thus, it is necessary to improve the training of teachers, to provide the right tools and space sufficient to activate the programs and curricula and to investigate the factors that will enhance the educational environment of preschool institutions. The dynamic educational environment is a complex combination of both social and physical environments, where both are intertwined and complement one another and both are of equal importance. The elements of the social environment include the management of the classroom and the ability to control and modify the behavior of children by using, for example, techniques and strategies for direct guidance (Hare, 2006).

All activities and programs designed for the child at this stage must incorporate an integrated, flexible educational system that fits the capabilities and potentialities of the child and meets his needs and characteristics. Furthermore, the program must be administered by a teacher who is academically and professionally qualified to achieve the objectives of this important stage of education.

7. A Proposal for the Development the Pre-Primary Education in the Kingdom of Saudi Arabia

- When projecting on future changes anticipated in the Saudi society, there is an evident increase in the demand for kindergarten services. The Ministry of Education has received numerous requests to establish kindergarten institutions throughout the kingdom. Thus, the number of kindergartens continues to grow due to the rapid increase in birthrates in Saudi Arabia, the awareness of Saudi families regarding the importance of kindergarten in the child’s life, and the increase in the number of women working outside their homes as a result in the shift from extended to nuclear families in Saudi society. This rapid increase in kindergarten institutions must be accompanied by the radical development in the administrative system as it will face challenges organizing and supervising these kindergarten centers. Such challenges and difficulties have been evidenced through the negative effects of kindergarten (Al-Otaibi & Suwailem, 2002: p. 57).

- The need for kindergarten in the Saudi society is based the demographic changes that have occurred during the last three decades, the structural transformation of the family from a large extended family to a small nuclear family, the cultural shift of the social classes, and the increased awareness of the importance of a pre-primary educational program, due to its positive role in all respects of children’s development and preparation for primary education. The increased need has resulted in the expansion of public and private kindergartens in all parts of the Kingdom. The number of females in public kindergartens is presented in Table 6.

- Kindergartens are educational and social institutions that seek to educate children and qualify them for primary school enrollment, thus making the sudden shift from home to school less traumatic and problematic. The kindergarten program allows children the freedom to engage in activities and discover their abilities, inclinations and capabilities. Kindergartens help children gain new skills and experiences. The children in this stage are between three and six years. At this age, children need constant encouragement from their teachers to develop an appreciation for teamwork; to instill a spirit of cooperation, positive active participation,
Table 6. Number of females in public kindergartens in Saudi Arabia.

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Academic Year</th>
<th>No. of Kindergartens</th>
<th>No. of Classes</th>
<th>No. of Female Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeddah Public</td>
<td>2003/2004</td>
<td>23</td>
<td>129</td>
<td></td>
<td>2140</td>
</tr>
<tr>
<td>Jeddah Private</td>
<td>2003/2004</td>
<td>155</td>
<td>610</td>
<td></td>
<td>9587</td>
</tr>
<tr>
<td>Rest of Saudi Arabia</td>
<td>2005/2006</td>
<td>1159</td>
<td>5316</td>
<td></td>
<td>94,786</td>
</tr>
</tbody>
</table>

self-reliance, and self-confidence; to acquire social and language skills; and to form sound trends, habits, and attitudes regarding the educational process.

- Kindergarten must be considered a purposeful educational stage that is no less important than other educational stages. As such, it is a distinct educational stage with its own educational philosophy, behavioral objectives and teaching and learning psychology.

- The objectives of kindergarten must be based on self-respect, self-confidence, stimulating creativity and independent thinking. It must encourage the child to adapt to change without fear, promote physical well-being, and positive health habits. It must helping children learn to live, work and play with others and promote an appreciation for music, art and nature.

