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Multigrade education: application and teacher preparation in Egypt

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Multigrade Education: Application and Teacher Preparation in Egypt

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Based on my belief in the multigrade schools' mission in reaching out to the children who would otherwise remain uneducated, in its child-centered pedagogies that are not available in most monograde schools, this research study is a tiny contribution that salutes the efforts of all who participated in that great initiative, and strives to extend it on a larger scale, to realize the dream of providing quality Education For All. Hoping that one day the monograde system would follow suit.

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1. ABSTRACT

This research study falls within the realm of exploratory work on a particular mode of delivering education. It aims to explore the rationale and implications of multigrade education both globally and nationally. It focuses more closely on the teacher preparation processes. The study looks at the general global perspective regarding this kind of education and its best practices. It sheds some light upon its assets in addition to the challenges involved. This research strives to examine the various forms of application of multigrade schooling in Egypt and the teacher preparation programs involved in the process.

In more specific terms this study mainly focuses on a current policy concern, which is the issue of teachers' qualifications and certification in hard to reach areas employing a multigrade mode of delivering education. The study tries to compare the performance of paraprofessional teachers who are non-university graduates to university and Faculty of Education graduates and hence aims to shed light on policy decisions needed to be made with regard to the needed qualification. The study relies on field research conducted in eight multigrade schools in Egypt in Giza governorate to meet such objectives.

CHAPTER ONE

BACKGROUND

2. INTRODUCTION

> Children from rural areas are denied access to education which perpetuates cycles of poverty, poor health and malnutrition. The children work from an early age to support their families and are never educated in a safe clean environment. If they had access to an education they could break this cycle and gain opportunities for their futures.
>
> *EFA Global Monitoring Report*, 2004.

Education for All (EFA) is a universal movement that calls for promoting the availability and quality of education for every single person, despite his/her age, color or race by 2015. In addition, the Convention on the Rights of the Child (1990) has denoted that all children have equal rights to an education that respects and cherishes their identities (Article 28). Actually, most of the shortcomings in realizing EFA goals as scheduled are demonstrated in remote or impoverished societies, where schools do not either exist or operate well.

In many parts of the world monograded schooling is considered the norm. It seems that it has kept dominating the major trends of educational policy briefs and action plans worldwide (Angela Little, 2006), even when it does not fit the local, social and economic conditions. They totally ignore considering multigraded classrooms as an alternative, which would be more suitable in situations where it is difficult to apply the public monograde system with its fixed rules that might not be appropriate for some communities. Moreover, based on previous studies, monograded public schooling in developing countries, proved to be inapplicable for remote or impoverished areas. On the other hand, there are many developed countries that chose to adopt the multigrade system for pedagogic reasons. It is imperative then to describe this kind of education in details and to see what other researchers have said about it in order to explore its applicability in our country in the areas where the public monograde system is inaccessible.

Currently, there are many circumstances that give rise to multigrade education. A lot of countries, in their attempts to reach the desired aims for providing education for all before 2015, utilized the multigrade mode of education as the most suitable in hard-to-reach communities with low or null enrollment rates. This has served as an outlet for the children and specifically girls, who missed out on education because of socio-economic or cultural constraints. This could also assist in realizing universal primary education as one of the main UN Millennium Development Goals (MDGs), particularly universal primary education (Shereen Abd El Razek Kamel, 2010).

There have been some great efforts done in few rural and poor areas in Egypt to establish some schools that adopt the multigrade system for providing more access opportunities. The schools attracted some children who missed out on school for social, economic or demographic reasons. The question is how far multigrade schools in Egypt are providing high quality education? Does this type of schooling suit the socio-economic needs of such deprived areas? Would it be better to have some regulations for resuming it till high school? Are the curricula and assessment forms used in these schools suitable to the context? Are the teachers qualified and trained to practice this mode of instruction? All these are issues which this study will shed some light upon, with a special focus on teacher preparation for multigrade settings in Egypt, and how this affects teachers' performance and, in turn, student achievement.

To provide a comprehensive view of multigrade education in Egypt, it is necessary to explore first the concept itself of multigrade education worldwide, its rationale, advantages, disadvantages, where it is applied, and how it works best. It is also important to find out the role of teachers in this kind of education and the type of preparation and support they need. This would help in formulating a general framework that could be viable for our society. At this point it would be important to look at the research about the application of multigrade schooling in

Egypt, and the challenges that teachers face, the training they receive, and the outcomes of this type of schooling and teacher qualification/preparation as demonstrated in students' classroom interaction, enrollment rates and achievement scores. It is even more crucial to conduct some field research to examine the application of multigrade education and teacher preparation and qualification in Egypt, especially that there is not enough research done on multigrade education in Egypt or on teacher preparation for multigrade schooling in Egypt. Thus the research question for this study is: How do teachers in multigrade schools in Egyptian rural communities approach teaching, how does their training and context support this as reflected in their classroom practices and students' performance, and finally how far do their qualifications affect their performance?

3. LITERATURE REVIEW

This review comprises three major concerns – the essence of multigrade education, the required teacher preparation, and its application in Egypt, all of which would help us have a complete understanding of the topic under discussion. First, the review will begin with a concise historical background, and then present some recent percentages about the prevalence of multigrade schooling. After that, it will refer to the most common connotations and modes of practice of multigrade education, together with a brief idea about the Escuela Nueva Program as an example of the best designed and implemented multigrade models. Next, it will shed some light upon the positives and negatives of multigrade schooling, in addition to its impact on students' achievement. And then, it highlights the presence of multigrade education in the developed world, in addition to the varied types of multigrade classrooms in the developing countries. Following this is a summing up of the rationale behind adopting multigrade schooling. The review will then shed some light upon teacher preparation programs perspectives and essentials for multigrade teaching, in addition to measures of teachers' effectiveness as well as their challenges. Those issues will be discussed in relation to the varied types of multigrade schools in the Egyptian context, to which the final part of the review is dedicated. These types are community schools in Upper Egypt, Child/Girl friendly schools and one-classroom schools. Finally, there will be some concluding remarks wrapping up the whole issue under discussion.

3.1. Historical Background:

> In most primary schools around the world a single teacher is responsible for a class formed of students from a single year grade…. . This is known as monograded teaching. This may be contrasted with settings where a single teacher is responsible for a class formed of two or more year grades. This is known as multigraded teaching.
>
> Angela W. Little, 2006.

There has been wide consensus regarding the history of the emergence of multigrade schooling. Historical texts state that 'traditional education' all over the world was basically multigraded (Shereen A. Kamel, 2010). Classrooms included learners of different ages, and a variety of textbooks that suit their different abilities (Little, 2006). Moreover, informal assessment served as the main tool utilized by the instructor (T. Morgan, 2001). In fact, monograded schooling, with its widely accepted notions related to age development aspects, is relatively new. It goes back to the 18th and 19th Centuries in highly populated communities with mounting enrollment rates (Little, 2006).

3.2.Current facts

Most research studies refer to the fact that multigrade schooling is available in developed and developing countries. Catherine Mulryan-Kayne (2004) presents its prevalence rates all over the globe in various configurations, but the data she provides are not entirely comparable. Here are some of the percentages she indicated about the prevalence of multigrade schooling in developing as well as developed countries: Australia (34%); Finland (32.4 %); France (34 %); India (84 %); Ireland (40 %); Mauritania (39%); Namibia (40%); Peru (78 %); South Africa (30 %); Sri Lanka (63 %); Sweden (35 %); and Switzerland (23 %). According to Kamel (2010), in Africa and Asia multigrade schooling is mainly found in impoverished areas, and that it is expected to spread widely based on the *EFA Global Monitoring Report* issued in 2009. Nevertheless, she adds that the problems of access are still unresolved based on the varied socio-economic aspects. In addition, Bruce Miller (1991) refers to the scarcity of teachers, their lack of training, minimal funding and adequate curriculum. Worthy to mention, it is not only the percentage of multigrade education that is increasing, but also its emerging terms.

3.3. Multigrade connotations

A variety of connotations is employed by different research studies to refer to the classroom where students of varied ages learn together. These include terms as 'vertical/family grouping', 'composite classes', 'non-graded' and 'split grades' (Kamel, 2010). At some instances, the term multigrade education refers to the classroom where learners possess varied ability levels. Moreover, Nicole Blum (2007) mentions that in India 'multilevel' is more widely used because of its holistic attributes that reflect the learners' different levels of interests and progress in each branch of knowledge offered to them at schools. This is why in Bodh schools lower elementary students are categorized according to their varied levels or skills and not their age differences (Kamel, 2010). However, there is no reference why a specific term is used though it might be equivalent to another one. Not only the definitions and terms attributed to multigrade education are varied, but also its modes of practice.

3.4. Multigrade models of practice

Research studies mainly pointed to four major modes of instruction. Pat Pridmore (2007) and Shereen A. Kamel (2010) discuss these modes extensively. For instance, the "multiple-year curriculum cycles", refers to the situation where learners from two or more consecutive grade levels work together on a certain curriculum, and then join other groups in other curricula. Also the "quasi-monograde" mode gives the chance for the instructor to work with every grade separately, whereas the other grades conduct an "unsupervised activity". As for the "differentiated curricula" mode, the instructor opens a general discussion with the class as a whole, and later classifies them in level/age groups, but makes sure to provide them with adequate feedback and assistance on the spot. Finally, the "learner and materials-centered"

model, which has been applied in Colombia as part of the *Escuela Nueva Program*, mainly utilized "self-study" mechanisms. This very last mode is the only model that has been discussed intensively in many research studies.

3.5.The Escuela Nueva program

It has been the subject of admiration and recommendation of multigrade research. Based on its enormous success, this "self-study" model has been accommodated and utilized in Brazil, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Mexico, Nicaragua, Panama, Peru, the Philippines and Uganda (Kamel, 2010). The key to such achievement was basically because of providing adequate teacher preparation, curricula adaptation and community involvement. In addition, the learners demonstrated higher levels of "peaceful social interaction" and "democratic behavior" than their counterparts in monograded classrooms (Little, 2006). There are indicators that such result was due to the peer collaboration involved. It also provides the chance for learners to resume their schooling – in case they dropped out for any socio-economic constraints, whenever they want. Moreover, according to research, this model would be very appropriate in countries where serious health problems prevail; resulting in low-performing students or a high rate of drop-outs (Kamel, 2010).