- The need to benefit from contemporary educational research, which states, “The educational role of the kindergarten is the development of the child’s personality traits; the child’s physical, mental and motor aspects; and the child’s linguistic, emotional and social aspects to help the child express himself. It also helps the child to integrate with peers, develop respect for the rights and privacy of others and for public property, develop the child’s ability to solve problems, prepare the child for formal education and impart the concepts and skills of religious education, Arabic language, mathematics, arts, music, health education and social services. In addition, it prepares the child for the natural transition from family to school after age six and it develops the child’s self-confidence as an individual who has his own abilities and features” (Badran, 2000).

- “The inspector of global modern trends of servicing childhood and caring for kindergarten institutions sees disappointing significant differences between the reality of childhood and its modest educational institutions in Saudi Arabia and the recent trends in countries of the world, especially the countries that have made from the beginning of the third millennium a new formulation of kindergarten goals. For example, South Korea and Malaysia have provided premium quality education and care for preschool children as they recognize the importance of kindergarten on a child’s mental, educational and social life. The governments of these countries allocated large budgets to ensure free enrollment of children in government kindergarten programs without financial burdens on their families, and provide kindergarten institutions with all needed requirements to ensure that the objectives of the kindergarten are met” (Al-Otaibi & Suwailem, 2002). This is a clear indicator of educational policy, and it calls for Saudi Arabia to reconsider the terms and planning objectives for its kindergarten program.

- Herein, we refer to the recent efforts made by Saudi Arabia to develop this phase, which is a move that intersects the characteristics and features of the countries compared in this study. This is achieved primarily through the adoption of curricula that are aligned with the standards of global education and the acquisition of capable human resources to effectively implement the curricula in schools and educational departments through the training of teachers, school leaders and supervisors. This contributes to raising the level of achievement of children at this important educational stage and prepares them for later educational stages. Such attention directed to the proper design of curricula was common in both South Korea and Malaysia.

- Tatweer provides educational services and builds strategic partnerships with institutions and educational companies that have developed integrated curriculum approaches that are supported by appropriate educational means and tools and based on global educational standards for kindergarten. The company also supports the application process, provides for the transfer of knowledge through the training of teachers and supervisors, and ensures the quality of the application of materials. Hence, the services provided by Tatweer will lead to the achievement of the objectives of the strategy for the development of public education in the kingdom of King Abdullah bin Abdul-Aziz, who posits that the development of public education depends not only on the educational system but on the participation of all sectors, members and institutions of society. Under King Abdullah bin Abdul-Aziz’s direction, Tatweer is to conduct training workshops for kindergarten supervisors titled “Acers scale to evaluate the learning environment”, a program devoted to the evaluation of
the kindergarten environment. This training was part of a series of training programs offered by the project to develop kindergarten curricula. The kindergarten curricula development project sought to adopt curricula that were aligned with global educational standards and build the required capacity for effective implementation in schools and educational departments through the training of teachers, school leaders and supervisors, which would raise the level of achievement of children in this educational stage and prepare them for the subsequent stages of their education (King Abdullah Project for the Development of Online Public Education, 2013).

Consequently, the author suggests there be a focus on the following concepts.

- The administrative and supervisory responsibilities of kindergarten institutions are filled with challenges and educational needs that influence educational policy and result in the need to revisit the kindergarten position on the educational ladder. Thus, the kindergarten stage should be considered an economic investment, as well as an educational and social investment, as it is the foundation for future generations.

- The bodies supervising the process of education should have a conscious awareness of the nature of the innovations and the development of educational systems, as they are social systems that interact with the environment and go through continual changes.

### 8. Recommendations

In light of the outcome of the current study and the aforementioned requirements, the researcher proposes the following recommendations.

- To increase the degree of compatibility between the size of the administrative education system and the requirements and conditions of employment in the field, and accordingly, move towards a decentralized management style that is void of bureaucracy. This will strengthen the institutional and collective work by establishing the principle of accountability to ensure outstanding achievement and by promoting a comprehensive quality and accountability educational philosophy in training courses and programs.

- To increase the complementary relationship with the private sector and encourage the private sector’s role in the educational process by making it easy to invest in the development of excellent programs and pilot projects at the kindergarten levels.