3.6. Multigrade education obstacles

Among the major challenges of multigrade education in different parts of the world is the curricula employed. It basically utilizes those of monograded schooling, the fact which puts extra loads on the teachers for curricula adaptation to suit the multigrade mode of education. Such drawback – based on research, could lead to lower levels of teachers' performance and interest in multigrade teaching. Gisela Sirivika (2010) highlighted the importance of changing the education

system to fit the multigrade settings and requirements. According to Kamel (2010), teachers could be provided with a lesson-planning template that incorporates some ideas for presentation usage within a multigrade setting, or related to child-centered pedagogies.

Lack of teacher training or preparation for multigrade contexts is another challenge. Based on the instructors' crucial role in facilitating the whole learning process, research has pointed to instances where instructors dominate the scene, learners' input is minimized, and group work is sacrificed (Kamel, 2010). Hence, this results in failing to provide the main positive attributes of multigrade education as peer-cooperation and student engagement. Adding to this, when instructors are not proficient in monitoring techniques, learners wait a lot in their places till the teacher pass by to see their work, and thus learning time is sacrificed. Moreover, according to Kamel (2010), instructors ought to discard their previous role as the "holder of knowledge" and promote the learners' potentials to be 'subjects' and not 'objects' as implied by Paulo Freire (1970). This will help create more autonomous learners.

One last challenge is that of recognition. In most communities, mulltigrade schooling is of a lower status than the monograded. This is totally inaccurate because it is all about which mode of education suits the community circumstances best. Another issue is related to the high-cost resources provided for multigrade schools. This is based on the fact that the process of adapting the curricula into activities that suit the multigrade pedagogy needs extensive use of numerous materials. However, in order to make this type of schooling cost-effective, community-donated materials could be used in creating new activities. Actually, multigrade schooling embodies various positive aspects despite the challenges involved. Its negative aspects can be overcome, but its assets can never be sacrificed.

3.7. Multigrade schooling assets

Collaboration is among the main strengths of this type of education, especially when the learners are of different ages/abilities. In addition, Kamel (2010) referred to some studies that demonstrated how such cooperation among peers makes low-performing learners achieve better grades within a relatively short time span which is even less than their counterparts in monograde settings. In fact, Patrick Mc Ewan (2001) supports this aspect and adds that high achievers develop their skills even faster in these settings. Moreover, this type of schooling respects students' different abilities and multiple intelligences. Thus, it enhances responsible behavior and mutual respect among the learners, and eventually within the entire society (Kamel, 2010). Finally, multigrade schooling provides better access to education for a larger student population in disadvantaged communities which suffer from severe socio-economic difficulties, and with minimal teaching force. This will be mainly guaranteeing education for all.

3.8.Effects of multigrade schooling on student's performance

Regarding the impact of multigrade schooling on student achievement, research has identified more positive correlation to non-cognitive skills than the cognitive ones (Kamel, 2010). Moreover, no consensus reached concerning the monograded's influence. For instance, Shereen Kamel pointed out that few research papers have found higher impact in multigrade contexts, some reached opposing findings, while other studies have shown equal status demonstrated in mono and multi grade settings for both types of skills. Nevertheless, the findings demonstrating the outstanding effect of multigrade schooling on social and personal skills have proved consistency in the results reached.

3.9. Multigrade schooling in developed societies

Research has shown that a lot of developed countries have opted for multigrade classrooms as a more effective pedagogy which promotes the potentials of the students, despite the high expenses involved. This has been the case with Sweden and Finland, where curricula and instruction were transformed to suit the multigrade system (Kamel, 2010). Moreover, she has mentioned that some studies refer to the fact that Australia and Canada apply the multigrade system in lower elementary due to their strong belief in its high benefits for the early childhood phase. However, despite the fact that in England multigrade education was applied in the 1980s to address low enrollment problems, it was employed at a later stage for its pedagogic effectiveness. Surprisingly enough, its low percentage in the US is rarely referred to in research studies.

3.10. Multigrade classrooms in developing societies

Multigrade schooling in developing countries is demonstrated in three major kinds of schools: Quranic, mobile and community ones.

3.10.1. Quranic multigrade schooling

Though they go a long way back, surprisingly enough Quranic schools still exist in many communities in Africa and Asia. For example, the majority of Moroccan children go to this type of schooling (D.A. Wagner, 1999). Moreover, these institutions, nowadays, embody positive aspects of community development as represented in the increasing percentage of female instructors (Helen Boyle, 2004). In addition, according to the UNICEF reports and statistics, about half of the children in Senegal attend Quranic schooling (Boyle). Regarding northern Nigeria, Quranic schooling is actually competing with public schools (S. Reichmuth, 1989).

According to Kamel (2010), these schools are preferred by many societies due to their moral associations, low cost, and cultural implications. In Egypt, for instance, a long time ago this type of schooling known as the *kuttab* "formed an intrinsic component of the village social structure and ingrained rural customs and traditions" (Yunan Labib Rizk, 2001). Moreover, Boyle stated that such peasantry communities regarded those schools as a main force for social and human capital formation. This type of education suited their circumstances much more than public schooling, especially concerning the latter's rigid rules that did not take into consideration the students' familial obligations in fieldwork and related chores that are essential traditions in these communities. Worthy to mention, this type of multigrade schooling employed informal assessments and depended on the student's individual pace, a fact which made Boyle regard it as a modernized form of education from the remnants of the past (Kamel, 2010).

In the post-colonial periods, some societies followed the western style of education while others remained faithful to their traditional kind of schooling which they later modified. Some parents from Tunisia, India and Turkey, for instance, sent their kids to the western type of schooling which in their opinion would provide them with better job opportunities in the modern era. On the other hand, other societies in Africa were totally against that. They viewed Quranic schools as a means to preserve their own cultures, traditions and identities against the sweeping westernization and colonial inclinations (Boyle, 2004; Kamel, 2010). According to Kamel (2010), this was seen in Nigeria, Mauritania and Somalia, where western schools failed to attract those communities even when there was no other option, especially for nomads. This has been asserted by UNICEF representatives and other researchers as mentioned by S. Nogaard (2009), where sometimes they even refuse to receive any books as donations from such international organizations (Kamel, 2010). Recently, these schools utilize more developed curricula that cover

an array of different branches of knowledge. Examples of this could be found in Mauritania, Mali and Cameroon (Kamel, 2010).

3.10.2. Mobile multigrade schooling

This type of schooling basically targets special-natured communities, like the nomads, pastorals and Bedouins who never settle in one place. Mobile schools constitute the only available means that provide basic schooling opportunities in these remote disadvantaged societies. In Syria, for instance, Bedouin children miss out on schooling – even though it is for free, because their families never stay in one place long enough. This prevents those children from fitting into the conventional public education system. Thus an alternative had to be found. Mobile school tents in Syria are meant to serve nomadic communities who never settle in one place. The UNICEF started this project in 1981 to address the high illiteracy rates among these nomads. According to their statistics, 101 mobile schools are spread across the Syrian Desert to provide access to schooling to more than 1,100 nomad children. On the UNICEF website, one of the teachers expressed his anxiety regarding stereotyping the Bedouins as 'backward people'. Even parents themselves cannot value the returns of educating their children. Thus they never encourage them to do their school assignments. Instead, they prefer that they help them in taking care of the animals. The problem that still needs to be solved is the fact that sometimes, the tribe's migration route extends to another country, and the mobile school had to stay within the borders.

Sudan's nomadic communities have very high illiteracy rates as well. They are totally against sending their children to schools, especially girls[1]. The UNICEF with the collaboration

[1] http://www.unicef.org/mdg/sudan_59297.html

of the Sudanese government introduced mobile schooling first in Darfur and Kordofan states in the western part of Sudan to ensure that nomad children have equal educational opportunities as other Sudanese children. These schools were also set up in tents or temporary structures made of straw and bamboo. Others just made use of the shade of big trees. Solar lamps were used to facilitate evening classes for both children and adults. Nowadays, according to the UNICEF reports, there are more than 200,000 nomadic children enrolled in nomadic mobile schools in almost every state in Sudan.

As for Kenya, mobile multigrade schooling started in 2008, serving a lot of nomadic areas. According to Kamel (2010), there are about 24 schools that provide education for about 10,000 students through the Millennium Villages Project (MVP). Schools are not built; tents or shades of trees are used as classrooms[2]. The teacher carries few simple things along their routes on back of camels. Despite the fact that the government has built schools lately, these societies have not used them due to their constant travel and their children's familial responsibilities. This was also the case for fishermen's societies in Mali and Iraq where mobile multigrade schooling was their sole resort. Let alone the number of children that these "movable" multigrade schools support in emergency situations as happened in Haiti, where not only education was provided, but also food supplies (Kamel, 2010).

In India, the problem of having access to education is basically in the slums, where remoteness and commuting is a major obstacle. Another challenge is that of awareness, poverty and familial responsibilities born by the children themselves (Kamel, 2010). Other families are

[2] http://blogs.millenniumpromise.org/index.php/2009/06/30/a-camel-a-tree-and-a-blackboard-dertus-mobile-school/

always on the move from one construction site to another. Thus mobile schooling is the only chance that these students can ever have. Sometimes they refer to these classrooms as "moving schools", where it can be moved from one place to another. Sometimes they are made of wood or other simple materials. Moreover, students are encouraged to come because of attendance bonuses in the form of sweets. Shereen A. Kamel (2010) believes this could be applicable in many poor areas in Egypt with minimal expenses. She also refers to the "school on wheels" project applied in India and Chile as well, where the school takes the form of an old bus without chairs but is attractively decorated for the children who could bring along their brothers or sisters who they babysit[3]. Sometimes they use the bus for school excursions, or as a means of transportation to the nearest spot to their homes. It is such an inspiring project.

3.10.3. Community multigrade schooling

Such schools provide education in societies where public schooling is not available. This type of schooling is found in seven African countries out of a total of 17 countries worldwide; serving hundreds of thousands and millions of students living in remote disadvantaged areas like those in Bangladesh, Colombia, Ethiopia, Honduras, Mali and Zambia (Kamel, 2010). This model proved enormous success in rural areas in Egypt, where this type of education is widely acceptable and deeply rooted in their culture as noted by Malak Zaalouk (2004). Community participation in school management in collaboration with the governmental representatives and Non-Governmental Organizations (NGOs) was a major factor for its sustainable effects.