- To ensure that teachers are aware of the objectives of the kindergarten program by holding intensive training courses in the areas of teaching methodology and with respect to the appropriate treatment and behavior of children. Such trainings should focus on enriching teacher creativity by providing exciting examples and exercises that teachers can easily implement in the classroom and by providing them with the tools and technical equipment necessary for successful teaching.

- To re-evaluate the kindergarten teacher preparation programs for improvements and redevelopment and thus provide empowered, innovative strategies and modern educational methodologies for implementation in the teaching and learning process.

- To provide enriched quality programs that integrate technology and curriculum geared to kindergarten children.

- To provide public and private kindergarten institutions with specialized teachers and provide these teachers with ongoing training.

- To establish school buildings for nurseries and kindergartens, in the Kingdom of Saudi Arabia in accordance with the requirements and specifications for kindergarten programs to meet the needs of education. This is contrary to what currently exists in Saudi’s contemporary educational systems. It is necessary to create schools that are dedicated to children at the kindergarten age that have such features as parks, playgrounds, toys, equipment, furniture, technology, as observed in institutions and kindergartens in Malaysia, South Korea, and other contemporary educational systems.

- There are many factors and cultural forces behind these shortcomings, and it is possible that the economic boom led to the expansion of kindergartens without adequate preparation. Thus, there are issues regarding building appropriateness and the hiring of teachers and school principals who lack the ability and efficiency to successfully manage these institutions.

- To strengthen the relationship between the Ministry of Education in the Kingdom of Saudi Arabia and the local universities to benefit from research and scientific studies related to early childhood and kindergarten curriculum design and teaching methodology.
- To develop a preschool education curriculum that promotes self-respect, self-confidence, creative thinking and constructive habits and behaviors.
- To model and adopt teaching strategies deemed appropriate for children at this stage, including learning through play, cooperative learning, and role-playing strategies.
- To benefit from the creative approach used in Malaysia and South Korea that is based on an educational philosophy that clearly meets the individual needs of each child.
- To provide effective and active kindergarten programs that keep pace with the growth of the child and that incorporate early childhood education practices that are similar to those found in Malaysia and South Korea.

9. Conclusion

Based on the experiences of South Korea and Malaysia, this study concludes with the following proposals:

- The formation of a committee to study distinguished successful international pre-primary educational programs and formulate a strategy for the development of this educational stage in Saudi Arabia. The committee should also assess the suitability of the curriculum offered by Tatweer, a company that provides educational services, for kindergarten programs and measure the feedback of the results on students at this stage.
- The need for the Ministry of Education in coordination with the media in Saudi Arabia to conduct comprehensive awareness programs regarding the importance of these institutions and provide education programs for parents to learn the fundamentals of raising a child of this early age.
- The need to conduct periodic evaluations of private kindergartens in Saudi Arabia every two or three years to assess their educational processes, their progress, and their degree of research.
- The need to prepare a detailed list of curriculum standards appropriate for students at this stage.
- The need to build a curriculum that aligns with the standards of the global curriculum while taking into account the characteristics of Saudi society.
- The need to build a curriculum that is based on sound educational philosophy and clear scientific grounds that takes into account the child’s needs and abilities.

Finally, with these proposals, the establishment of kindergartens in Saudi Arabia will definitely enhance the development of children in all respects—psychologically, academically, socially, etc.—and will thus contribute to building the future generation.