[3] http://thecityfix.com/blog/back-to-school-edition-mobile-classrooms-set-up-in-the-slums-of-india%E2%80%99s-largest-cities/

In Mali, community schools were launched in villages by 1991 (Shereen A. Kamel, 2010). The smart thing in her opinion was that these schools first provided adult education in relation to the agricultural nature of the society, with a deep understanding of the related industries. This created a special bond with the community and encouraged them to enroll their children in these schools when it was open for youngsters. According to K. Helmore et al (2007), the school structure seems very familiar and simplistic, because it is very much similar to the way their homes look like. Moreover, sustainability has been ensured through community participation in managing these schools.

3.11. Rationale behind adopting multigrade education worldwide

So far the review of research on multigrade education has provided us with various reasons and motivations. Many recent conditions and circumstances have made many countries resort to using the multigrade mode of education. As a matter of fact, a lot of countries, in their attempts to reach the desired aims for providing education for all before 2015, utilized multigrade schooling – with its flexible and inclusive modes of instruction, as the most suitable in hard-to-reach communities with low or null enrollment rates. This has served as an outlet for the children and specifically girls, who missed out on education because of socio-economic or cultural constraints. This could also assist in realizing universal primary education as one of the main UN Millennium Development Goals (MDGs), particularly universal primary education (Shereen Abd El Razek Kamel, 2010). Adding to this, a lot of developed countries have chosen to adopt multigrade schooling for pedagogic reasons. For research and application have demonstrated how this type of schooling maximizes the cognitive as well as the non-cognitive

skills of the learners. Moreover, there is consensus that the prevalence of multigrade schooling is at times more of a *necessity* issue than a matter of *choice*.

E. Brunswic and J. Valerien (2004) elaborated that the establishment of multigrade schools is normally resulting from necessity. They referred to these main necessities as including:

> geographic or demographic constraints (scattered settlements, low population density, declining population density resulting from rural-urban migration, schools having a number of remote sites), or administrative or pedagogical problems (absenteeism, leave or lack of teachers, insufficient numbers of students in higher grades, excessive numbers of students in certain grades,…. [pp. 45].

Nevertheless, Brunswic and Valerien refer to the fact that sometimes this type of schooling is undertaken for political reasons such as "regional development and efforts to stop the migration to the cities, that is, the desire to maintain a school site in a given locality" [p. 46]; as was the case in some Iraqi mobile schools, as mentioned earlier. Moreover, multigrade education has worked very well in emergency and conflict areas such as Haiti and others. Thus it seems to be quite needed in the current unrests in many parts of the world.

3.12. Teacher preparation and education for multigrade teaching

There has been unprecedented concurrence that teacher preparation for working in multigrade contexts is the most crucial element for providing quality teaching, and demonstrating teacher effectiveness. Having been a Montessori teacher – without prior acquaintance with teacher education, one can only express one's total consent that the initial pre-service training made a huge difference to one's performance. This is in addition to the on-going in-service training and

professional development sessions that promoted one's professional growth in dealing with the early childhood students as whole beings. There are many studies that refer to the large scale training provided to developing countries – and mainly in Africa, by International Bilateral Organizations like the USAID, and Multilateral International UN Organizations like the UNESCO and the UNICEF.

Many studies recommended enhancing the courses dealing with multigrade schooling offered in teacher education programs in all universities. Nevertheless, almost all the universities in Africa do not offer such courses in the first place (V. Juvane, 2007). Meanwhile, many developed countries have embedded multigrade teaching courses in teacher education, as in Australia and Finland. Adding to this, in Vietnam, teachers receive intensive training on teaching in multigrade contexts (Pat Pridmore, 2007).

3.13. Essentials of teacher education programs for multigrade teacher preparation

The importance of initial preparation programs for multigrade teaching that provide teachers with the basic tips of *how to get started* was not only highlighted by research studies, but also by the teachers themselves. There is a general framework of the essential elements in multigrade teacher preparation programs that all research studies agreed upon. Other studies added more focused items for specific local contexts. There are some common aspects included in such programs. On top of the list is classroom organization, management and layout. This is in addition to instructional time management, and student time on task strategies, plus appropriate continuous assessment measures that promote independence. Last but not least is the element of building strong parental and communal rapport and collaboration.

3.14. Teacher education/certification and teacher effectiveness

There has been a very hot debate that has not been resolved yet concerning the linkage between teacher preparation and teacher performance. Some studies focus on the ability to teach diverse students, others on teacher education programs and certification, and a few other studies on competency in subject matter. For instance, there are studies that demonstrate a positive correlation between teacher preparation and certification and student achievement. Meanwhile, there are many others that relate specialized training and on-going professional development to student performance. In fact, there is much reference to successful attempts of training new teachers who had no degree, or prior experience, in education. What made the difference were their pre and in-service training, close mentoring and frequent peer-observation, like the Houston Program (Linda Darling-Hammond et al, 2005). However, other studies related effectiveness to teachers' sense of responsibility towards the students, their level of teaching competence, and their intention to stay in the profession.

There is mounting interest in alternative teacher certification programs; whereby new teachers who had no background in teaching either receive a summer training program for several weeks before they start teaching, or go through a post baccalaureate coursework with intensive, monitored and supervised training (Linda Darling-Hammond et al, 2002). Adding to this, D. James MacNeil from the World Education Incorporation (2004) has referred to the outstanding success of Malawi in implementing the initiative of hiring and training 18,000 secondary school drop outs to become teachers, in order to overcome the problem of teacher shortage to promote primary school enrollment. The Malawi Integrated In-service Teacher

Education Program (MIITEP) was a well-tailored approach, which guided and supported those new teachers on each step of the way. This has definitely helped the teachers to deal with the specific situations and problems they have faced in the profession and in their specialized teaching contexts.

3.15. Perspectives on teacher education

Research has identified different perceptions of initial teacher preparation content and context. Nevertheless, there is an increasing consensus regarding the importance of the process itself, with its cornerstone ideologies, but there are variations in the perspectives concerning the specific objectives underlying such conceptual frameworks, based on varied priorities. For instance, there are different questions raised and findings reached concerning the attributes of a high-quality teacher, the extent of teacher knowledge, and how to define and measure teacher effectiveness. Moreover, the different problems perceived in teacher education have been scrutinized by many research studies. Some of them referred to the fact that not necessarily all teacher education graduates turn out to be good teachers, while others criticizes the constant blame on teacher education programs for poor quality teaching. Hence, we can infer from this that what matters are the attributes, preparedness and devotedness of the teacher. However, there is consensus that improving those programs will undoubtedly promote quality teaching.

Research has also tackled the different views of a variety of educators concerning the shortcomings of teacher education programs. Some referred to their incoherence, fragmentation and weakness. According to Catherine Mulryan-Kyne (2007), there has been a declaration by the ministers of education in the OECD countries in 2002 that the quality of teacher preparation and education is considered one of the main policy issues that deserve utmost attention. Based on

interviewing teachers in several studies, they have voiced their concern about, and outrage against, focusing on rigid theories rather than practice strategies in teacher education, training and preparation programs. Moreover, they stressed the importance of highlighting the underlying philosophies behind teaching pedagogies and practices. They need to be aware of how to develop their practice skills within the context in which they operate, so as not to resort to traditional teaching practices that do not maximize the potentials of the learners or develop their skills. Some research studies referred to the fact that initial teacher preparation can never provide teachers with all the competencies and skills they will need throughout their teaching career; they only give them the basics and essentials to help them in the mission at hand, on condition that they receive ongoing in-service training and professional development sessions, with follow-up on-site supervision and feedback in order to improve their performance as they go along.

3.16. The case in Egypt

Based on previous research studies, multigrade education started in the early 1960s and expanded in the late 1970s to serve remote rural areas, scarcely populated and nomadic communities (Manar M. Baghdady, 2011). Priority was given to children from 8 – 14 years old. Those enrolled students were allowed to resume their education in public monograde schools if they wished to do so. According to Baghdady, there were no special curricula or books designed especially for them. The books they used were extra copies originally provided for traditional public schools. Moreover, the teachers who were selected were either retired teachers, religious figures or civil servants. Later on, other teachers who were originally working in monograde public schools, were appointed in those multigrade schools. It was not a requirement that teachers of grades one, two and three should be university graduates, unlike those of grades four, five and six (El Aasi, 2003). Nevertheless, hiring teachers then who do not belong to the same

community was a fatal mistake, as the main reason for the failure and discontinuity of these schools was teacher absenteeism due to the distance and difficulty in reaching the schools.

Working on providing access to education in underserved regions in Egypt was a critical challenge that the country has had to face in the 1990s, especially after its commitment towards achieving *Education For All* based on the Jomtien and Dakar framework of action. The Egyptian educational system had many drawbacks. The curricula and instructional methods adopted in public schools were totally ignoring the promotion of autonomous interactive learning, and critical thinking. They tended to encourage memorizing and rote learning. In addition, assessment strategies were *summative* rather than *formative*; that did not take into account the importance of the processes of "diagnosis, remediation and support", as mentioned by Ronald Sultana (2008). This means that it was assessment *of* learning, and not *for* learning.

Schooling in Upper Egypt was quite scarce, and/or of low quality. Moreover, enrollment rates in such areas were lower than the northern parts of the country, especially for girls. Thus, a whole education reform strategy was planned by the Ministry of Education (MOE), in collaboration with national NGOs and international organizations. Ever since then lots of efforts have been exerted to achieve better access to and quality in education *for all.* There was a sincere belief in the importance of local community participation and awareness regarding educating their children, especially girls, and in adapting educational policies to the local contexts; all of which helped to solve the root causes of the problem.

Children living in difficult circumstances should not be blamed for it or stereotyped as having incompetencies or mental drawbacks. They possess both the ability and the desire to learn and achieve good results when in better conditions. It was suggested in a UNESCO document

that teachers could build upon these children's inherent potentials and strengths (Higazi Idris, 2004). This would also realize Paulo Freire's vision about making these children extend the boundaries of their oppression, and prove that this world of the *oppressed* does have an exit, and can be changed for their betterment (Freire, 1970). Thus there is a dire need to find an educational approach that would be tailored *with* the children rather than a ready-made one *for* them. There were three main initiatives that targeted impoverished and remote rural areas with very low enrollment rates, and which implemented child-centered pedagogies and learning strategies that would develop the learners' skills. Above all they were all designed to *fit the child*, instead of the child fitting them. Worthy to mention, all these initiatives have adopted the multigrade system as we shall see. They include community schools in Upper Egypt, one-classroom schools, and child-friendly schools.