References


Bashir, M. S. (2003). Investing Humans in Malaysia, a Study Published in “Islam Online”. 
[http://www.islamonline.net/arabic](http://www.islamonline.net/arabic)


Developing Entrepreneurial Curriculum in Indonesian Islamic Higher Education: A Transformation Process

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Abstract
Entrepreneurship is believed as a method that could change people mindset, behavior, and attitude. In this term, the entrepreneurship position is between education and economic issues. Many people have thought that only an entrepreneur who has entrepreneurial spirit, as a hereditary, that formed by his ancestor. Therefore, some people believe that an entrepreneur does not need a high education degree. As consequences, the scope of entrepreneurship will be understood as the domain of the rich, and poor people are prohibited to become entrepreneur. What is more, the community has general views that becoming wealth and rich is a symbol of entrepreneurial success. However, the fact shows rich and wealth is not the one and only indicator of the entrepreneurship aim. It is a stepping stone to achieve a better life and future. Whether an entrepreneur can be created or not, the role of universities cannot be ignored. UIN Sunan Ampel that framed to become of one of the Islamic Higher educations that develops entrepreneurship in the frame of Islamic Studies, has an interesting experience. This experience would be useful to be shared with other agencies in setting up their institutions more adaptable with entrepreneurial spirit. There are many challenges that should be faced solved.

Keywords
Entrepreneurial Education, Strategic Planning, Islamic Higher Education, Young Muslim Entrepreneur

1. Introduction

Indonesia experienced the highest economic growth ever in 1976-1981. In average, Indonesia had 7% - 12% annual growth and reached the peak of economic growth in 1982 by 13.5%. This era was known as the oil boom. Up to 1997, Indonesia still experienced a positive economic growth. However, in mid-1998, Indonesia economic contracted minus 13.1%. The crisis was getting worse, if added with the uncontrolled population growth rate and the unemployment rate. Economic fluctuation created its own consequences, such as the changing of labor market structure that brought social economic political consequences. For example, the economic was squeezing, both in size and value. As a result, many factories and businesses had to do efficiencies. One policy that had to be conducted for efficiencies was the reducing of production cost. The reducing of production cost also meant as reducing human labors. Therefore, many employees had to seek another job. The competition in seeking jobs was getting difficult, not only because of that the economic condition experienced a negative growth but also the growth of jobs seekers made it worse. Statistic Bureau Data in February 2011 shows the Indonesia total labor force reached 119.4 million and from that number 111.3 million had jobs, which means that there was 6.80 percent of unemployment rate or equivalent to 8.1 million unworked labors. Another surprising fact, there were 93,601,800 college graduates who were unemployed (BPS, 2011). This figure was higher than in 2006 where there were 670,000 Bachelor degree and diploma graduates who were unemployed (Tempo, 2007). There are at least five factors causing unemployment in Indonesia. Firstly, the number of jobs available and the number of job seekers are not in balance. The number of job seekers is bigger than the available jobs. Secondly, there is a mismatch between the skills owned by job seekers with the skills needed by the labor market, in other words there is a misleading of education purposes with employers purposes. Thirdly, there are poverty problems, which force many poor students not to continue their education because of their economic hardship. As a result, it will cause of unskilled labor. Fourthly, the economic recessions that were followed by the global financial crisis, made many companies that had to cut off their production. As consequences, the companies reduced the number of workers, which resulting many unemployed people. The last caused is urbanization. Once a region is created as a center of economic, many people surrounding that region will come and try to get jobs. However, this region has limited resources to support all the people. Therefore, some of them are not survive and do not get appropriate jobs. That condition also creates social tension such as the increase of criminal rate and the rapid sprout of slump area.