3.16.1. Community schools in Upper Egypt

The MOE in collaboration with the UNICEF, and with 'genuine' community collaboration, initiated the community school project in 1992 targeting Upper Egypt to serve as a preliminary model. It was agreed that the ministry would pay the teachers' salaries and cater for curriculum development and training delivery, while the UNICEF would be responsible for designing the whole educational program, including the training, and for providing the furniture and learning materials and equipments needed for the classrooms. According to Zaalouk, the sense of community in Upper Egypt was very strong. They were accustomed centuries ago to community education, which was represented in Quranic schools that adopted the multigrade pedagogy as mentioned earlier. Hence, they were not against educating their children, especially girls; they only had some reservations concerning the long distance their children had to walk to public schools, the appointment of non-local teachers, and the help they needed from their children in

field and household chores within the rigid school hours. As a matter of fact, addressing those concerns in designing the educational program of the community schools was the main reason behind its enormous success, because it tailored it *with* the community, instead of imposing a ready-made model *for* them. In fact, in the pilot phase of the project (1992-1995), 38 schools were established; serving 1,037 students, of whom 63% were girls. In the following phases, the development and expansion phases (1995-1999), the number of schools reached 202, with 4,656 enrolled students, of whom 70% were girls (Zaalouk, 2004). Adding to this, the community school students outperformed their public schools counterparts in official MOE examinations. More importantly was the empowerment that the adopted learning pedagogies imparted to the students and extended to affect many social aspects and practices in their community, as cooperation, decision-making processes, and democratic practices. Furthermore, the schools became centers for enlightening the whole community. For after school hours, the classes were open to deliver many sessions that would assist in developing these hamlets and villages, such as literacy, parental guidance, health care, environmental awareness and many others. Based on the progress achieved by the community school model, INGOs like CARE, followed the same approach. Moreover, when the MOE started to think of expanding this model into another multigrade approach, which we will talk about right now, no better exemplar could be found.

3.16.2. ONE-Classroom Schools (OCS)

These schools were established by the MOE in 1993. These schools also targeted remote rural and impoverished areas to increase access to, and enrollment in, the primary stage, especially for girls. A national department for OCS which comprised local district sectors was assigned to implement and support those multigrade schools. Moreover, supervisors were appointed to monitor the progress of the schools and teachers. Nevertheless, Bruce Miller (2001) in the report

he prepared for the USAID about the LearnLink Egypt education project, criticized the fact that content areas supervisors of public schools are assigned to monitor grades four and five in the OCS, unlike grades 1-3; a fact which sounds 'uneven'. Based on this report, these schools operate in 26 governorates.

2.16.3. Girl/Child-Friendly Schools (GFS/CFS)

Based on the same pedagogy, of community schools, the CFS model presents a learning environment that is inspiring, stimulating and empowering. The main rationale behind this is to build interest and confidence in these schools amongst the children and their parents. In fact, this is the second contribution of the UNICEF regarding multigrade schooling. With the start of the Girls' Education Initiative (GEI), where the UNICEF collaborated with the National Council for Childhood and Motherhood (NCCM), these schools mainly targeted girls out of school and others at risk of dropping out, in an attempt to address gender gaps and disparities. It is considered a 'scaling up' of the community schools (Ronald Sultana, 2008). These CFS adopt some strategies as 'girl counseling' to prevent those at-risk girls from dropping out through discussing the problem with the parents, in order to come up with appropriate suggestions that will relieve all parties; focusing on what would be best for the girls themselves while considering the familial concerns, as a corner stone for the rights-based approach which is the main force behind all those initiatives. Moreover, the teachers of those schools belong to the same community, so they play a great role in that aspect. In fact, since the teacher's role in such an interactive learning environment is no more seen as the holder of knowledge, but more of a facilitator; guiding the children as they go about in their learning, the teachers of the child-friendly school, as that of the community school was called a *facilitator.* Hence, their selection and preparation is of utmost importance.

3.17. Multigrade teacher selection and preparation in Egypt

It is widely acknowledged that teachers are central to educational reform. Accordingly, when the UNICEF started its first model of multigrade schooling, which is the community schools initiative, followed by the child-friendly schools, teacher selection and training was a priority. This entailed choosing an adequate caliber of teachers whose personal qualities and beliefs would best fit the child-centered, interactive and rights-based pedagogies; someone who would have an adequate level of education, and who would be accepted by the local community. Since it was very difficult to find among those communities female university graduates to recruit them for teaching positions, the alternative route was to look for paraprofessionals, like the emergency permit teachers in the United States and Malawi, as seen earlier, and which turned out to be quite fruitful. Furthermore, as much as it was necessary to benefit from these successful attempts, it was even more important not to repeat the common mistakes referred to in educational research. Thus, there was a great care, keenness and precision in the process of designing a holistic approach to those teachers' preparation and training, with a specified framework, that would be considered as an exemplar one to be followed.

The local education committee selects candidates in addition to some reserve facilitators who would act as substitutes when needed. Zaalouk adds to this the detailed training procedures undertaken to ensure quality preparation and, in turn, quality teaching. These facilitators go through a three-phase pre-service training especially designed for multigrade interactive pedagogies. What is outstanding about this training, besides the content and method of delivery, is the fact that it is attended by both the facilitators and their supervisors at the same time, in

addition to the fact that the training context promotes the main principles governing the educational pedagogies of these schools, such as reasoning, critical and scientific thinking, effective communication skills, decision-making skills, cooperation and team work, away from the authoritarian spirit which is totally against the rationale of this type of education. This is all included in the first training phase. As for the second phase, teachers are introduced to more practical parts as activity-based learning strategies, and on-going student assessment using portfolios. As for the third phase, it constitutes a major step towards hands-on experience, because it involves classroom observation in the real context they are expected to encounter. In fact, this pre-service initial training is not the only preparation that facilitators undertake. They are offered a refresher training every other year, in addition to the in-service training. What is also a great asset to this professional development are the daily reflections facilitators go through and the weekly meetings – which Zaalouk has referred to, with their supervisors and multigrade colleagues in other schools. There is this pressing question whether teacher education graduates receive in their faculties of education the same quality of preparation which those paraprofessionals receive, and whether they are introduced to the multigrade concept in the first place.

Concerning the OCS teachers, Miller mentioned in the USAID 2001 report that they receive no pre-service training, and when they do it is 'minimal'. Moreover, he refers to the fact that the majority of them (58%) have no post secondary education, while very few are university graduates (16%), and the rest have not finished their university education (26%). In fact, this level of education he referred to is amongst the highest females can obtain in those areas. His point is that since most of them have no background in education and/or are not highly qualified, therefore providing them with pre and in-service training is a must. There was also a

recommendation suggested by Miller concerning the need for offering training to the OCS supervisors to be able to help the teachers, and that faculties of education should offer OCS programs and training courses.

3.18. Multigrade teachers' challenges

Several research studies have tackled the perceptions and challenges of multigrade teachers regarding their profession. In many parts of the world, there was a common concern about the amount of effort exerted in this type of teaching, especially where teachers had to adapt the monograde curriculum to suit the multigrade setting as was mentioned by Little (2001). This created an overall negative attitude towards multigrade teaching. This has slightly changed a little bit in some countries like Sri Lanka, when the teachers saw the amazing progress that happened to the students' learning skills and abilities, because of the multigrade interactive pedagogical practices (Little, 2006). However, there were other common reservations voiced by many teachers in varied studies. These included the remoteness of multigrade schools, and the scarcity of in-service training and support (UNESCO/APEID, 1989). Others express their concern as to why multigrade education and multigrade teachers are rated as second class quality. This was also the case with some of the multigrade teachers in Egypt, especially those working in the OCS. They criticized the fact that they are not treated as the other teachers working in monograde public schools, and that their salaries are not equal to theirs, as was mentioned by Miller in the UNESCO report in 2001. Moreover, some research studies referred to the negative attitudes of some parents towards multigrade schooling. However, the research found about Egypt does not support this point, specifically in the areas were the teachers are from the same local community, where parents are supportive of such schools.

3.19. Concluding remarks:

Multigrade education would serve as a viable alternative strategy to promote access to education for all children of all ages, genders and backgrounds, and as a vehicle that promotes the skills of the learners; all of which would help in realizing EFA goals. For maximal results, teachers who work in multigrade classrooms need to be well-trained and well-prepared for this type of teaching/learning environment. Teacher preparation and training for teaching in multigrade settings affects teachers' performance and interaction with the students. It should be part and parcel of the multigrade education initiatives in Egypt in order to realize its main objectives.

Based on the literature review, this kind of schooling has proved its success in many parts of the world, whether in developed or developing societies. It has played a great role in promoting both access to and quality in education. It was demonstrated clearly in disadvantaged and at-risk societies, for instance, through successful initiatives such as mobile and community multigrade schooling. The special nature of multigrade education has helped to take into consideration the socio-economic conditions and obligations of poor families. Moreover, research studies have shown the positive influence of multigrade education on maximizing the learners' skills and potentials on the academic and social levels. This is in addition to the assets related to community acceptance and participation. Therefore governments should consider the option of multigrade schooling as a viable substitute where public monograde schooling is not applicable.

In fact there were many comparative studies that contrasted monograde to multigrade schooling, but this current research study will be mainly describing multigrade schooling, referring to other contexts that might be facing similar circumstances but succeeded in

implementing an appropriate model. The study will focus on multigrade teacher preparation so as to come up with a general framework that would work for our society.

Throughout the review of literature found on multigrade education, there has been constant reference to the importance of the teacher's role in the applicability of this system. It contends that their preparation and training for teaching in multigrade settings is of utmost importance. Accordingly, this research study strives to examine the issue of the qualifications of multigrade teachers in Egypt, and how this affects their performance in the classroom and their interaction with the children. Nevertheless there are some specific questions that this research needs to address and find answers for.

CHAPTER TWO

FIELDWORK

4. METHODOLOGY

In this study I used mixed research methods to gather background information related to the participants as a preliminary step to shape a view about the whole situation. Observations were used to view the participants within their normal school setting, to record their interactions, as well as their level of participation and competence. Hence, multiple instruments and sources of data were used; like interviews with teachers, supervisors and key informants, and observations of in-class activities. Moreover, I had access to some documents about students' achievement, teachers' lesson planning records and supervision recommendations. This is in addition to some documents referring to the kind of training that teachers received as well as some documents which included statistics about the number of schools, students, teachers and some demographics related to teachers' qualifications and certification.