The common sense in the public assumption is that a university graduate student is intended as “a beggar” for work. This assumption occurs because the learning system applied in various universities are mostly focus on how to prepare students to graduate fast and quick acquire job, others not. Due to the availability of employment is very limited, as a result, the number of higher education graduates who unemployed increases. There are many educated people are unemployed. Based on the logic above, it could be seen that universities potentially contribute in the increasing of unemployment rate. It seems that universities as the center of change and innovation are failed. Universities as the center of education provide basic science then are commercialized by large vertically integrated businesses. In the USA case, university patenting grows rapidly compared to private firm patent, which means that the growing of basic science that mostly developed by universities could enhance economic growth (Powell & Snellman, 2004). In addition, Gunasekara (2006) indicates that universities play an important role in advancement of regions to develop their government structure to create more simple bureaucratic services in order to drive contemporary economic environment. Resuming from the opinion above, Benneworth (2006) figures that university is a kind of an incubator for social construction, therefore the universities position is crucial and urgent in seeking unique access of sources and invest resources in knowledge-based growth. Drucker (1992) sees that universities create better economy and better quality of live, human need knowledge. Powell and Snellman (2004) point out that knowledge is the resources in solving problem. Howkins (2011) strengthens those opinions by saying that knowledge tends to empower people. The use of knowledge is call as knowledge economy (Powell, 2004). According to Milwar (2003), the knowledge-based growth could change the way of thinking of communities that affect to the using of natural resources and the mapping of economic production toward the government capacities in managing economic growth world-wide (Henry, Pollard, & Benneworth, 2006). This knowledge could escalate opportunities for gaining stable and rising prosperity for advanced economies’ community (Henry et al., 2006). Florida (2005) defines more clearly about the knowledge economic or knowledge-based growth as a skill that is owned by human that using their creativity in optimizing the limited resources and managing abandon resources. In sort, knowledge economic could be defined as a skill
that could see economy potencies and use the potencies that is had by using certain knowledge and technology. In other world, it is called innovation. According to Powell, W. W. and Snellman, K. (2004), there are two benefits of innovation. The first benefit is that innovation will result in cost reduction for goods in widespread use. The second benefit is that innovation will produce new goods and service. Despite the fact that university plays a significant role in determining the economic creativity and innovation, it also contributes in pushing the economy by supplying educated labor annually. It is yet to address how the university standardizes their curriculum and their graduate in wide range of jobs opportunity offering by businesses and employers. Through the description of knowledge economy theory and the university social function as the center of social changes in society, this writing demonstrates how Islamic higher education such UIN Sunan Ampel in resolving the unemployment by developing a good environment in university teaching process in creating entrepreneurs. Can entrepreneur be created? The UIN Sunan Ampel Surabaya as one of the higher educations under the Ministry of Religion Affaris has a duty to create graduates who are competitive both in local and international jobs market. This university founded on 5 July 1965, based on the Indonesian Ministry of Religion Affairs Decree Number 20/1965 as the state institute for Islamic Studies. Based on the Indonesian Presidential Decree Number 65/2013, since 1 October 2013 UIN Sunan Ampel has a wider responsibility not only as the centre for Islamic studies, but also has an authority to develop other social studies, science and technology. The vision of this Islamic university is to become a worldwide premier and competitive Islamic university. In order to achieve this vision, UIN Sunan Ampel has three missions as follows:

1) Providing a premier and competitive teaching and learning services on Islamic studies, multidisciplinary studies, science and technology;
2) Developing research on Islamic studies, multidisciplinary studies, science and technology that relevant toward community needs; and
3) Developing community engagement model based on religiosity and research.

In order to support those vision and mission, UIN Sunan Ampel creates institutional development paradigm called “integrated twin tower”. This paradigm is developed based on the discourses between religion and science. A meeting point of the religion and science discourses is defined as the concept of two twin towers (twin towers). The logical thinking of this concept is based on the interpretation of Al-Quran and Hadith as the foundations of science. This concept emerges two tower of knowledge. The first tower is the knowledge tower of Islamic Studies that consists of Islamic Studies Theory and applied Islamic studies. The second tower is the knowledge that consists of natural sciences, social sciences, and humanities. The two towers are linked by the adoption of two disciplines. The adoption of both towers of knowledge creates new disciplines such the Islamic Sociology, Islamic Philosophy, Islamic Economics, Islamic Politics, Islamic Entrepreneur and so on.

With the intention of supporting the twin tower framework, the strategic steps have been developed by UIN Sunan Ampel. The steps are including the updating of the curriculum, the modernizing the higher education management, and the upgrading the university infrastructure such as constructing new buildings and other facilities. However, from the strategic steps that have been planned, there are several obstacles that have to be faced. There are two major constraints faced by UIN Sunan Ampel and other Islamic Higher Education, which are cultural and structural constraints. Cultural constraint starts from the polarization of the society into the traditionalist theologians and modernist theologians. Traditionalist religious scholars assume that they have to have a high skill in classic Islamic texts. In contrary, the facts show that the community perspective looks at the skill and ability of students who graduates from Islamic higher education have no adequate understanding in classical Islamic texts (yellow book—Kitab Kuning).

Another indication also shows that students who graduate from Islamic traditional boarding school or pesantren just become religious rituals officers, which just have expertise in chairing of tahlil, talqin, marhaban and others ritual things. On the other hand, the modernist theologians are assumed that if they have to have a high skill in capturing the empirical aspects of the various problems that arise in society. Nonetheless, in the reality, this group is often less understanding the context and substance of empirical matters of religion. In this matter, Islamic higher education institution seems weak in developing new knowledge, especially the non-Islamic Studies. However, the current trend is shown the increase of acculturation process of local knowledge (religious studies) with science and technology. For example, Japan and Korea could be said succeed in combining local wisdom and modern science frame. As a result, the development of knowledge and technology grow rapidly. In other words, the ability of a nation to develop new knowledge, new information, new technologies and new culture are open widely because of the acculturation process of local knowledge (religious studies) with science and
technology. Western culture or the Japanese are the examples. Based on that trend, the role of Islamic Higher Education Institution must have critical interdisciplinary dialogue, which strengthens the knowledge. An academic discourse accommodates religious studies with science and technology.

2. Solution That Is Offered

Instead of forming entrepreneurs as independent and creative human resources, entrepreneurs also have function as agents of change that support personal and national economic prosperity. It is believed that entrepreneurship can improve the quality of higher education, especially higher education in four aspects. The first aspect, it will strengthen Islamic Higher Education Curriculum. For example, the entrepreneurial content that has inserted in offered curriculum or unit courses can make students more creative in developing basic knowledge and skills of certain subjects. For example, in teaching of *Fiqh Ibadah* (Worship principles) there is the concept of beatification/sanctification or *Thoharo*. By inserting entrepreneurial aspect at this lecture, then a student can develop or innovate technologies that make it easier for Muslims to do *wudlu* by providing *wudlu* machine. Machines are more economic to conserve water but still in accordance with the pillars of *wudlu*. The second aspect, it is believed that entrepreneurial institute or university can strengthen itself by creating sustainable finance system. Most of universities in Indonesia are very dependent on the government budget. Just in case for example, there was less harmonious relationship between the government and parliament will result in the pending of budget list and programs that proposed. This is because the budget has not been approved by Parliament. If this happens, it can make difficulties to the university to carry out their activities normally. In order to anticipate this possible case, and to increase the sources of financing of the university, the university management could seek the funds by doing business activities that do not violate the law. For example, Indonesia is known as the largest Muslim country, in the month of *Dzul-Hijjah* for example, many people wish to conduct pilgrimage to Mecca. Fulfilled this demand, Islamic university such UIN Sunan Ampel can offer guidance services to perform Hajj and can hold a tour and travel for Hajj and Umrah organizing to Mecca. The third aspect, entrepreneurial content could be integrated on the one integrated Islamic education system from primary education up to the higher education system. It is inevitable if the current economic education system from primary school to university is not integrated yet. Teaching system was carried out partially in each level of education. By introducing the concept of entrepreneurship at every level of education, then it can integrate economic education at all levels. The final aspect, the entrepreneurial education can reduce the negative image of Islam Higher Education which is probably known only as the producer of a preacher/speaker or even give birth to extremists or radical. With entrepreneurial contents, Islamic higher education will be known as one of the source entrepreneurs that support Indonesian economic growth. As a result, the negative image of religious radicalism can be reduced.