4.1. Data collection questions

There were some specific issues which this research study mainly explored. First of all, there is a major research question that this study strives to find some answers for:

What type of teacher preparation do they receive? Does their preparation affect their performance? How far does the degree or type of education make a difference? To what extent are these differences reflected upon their pedagogical practices, and the quality of interaction with the students and supervisors?

Yet, there are other secondary questions that I am interested to explore:

What about supervisors? How do teachers view them? Are they supportive?

What type of skills do students in multigrade schools develop? Are students becoming autonomous learners? Are they enjoying the learning process? How do they interact with each

other and with their teachers? What about discipline problems? How do teachers deal with disruptive behavior? Do they have a discipline ladder?

How do teachers view and apply assessment? Is it *for* or *of* learning? Do all schools use portfolios? Do teachers know how to use them as guiding tools in their instructional planning, or is it just an overloading set of paper work?

All these were questions that I needed to explore to be able to compare teachers' performance in varied multigrade schools in Egypt, using the most appropriate data collection methods.

4.2. Target Population and sample selection

Since this is a comparative study, I set out to compare the performance of teachers in more than one multigrade school in Egypt, based on their qualifications and preparation. I compared facilitators who were paraprofessionals to teacher education graduates, and university graduate to non-university graduate facilitators. I collected data about teachers' performance through observation and interviews by nonrandom, purposive sampling procedures.

Egypt has few schools that apply the multigrade system. The study only collected data from some of them – specifically girls-friendly schools, which are currently being managed by the National Council for Childhood and Motherhood (NCCM). The schools were mainly chosen based on the teachers' backgrounds and qualifications. It was necessary to observe in person whether these schools differ in their application of the system, whether their teachers have the same training level and dedication, and whether the level of students' interaction and participation within a learning community differ from one school to another.

The chosen sample for the data collection constituted of the multigrade schools located in Giza governorate and run by the NCCM. It was a great opportunity to visit eight schools out of a total of ten schools run by the NCCM in Giza, whereby 16 facilitators were observed and interviewed. These multigrade schools were all girls-friendly schools that were referred to earlier as one of the most prominent types of multigrade schooling in Egypt.

4.3. Data collection and instrumentation

I began by interviewing some key informants, whether from the MOE or the NCCM, and to have access to some clarifying documents to get a general idea about how the schools operate, and then conducted some field observations and interviews with teachers and field supervisors. Interviewing teachers after spending some time with them in the schools aroused more questions, and they were less intimidated by the questions. They actually added some explanations and/or justifications for things I was not aware of. This triangulation definitely added more credibility.

Interviews were conducted using the "*interview guide approach*". The topics I intended to discuss with the interviewees were prepared ahead, but the sequence was decided upon in the course of the interview. In order to avoid affecting the behavior of the respondent, I tried to be as cautious as possible and unobtrusive during observation, whereby the children and teachers were not disturbed by my presence and went about their usual activities. Concerning the observations themselves, the instruments varied between tally sheets, checklists, and anecdotal records according to the specific objectives. All these were compiled in an observational grid and on excel sheets for the sake of data analysis using the statistical package SPSS. Fieldwork was conducted starting from the end of November 2011 till the end of March 2012.

4.4. Validity and Reliability measures

Validity was considered when preparing or selecting the instruments used for recording the data, in order to make sure that the information obtained would allow me to make accurate and plausible interpretations. This was ensured by referring back to the research supervisor and readers being experienced and independent judges, and through using some expectancy tables. This is why triangulation was essential in this mixed-method research.

4.5. Data management

As soon as the interviews and observations were done with, the data were coded and edited manually. Soon after this, the data were entered into the computer on excel sheets and data files. Concerning the measurement scales of the observational grid, they were mainly nominal, whereby one can easily assign numbers to different categories or variables of interest to facilitate the computerized data analysis. Data were represented by using descriptive statistics, cross tables, bar charts, pie charts, and component bar charts. The effect of interesting factors was detected by using multiple regression analysis and appropriate statistical tests based on the nature of the variables of interest. The software program SPSS was used for data analysis. Qualitative variables were treated by using the dummy variable technique. The effect of some specified variables on other important variables was tested for statistical significance. The results and findings of the analysis were interpreted in accordance with the objectives of the study.

5. PRESENTATION OF DATA

In this section, the researcher will present objectively a detailed description of the sample population of schools and teachers. This will comprise some demographics that could be considered as affecting variables in the course of the study. Moreover, there will be a detailed description of the kind of data accessed through the varied data collection methods mentioned earlier, in addition to a general outline of the observational grid form and technicalities used for evaluating and comparing teachers' performance, besides providing an overview of the daily routine of the schools sample population.

5.1. Schools sample population

Concerning the chosen multigrade type of school sample – which is the girl-friendly schools, the total number of schools is 1167 schools spread over eight governorates as follows: 128 schools in Sohag, 89 in Assiut, 137 in Menya, 318 in Beni-Suef, 276 in Fayoum, 78 in Giza, 131 in Beheira, and 10 in North Sinai. This is based on a document obtained from the NCCM. As for the chosen location for the field study, which is the Giza governorate, it includes as mentioned 78 schools distributed over nine districts as follows: 25 schools in El-Saf, 16 in Atfeeh, 10 in El-Badrasheen, 15 in Ayat, 5 in Kanater, 2 in Kerdasa, 1 in El-Wahat El-Bahareya, 3 in Oseem, and 1 in Bolaq El-Dakrour. Regarding the chosen district sample, which is El-Badrasheen, it contains 10 girls-friendly schools, but I only had access to eight of them because the remaining two schools were being run by substitute teachers who alternate between the two schools since it happened that the teachers of these two schools were on leave for three months. Of course, it would have been great to visit the remaining two schools, but for the sake of conducting fair

comparative research that aims at comparing the performance of the facilitators based on specific variables that were not completely available in these two schools since they are not the original teachers who have always taught those students, they were excluded from the study. Worthy to mention, there are eight one-room schools in the same district. This is according to a document accessed from the MOE district office. The names of the schools found in these documents, which comprise the sample school population will not be included in the study for the sake of confidentiality and for protecting the rights of the participants.

5.2. Teachers sample population

The total number of multigrade teachers working in El-Badrasheen district is 42 teachers, where 20 of them work as facilitators in the girl-friendly schools, while the other 22 teachers work in one-room schools. The number of girls-friendly schools facilitators is distributed among the ten schools of El-Badrasheen; two for each school. As for those who work in the eight one-room schools they are spread among eight schools, where some schools have two teachers, others have three, and others have two and the third alternate between two or more schools, and teaches technical activities like carpentry, cooking and weaving. This aspect is not available in the girl-friendly schools. This is according to the information delivered by one of the key informants and some supervisors. There is also a document that specifies the teachers' names, their qualifications, certification year and the school they work in. However, this document is not attached in the Appendix for the sake of confidentiality and for protecting the rights of the participants. Moreover, the names of the teachers will not be mentioned in the research study for the same reason.

The 16 facilitators who were included in the study and who work in the girl-friendly schools were divided by the researcher into three typologies based on their educational backgrounds and qualifications as shown in the following figure:

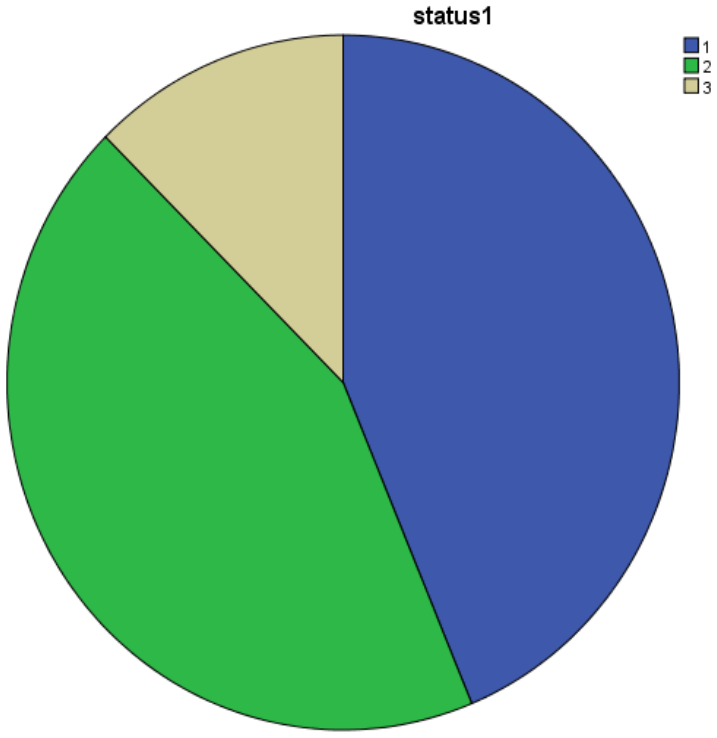

Figure 1. The three typologies of teachers

First of all, there are six university graduates. Second, there are seven non-university graduates, and third, there are three Faculty of Education graduates. This is also illustrated with more elaboration in the following table:

Table 1

Teachers' Typologies

Typology	Frequency	Percent
1: UG	6	37.5
2: NG	7	43.8
3: ED	3	18.8
Total	16	100.0

Concerning the university graduates, three of them graduated from higher education institutes not faculties. Regarding the non-university graduates, six have gone through a technical institute for two years after high school, and only one of them just finished high school. As for the Faculties of Education graduates, two of them studied there as undergraduates, while one of them finished her graduate educators diploma after getting her degree from a higher education institute. The educational specializations of the three categories of teachers included seven different majors. These areas of specializations comprise commerce, social service, education, history, high school, psychology and secretarial. This is shown in the following figure:

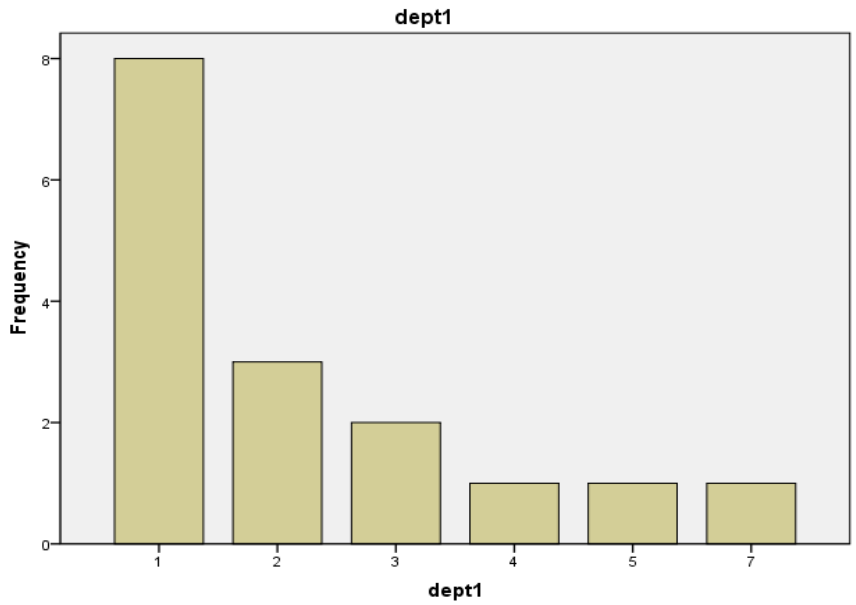

Figure 2. The seven different majors of teachers

Eight teachers had a background in commerce, three in social service, three in education, two in history, one in high school, one in psychology, and one in secretarial work, bearing in mind that three of them majored in two specializations. These latter cases who have a background in more than one specialization are the facilitators who are also Faculties of Education graduates; one of them has a major in social service, the other in psychology, and the last in history. This is illustrated in the following table:

Table 2

Teachers' Majors

Major/Dept.	Frequency	Percent
1: COM	8	50.0
2: SServ	3	18.7
3: Ed	3	12.5
4: Hist	2	4.7
5: Hi Sc	1	4.7
6: Psy	1	4.7
7: Secr	1	4.7
Total	19	100.0

As for the training they received, some had the full training package, while others only had a partial training where they only participated in some sessions. This is shown in the following figure:

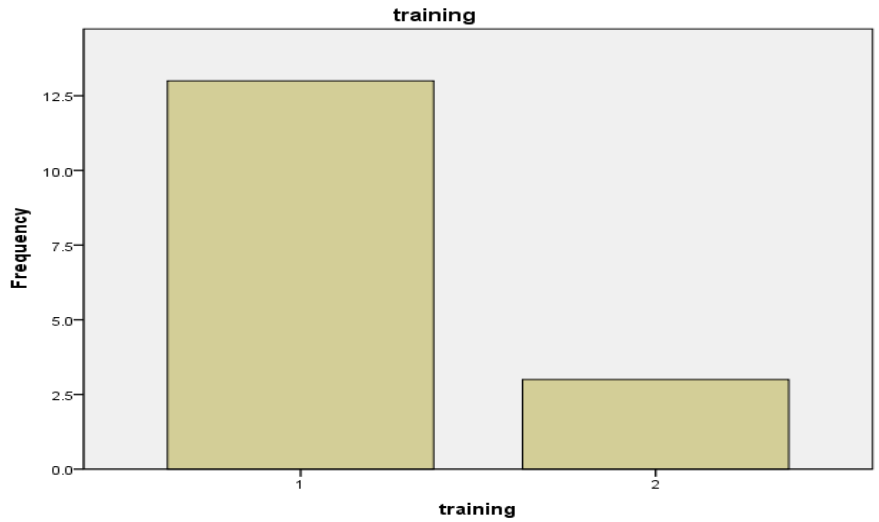

Figure 3. Full or partial training for teachers

They all attended the pre-service training but only 13 teachers out of a total of 16 teachers continued all the preparation phases and training sessions. The other three teachers they only had partial training. This is also illustrated in the following table:

Table 3

Teachers' Training Levels

Training	Frequency	Percent
Full	13	81.3
Partial	3	18.8
Total	16	100.0

As for the three facilitators who only had partial training, two of them attended some of the in-service training sessions, while the third teacher did not attend any of those sessions. Concerning the year they got appointed, the following figure shows the different appointment years of the teacher sample population:

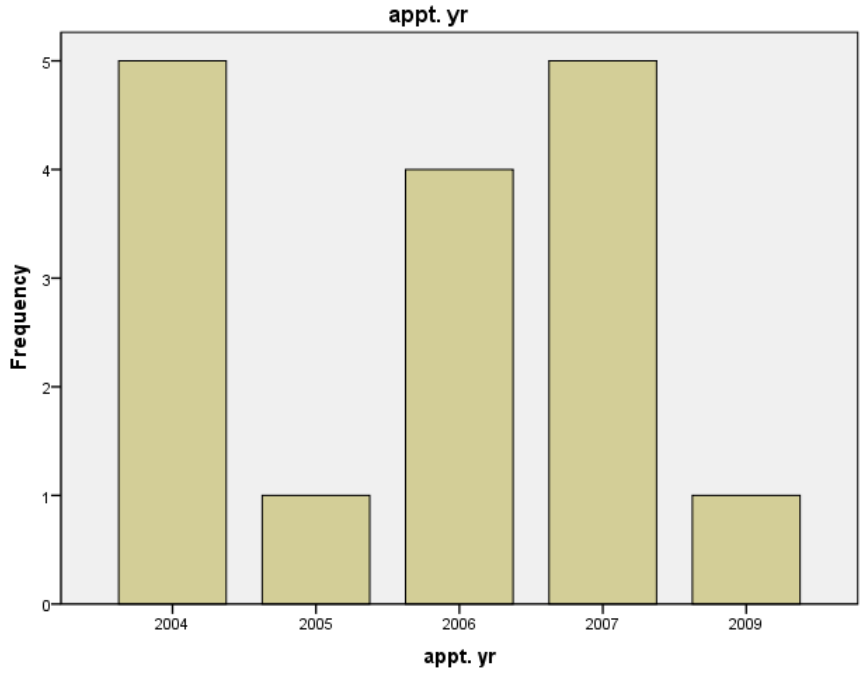

Figure 4. The different appointment years of teachers

To be more precise, five teachers were employed in 2004, one in 2005, four in 2006, five in 2007, and one in 2009. This is demonstrated in the following table:

Table 4

Teachers' Appointment Years

Appointment year	Frequency	Percent
2004	5	31.3
2005	1	6.3
2006	4	25.0
2007	5	31.3
2009	1	6.3
Total	16	100.0

This is the basic demographic information that will be included in the analysis in addition to the elements evaluated in their performance which will be discussed shortly. This demographic information was based on the documents obtained from the MOE district office, the NCCM, and was verified through the interviews conducted with the teachers themselves and with some field supervisors as well.

5.3. Students sample population

Students were not included in the study as participants by any means for child protection rights. Only some basic information about the number of students enrolled in the selected schools sample was obtained from the MOE district office and NCCM. The total number of students in the ten girls-friendly schools found in El-Badrasheen district is 279 students. The number of

students registered in each of these schools varies from one school to another. So for instance, three schools have between 15 and 20 students, another three schools have between 22 and 28 students, and the remaining four schools have between 32 and 39 students. In order to be more specific, 61 students are enrolled in grade 1, 90 in grade 2, 29 in grade 3, 36 in grade 4, 29 in grade 5, and 34 in grade 6. Concerning the multi grades available in each school, only two schools have the six grade levels altogether, three schools have five grade levels, three schools have four grade levels, and two schools have three grade levels. Worthy to mention, based on the information received from both key informants and teachers, many students are on the waiting list.

5.4. Data obtained about sample population

It is very necessary while presenting the data to mention the data sources and the exact type of data accessed. First of all, a very rich source of data was the interviews conducted with the two NCCM key informants from the outset. They provided me with a broad idea about the whole girls' education initiative and community schools, and how they all started. They also talked about the rationale of this type of multigrade schooling and teacher selection. It was obvious how crucial community involvement and participation was to the success of such efforts. Then of course they discussed the issue of teachers' qualifications, preparation and training. Moreover, they gave me a whole image of how schools operate, including the weekly holidays, and referring as well to the daily program of the schools. Adding to this, the interviews conducted with the three field supervisors were very productive as well because it provided me with details and specifics about the school day routine activities and supervision system. Furthermore, the interviews with the two MOE officials added a lot of insight about other aspects I was not aware

of, specifically about teachers' qualifications, preparation, certification and performance. The topics addressed in the interviews with key informants and field supervisors are found in Appendix A.

Another important source of data was the documents provided by the NCCM and MOE. These included information about the number of schools, their locations, their names, and the number of students in each grade within each school. There were other documents about teachers' qualifications and certification in addition to ministerial decrees about teacher selection in relation to their qualifications and educational background. One was also given the chance to have access to documents about teacher preparation, whether in the form of pre- or in-service training sessions.

Moreover, there was an indispensible source of data through the interviews with the teachers in the schools. The questions of the interviews that were addressed to teachers are found in Appendix B. The information they gave filled in many gaps and added reliability to the information obtained earlier from the key informants and supervisors, whether through interviews or documents. This is in addition to the observation conducted in the eight-school sample. This observation was like the last tile piece in the whole mosaic. Seeing it on the ground made me make sense of what was read and heard. It was like fitting the whole pieces of the puzzle together to form the whole picture. It also gave me the chance to look at the students' work and evaluation records, teachers' lesson plans, and supervisors' feedback records.

Finally, a rich source of information was the charts hung on the wall. These charts included facilitators' oath, learners' oath, learners' career wishes, daily schedule, weekly schedule for guided practice time, educational community members, learners' birthdates, child's rights, in addition to students' names and the grades they belong to. They said a lot about the teachers,

students' aspirations, classroom rules, daily and weekly routines, respecting child's rights, community involvement, and the participatory spirit among the learners. Thus observation was a very rich experience and an indispensible source of information especially for comparing teachers' performance.

5.5. Observation grid technicalities

The observational grid used in evaluating teachers' performance comprised of five main aspects that are considered essential factors in determining teachers' levels of performance and competence. These issues were basically related to planning, pedagogy, interaction, learning community and classroom management. It was essential when looking at teachers' performance to include their sense of preparedness, the methods of instruction they incorporated, the degree of interaction with the student, how they help promote the learners' skills through an independent cooperative learning environment, in addition to the mechanisms they use to manage the class. In fact the grid delved into the minute details of the teaching and learning process. It included elements like having the materials ready, using varied instructional aides, providing sufficient time for practice, discussion and transition, having a clear organized plan, monitoring strategies and feedback techniques, encouraging analytical and critical thinking, tailoring instructional methods to the students' lives, abilities and multiple intelligences, honoring diversity and individual differences, having good rapport with the students, creating a positive enthusiastic learning environment, using time effectively, being aware of the seating or standing position in the classroom, and following consistent classroom rules and management techniques. Worthy to mention, the actual grid that was used is found in Appendix C.