In order to achieve a better quality of higher education through inserting entrepreneurial contents into curriculum, UIN Sunan Ampel develops three differentiator’s entrepreneurial concept. The first, UIN Sunan Ampel puts the Islamic value as the main idea in developing entrepreneurial skill that is offered. The second, UIN Sunan Ampel bridges between Islamic tradition and global modernity in order to develop the cultural awareness; and the last but not least concept, UIN Sunan Ampel develops education system that could provide education services with low budget but has excellent graduate. In some term, this effort called as “frugal innovation”.

The planned staging is based on targeting area that projected. There are two staging that are proposed; regional expansion and national expansion. The regional expansion is developed through promotion visit to all regions; conducting an education exhibition and running the business incubators regionally. The national expansion that proposed is based on three activities: Firstly is by conducting researches for potential targeted provinces outside of East Java. Secondly is developing a networking with related ministries and state agencies; and lastly is developing a good relation with the national parliament members. Beside that in more detail, the proposed four years staging is divided into four programs. Entrepreneurial research program, university business unit program development, university teaching curriculum development, student entrepreneurial club as extracurricular, and university outreach programs. Those programs are resumed in 13 single programs that could be implemented in four years with the fifth years as reflection and evaluation of the whole program and setting the strategic plans for the next four years.

Since the declaration as an Islamic University, UIN Sunan Ampel has a wide market compared with previous status as an Islamic Studies Institute. Previously, the Sunan Ampel market concentration is the alumni of Pe-
santren and East Javarural area. By the wider mandate from the Presidential Decree number 65/2013, UIN Sunan Ampel market copes both pesantren and high school graduates, rural area and urban area. The proposed vehicle is sustainable business concepts through four years’ programs and eight years’ programs. The business concept that is adopted should be pro-poor, environmental friendly and in accordance with the national development plan. The business concept is divided into three programs. First is the internal capacity building (Teaching, Research, Outreach); Second is redesigning the marketing concept; and the last, is developinga wider networking. The economic logic that is tried to develop is devided into three categories. The first category is that Sunan Ampel would have better reputation among Indonesian universities. The evidences that Sunan Ampel have better reputation are: Many community members that use Sunan Ampel services, such as extra fees for internship program, charging for services in the incubators and charging any Islamic entrepreneurship consultation. The second category is that Sunan Ampel would obtain financial income from their activities such as offering research finding to industries and enterprises and optimizing the income from the institute business units. The third is that UIN would have a great networking and counterpart. The great networking and counterpart could be seen from the support that is received from others such as getting program grants from several ministries. However, before implementing those strategies, UIN Sunan Ampel at least needs three conditions that should be done. The first, this Islamic University needs to improve the standard of students’ recruitment and both administrative and academic staff recruitment. The recruitment quality should be put as main consideration in regard to have a better quality of university resources. The recruitment processes require a more rigorous selection of input and better structured for both prospective students and prospective academicians. The recent recruitment process does not cover the cognitive aspect such emotional intelligence, cultural intelligence, maturity or character. Furthermore, the current recruitment test has not been tested for reliability or validity. By having a cognitive evaluation to the prospectus students and staff will give at least three benefits. Firstly, the university human resources department will be easier to put new recruits based on the university needs. Secondly, a new student who has a high quality cognitive skill tends to easily to adapt with the higher education system learning process. As we know the learning process in university is based on independent study model. The last advantages is that by having a good recruitment both staff and student will result in better university atmosphere which could result in productive research that could be use in creating better living environment in community.

The second, UIN Sunan has to encourage their academics to develop their teaching skills and methods. Beside the teaching process, the university academicians have to increase their research to become more implemental and practical. As a result of this work, students should be provided with clearer and more systematic study schedules and review programs, and more clearly articulated formative assessment.

The last thing that should be prepared is to pursue the community support. In an developing UIN Sunan Ampel as a centre of excellence in community development and sustainable education system, university have to create a breakthrough communication technique in order to pursue the industry, business and community to involve in the process. For example, by having a good communication with industry and business, university could play as a partner for industry and business in doing their corporate social responsibility program in the community. The business and industry provide the fund and material and the university provides the human resources.

3. Technical Implementation of the Solution Offered

There are two approaches in implementing entrepreneurial curriculum through teaching unit. First approach is the creating student organization that focusing in entrepreneurial as extracurricular. In this method, entrepreneurship is built as a student activity unit. This activity involves students who have same passion and goal to become entrepreneurs. This is a passion to do innovative and creative action by creating business opportunities. The innovation and creativity should not against the manifestation of Sharia law. Second approach is the putting the entrepreneurial contents in the curriculum. The curriculum insertion is conducted based on the spirit of developing a better learning process through a gradual direct experience, structured and systematic method that will make the students able to achieve the aims and objectives of teaching that has been set.

There are three techniques in applying entrepreneurial content in curriculum. The first technique is by inserting the entrepreneurial content into one of the sub topics of unit course offered. For example, in the Department of Islamic Philosophy, there is a unit course called hermeneutic interpretation (Tafsir Hermeneutic). This unit
could be inserted sub-topic such as the Quran economic verses interpretation or the hadiths of economy interpretation. The second technique is creating a new unit course. This method is introducing entrepreneurship unit courses as new courses in existing courses. The third technique is by developing a new specialization in entrepreneurship. This method offers some units that should be taken electively in order to fulfill the minimum requirement in entrepreneurial specialist.

4. The Lessons

The entrepreneurship concept and higher education aims meet in the process of encouraging people (students) to be more creative and innovative with their existing capital possessed. In Indonesia cases where the population is the third biggest in the world, a higher education graduate still struggle in joining in the market jobs. Beside educational background, experiences and personal esteem are the main components in obtaining jobs from the jobs providers. UIN Sunan Ampel as higher education institution has experienced in preparing the students in facing a competitive jobs market. The UIN Sunan Ampel road map in preparing their graduate is depicted on Figure 1. By having those five aspects, UIN Sunan Ampel is expected to provide adequate process in preparing their students for entering the job market. The first aspect that becomes main consideration is that UIN Sunan Ampel has to have economic logic in developing their curriculum and programs offered. By having a good economic consideration, the cost and benefit of each action planned could be determined. The second aspect is the arena, where is the scope or targeted market of UIN Sunan Ampel. The third aspect is the determined vehicles that need to be employed, what kind of steps and stages that need to be done. The last is that UIN Sunan Ampel in offering education services should show the comparative advantages in their system. The UIN Sunan Ampel should able show the differentiation of the UIN Sunan Ampel has offered compared the other universities. At the broadest level, the strategic planning of UIN Sunan Ampel may have some limitation and handicap, however, those strategic planning created as a road show in achieving the Sunan Ampel to become World Class University through entrepreneurship. By having entrepreneurship aspect in UIN Sunan Ampel curriculum, it creates a wider opportunity not only for Islamic Studies, but also for the other social studies, science and technology to become more implemental and applicative in creating a better society. However, from the effort that has been created, sustainability aspects need to be considered. The sustainability aspects that are needed could be fulfilled if the university could answer to the following four questions. Does the university have a strategy to deal with problem occurs? Does the university strategy explore the key resources that they have? What are the elements that support the strategy? Does the university have adequate support?

Figure 1. UIN Sunan Ampel strategic plan.
This sustainability aspect questions above need to be answered properly in order to avoid the potential failure that could be occurs in achieving the higher education aims.

References


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- Educational Technology
- E-Learning and Knowledge Management
- Elementary Education
- Health Education
- Higher Education
- Innovative Pedagogical Models
- Language Education
- Learning Systems Platforms
- Media Education
- Music Education
- Quality Management of E-Learning
- Reading Skill Education
- Science Education
- Secondary Education
- Special Education
- Tasks and Problem-Solving Processes
- Teaching and Learning Technologies
- Web-Based Learning Platforms
- Youth Studies
- Other Areas of Education

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the CE.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

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