The grid was filled on the same day of the school visit but not on site. During the observations, I took notes, and used tally sheets, anecdotal records, and simple checklists that were tested and modified after the initial school visits. Of the total eight schools observed, I spent two days in five of them, one day in another two schools, and three days in intervals in one of them. This gave me the chance to modify the instruments used in observation, and to get a gist of the whole school system and multigrade teaching pedagogy. It also provided me with a clear idea about the differences in performance among the 16 teachers who were observed. However, the grid that was used was a standardized form that allowed for an objective comparison of performance to avoid being biased towards any of the teachers, or forgetful of worthwhile items that might affect the evaluation and comparison of their overall performance.

CHAPTER THREE

OUTCOMES

6. FINDINGS

The findings of the study were quite extensive. They responded to the main research questions of the study, and they even reached other results that were of interest and close relevance to the issue under discussion. Together they formulated a broader perspective for further analysis and research. Accordingly, the findings will be divided into two sections. One of them is devoted to the main findings and which basically answers the major research question. The other section comprises secondary findings related to the other research questions, and revealing some interesting findings as well within the scope of the study. Nevertheless, these secondary findings add a lot of insight and are closely related to the main findings. In fact they are inter-related to a great extent. Moreover, they both have an enormous effect on each other, and in turn this has its own repercussions on the whole multigrade schools initiative.

6.1.Main findings

Regarding the main research question, it was about the type of teacher preparation, how this preparation affected teachers' performance, how far the degree or type of education made a difference, and to what extent these differences were reflected upon their pedagogical practices, and the quality of interaction with the students and supervisors. However, to reach an answer to such a question, it was necessary to reveal how those facilitators were selected in the first place, and then look for the factors related to their preparation and competence based on the interviews and documents accessed. As for the observation results, the section entitled 'teacher performance' is totally devoted to a comparative view on the extent of which various demographic and professional variables affect teachers' performance within the school setting.

6.1.1. Teacher Selection

Based on the interviews with some key informants, it was noticed that teachers chosen to work in those multigrade schools were of different typologies. All those candidates belonged to the same community, an aspect which was crucial in the success and community acceptance of the project. Some basic elements, or standards, were considered through the selection process. Among them are their educational level, their personal attributes and their relationship with the local community. Priority was given to those with higher educational background through a hierarchy that starts from Faculties of Education graduates, through Faculties of Arts graduates, Faculties of Commerce graduates, then generic university graduates, followed by non-university graduates with post-high school diplomas or certificates, and finally those who only finished high school. In fact this research study meant to include all these categories of teachers to be able to have a more solid argument about teachers' performance without neglecting any of those criteria. Worthy to mention, according to one of the key informants from the NCCM, in such remote impoverished areas where access to schooling was minimal, it was quite difficult to find educated female teachers. Of course this gender aspect is a community requirement based on customs and traditions that could not be ignored in the selection process. Thus, sometimes they have had very few options, and they choose the best caliber available.

6.1.2. Teacher Preparation

Following this initial selection process comes the phase of teacher preparation, where the selected candidates receive pre-service and in-service training sessions. Based on the interviews conducted with key informants, field supervisors and teachers, in addition to the documents received about teacher training agendas, teachers go through three basic orientation training

workshops before they start working as facilitators. In the first orientation session, teachers get introduced to the multigrade rationale and pedagogy, and to the girls' education initiative prospects. In the second part, they get to see and practice how curricula can be transformed into learning activities to suit the multigrade child-centered pedagogy. According to one of the key informants, it is considered a very 'technical' training. The third training they receive is about how to design and make learning aids and activities using recycled materials for cost effectiveness. Adding to this, sometimes teachers have the chance to go through peer-observation experiences after this initial training phase. Worthy to mention, there are two in-service training workshops that teachers receive. One of them is about classroom management, where they get to know how to manage teaching different grades at the same time in a professional and effective manner within a community of learners. The other two in-service training sessions they attend are related to subject matters for upper elementary stages, specifically in Math, Science and Computer, and how to incorporate active learning methodologies. Later teachers receive two types of training sessions focusing on active learning pedagogies and its context within the varied development learning theories. In fact, each of these training topics lasts for about six days. Adding to this, every now and then teachers used to receive refresher training. Such training, according to one of the key informants serves the teachers who were not very competent at the time of their selection or not equipped with an educational background. Nevertheless, the last refresher training that teachers received was about two years ago. Here is a table that shows the training received by the sample of 16 teachers, whether full training (1), or partial (2) based on the year they got appointed:

Table 5

Crosstabs for Training per Appointment Year

		appt. yr					Total
		2004	2005	2006	2007	2009	
Training	1	4	1	3	4	1	13
	2	1	0	1	1	0	3
Total		5	1	4	5	1	16

In addition, this is another table that shows the training received by the three typologies of teachers – university graduates (1), non-university graduates (2), or Faculty of Education graduate (3); whether the training they received was full (1), or partial (2):

Table 6

Crosstabs for Training Received by the Three Typologies

		training		Total
		1	2	
Status	1	6	0	6
	2	4	3	7
	3	3	0	3
Total		13	3	16

It is evident that the three teachers who received only partial training were all non-university graduates who belong to the second typology, from the first, third and fourth cohorts.

6.1.3. Teacher competence

Based on the information received from one of the key informants, teachers were categorized into tree main levels according to their competence as demonstrated in the selection and/or pre-service training phase, in addition to their level of performance when they started working as facilitators. Sometimes refresher training sessions help in addition to ongoing follow-up and support from field supervisors. This key informant believes that there are other variables that affect teachers' performance and not just the training and supervision since they all receive the same kind of training and follow-up. Among these variables are the personal attributes, character, aptitude, and educational qualifications. In fact all key informants and field supervisors who worked with the NCCM believe that educational qualifications have nothing to do with the quality of teacher performance as a facilitator. However, there are two key informants at the MOE – an official and a supervisor, who thought otherwise, even though both of them said that this cannot be generalized because of the presence of very qualified facilitators who are non-university graduates. As for the opinion of the MOE official, it was mainly based on the evaluation of the OCS which were referred to earlier as having minimal or no training at all. The premise is that when the multigrade initiatives started in the early 1990s, it was hard to find highly educated teachers, but now the case is different. Nevertheless, based on the interviews with the teachers, they mentioned that there is a very low percentage of university graduates in such communities till now. The other suggested option is to hire teachers from the city, but who do not belong to the same community of the students. This will make the whole initiative lose one of its assets which is the mutual trust between the parents and the teachers, whereby teachers

could easily solve the girls' social problems that might prevent them from going to school regularly. Also those teachers might find it quite hard to go to such remote schools on time on a daily basis. However, one of the field supervisors thinks that this is not the case anymore since the schools have established a good reputation within the community. Yet, based on some interviews with the teachers, it was obvious that some parents stopped sending their children to the school based on the recent unsafe conditions, but when the teachers managed to make some arrangements so that teachers would pass by the students' houses who live nearby to go to school in groups, the problem was somehow solved. Even the parents who refused to send their children anyway, promised the teachers that they will let them study at home and sit for the exam. Thus the teachers who belong to the same community have a great effect on the sustainability of the multigrade schools projects.

6.1.4. Teacher performance

In order to put the performance of the facilitators in the forefront, we need to situate it in the right context. Thus it is imperative to describe the various factors that could have had an impact on the results demonstrated in teachers' performance. Moreover, for confidentiality ethics, schools were coded from (1) to (7), and since each school has two co-teachers, they were coded in the number of the school in addition to (A) or (B). So for instance, School (1) has a team of co-teachers who are coded as (1A) and (1B). This is done for the sake of clarity in presenting the findings as well as in the process of interpreting them. It will also make it easier for those who read the research to make sense of the results and be more engaged in the process. In fact the main objective of the study is to see whether the educational backgrounds of the three typologies of teachers are reflected in their performance, and how far the elements included in the

observational grid counted as determining factors on teachers' performance regardless of their qualifications; meaning whether they are university graduates, non-university graduates, or Faculty of Education graduates. These factors were represented in the basic items on which the observational grid was based on as follows:

6.1.4.1. Planning

Based on the teachers' scores in the area of planning, the mean score was 12 points out of a total score of 36 points, with a range of 23.1 points, and a maximum score of 33 points. The mean score was demonstrated by a teacher from the first typology, which means that she is a university graduate (6A), while the maximum score was demonstrated by a third-typology teacher; that is a Faculty of Education graduate (7A) as well as by a second typology one who is a non-university graduate (3B). These two teachers are also among the first cohort of facilitators. In general, there are eight teachers who scored above the range. Four of those teachers belong to the second typology, which means that they are non-university graduates (3B, 5A, 5B and 8B). As for the other four facilitators, three of them are university graduates (2A, 7B and 8A), and one is a Faculty of Education graduate (7A). Regarding the other eight facilitators who scored below the range, three of them are university graduates (4A, 6A and 6B), three are non-university graduates (1A, 1B and 4B) and two are Faculty of Education graduates (2B and 3A). This is clearly demonstrated in *Chart 1*.

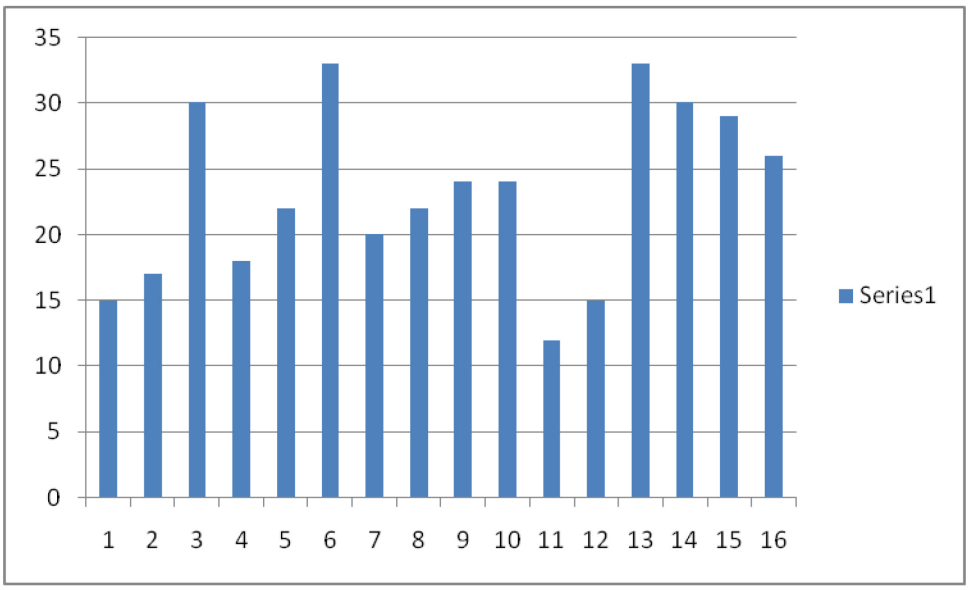

Chart 1. Teachers' performance in planning

6.1.4.2. Pedagogy

Concerning the area of pedagogy, the range of scores was 26.6 out of a total score of 45. The mean score was 13, and the maximum score was 39. The former was scored by a non-university graduate from the third cohort (1A), and the latter by a Faculty of Education graduate from the first cohort (7A). Only eight teachers scored above the range. Four of them are university graduates from the first, third and last cohorts (7B, 2A, 8A and 4A). As for the other four, two of them are non-university graduates from the first cohort (3B and 8B), and two are Faculties of Education graduates from the first and third cohorts (7A and 2B). Six out of these eight facilitators who scored above the range constitute three teams of co-teachers who work in the same school (2, 7 and 8). As for the other eight facilitators who scored below the range, six of them also form three teams of co-teachers who work in the same school. Two of them are university graduates from the third cohort (6A and 6B), five are non-university graduates from the first, second and third cohorts (4B, 5A, 5B, 1A and 1B) , and one is a Faculty of Education

graduate from the third cohort (3A), who majored in social service as an undergraduate and then received her graduate educators' diploma. This is shown in *Chart 2*.

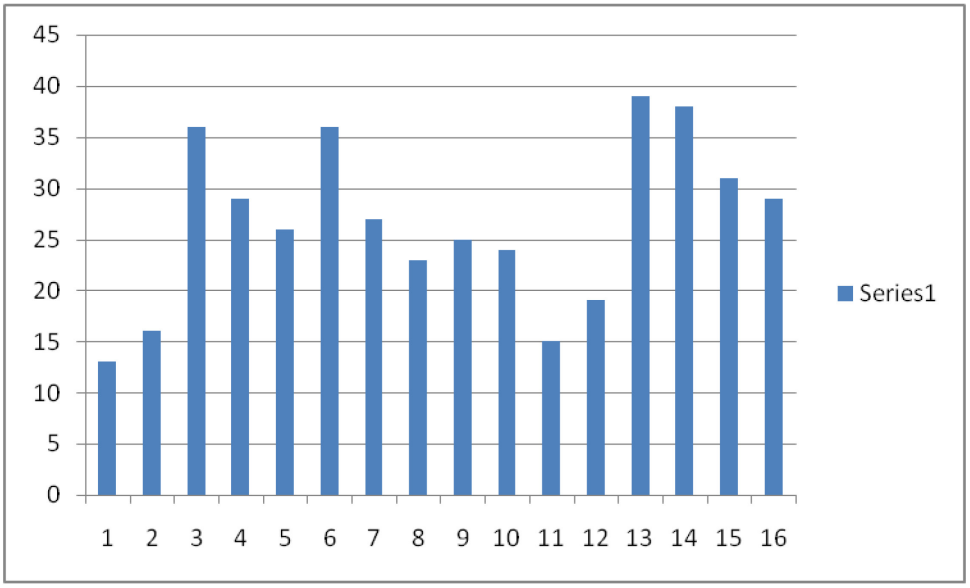

Chart 2. Teachers' performance in pedagogy

6.1.4.3. Interaction

The third factor to be considered in teachers' performance is their interaction with the students. Even though this is the aspect where the overall teachers' scores were the highest with respect to the other items on the grid, only eight teachers scored higher than the range which is 27.1 out of a total score of 39. Three of these teachers are university graduates (2A, 7B and 8A); where 2A is from the third cohort, while the other two facilitators are from the first cohort. As for the other five teachers, four are non-university graduates (3B, 5A, 5B and 8B), and one is a Faculty of Education graduate (7A). The teams of co-teachers from schools 7, 8 and 5 have the highest scores respectively, followed by the other two teachers who got the same score. Concerning

those who scored lower than the range, three are university graduates (4A, 6A and 6B), three are non-university graduates (1A, 1B and 4B) and two are Faculty of Education graduates (2B and 3A). Again co-teachers in schools 1, 4 and 6 scored the lowest in interaction. Worthy to mention the mean score was 21 demonstrated by facilitator 2B, whereas the maximum score was 34 reached by 7B. This is shown in *Chart 3*.

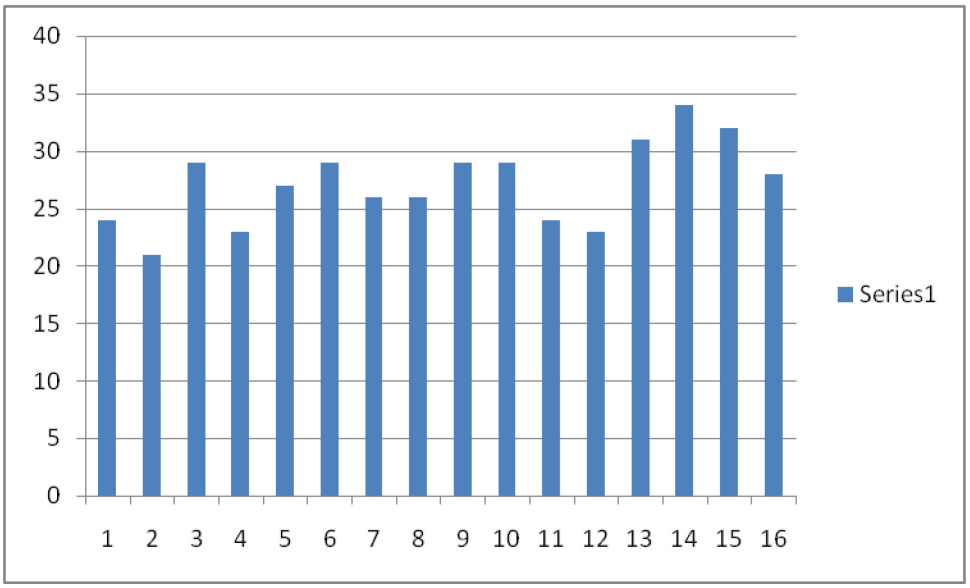

Chart 3. Teachers' performance in interaction

6.1.4.4. Learning community

Creating a learning community was another aspect besides pedagogical practices where teachers surprisingly scored relatively lower than expected. The range of scores is 27.1 out of a total score of 45 points, whereas the mean was 18 as demonstrated by 2B, and the maximum score was 36 reached by 3B. Only 6 teachers scored above the range. These are their codes in a descending order: 3B, 7B, 7A, 2B, 3A and 5B. As mentioned earlier, 3B and 5B are non-university

graduates, 7B and 2B are university graduates, and 7A and 3A are Faculty of Education graduates; that is two from each typology of teachers. It is also clear that four of them form two teams of co-teachers who work in the same school. Regarding the mean grade (18) that was scored by 2B, her co-teacher (2B) got 19. So the ten facilitators who scored below the range were 5A, 4A, 4B, 8A, 8B, 6A, 6B, 1A and 1B in a descending order. One can clearly notice that the score in that aspect is more of a school score rather than a teacher score. It is becoming quite evident that team teaching is a variable that needs to be considered and tested, since it seems to be an influential factor that affects teachers' performance. This is demonstrated in *chart 4*.

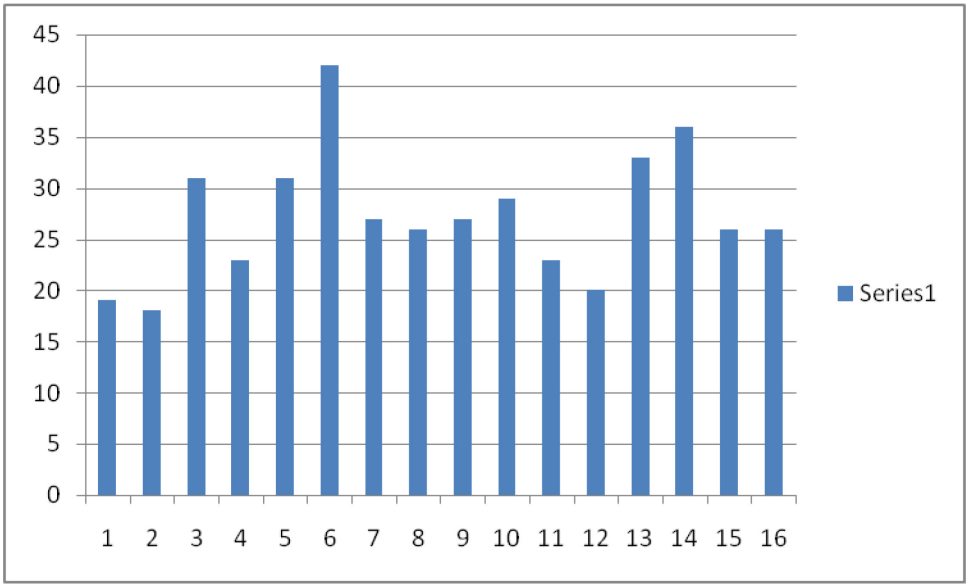

Chart 4. Teachers' performance in learning community

6.1.4.5. Classroom management

This was the last element on the grid. In general, the overall scores were moderate. The range was 14.2, mean = 6 and maximum = 21 out of a total score of 24. The lowest score was demonstrated by 2B and the highest by 3B. Nine teachers in general scored above the range.

These were: 3B, 7B, 5B, 3A, 8A, 5A, 7A, 2A and 1A, arranged in a descending order, where 7B, 8A and 2A are university graduates, 3B, 5B, 5A and 1A are non-university graduates, and 3A, 7A are Faculty of Education graduates. It is also clear that three teams of teachers in schools 3, 5 and 7 excelled in classroom management, whereas in schools 8, 2 and 1, it was a matter of individual attributes, level of competence and capabilities. Receiving training in that aspect is an element that needs further discussion and research. As for the teachers who scored lower than the range, they were 4A, 4B, 8B, 1B, 6A and 6B. This means that both schools 4 and 6 need improvement, more follow-up and mentoring regarding classroom management. School 4 as mentioned earlier includes one university graduate teacher from the last cohort and a non-university graduate from the first cohort. As for school 6, it has two university graduate teachers who were from the third cohort. This is seen in *Chart 5*.

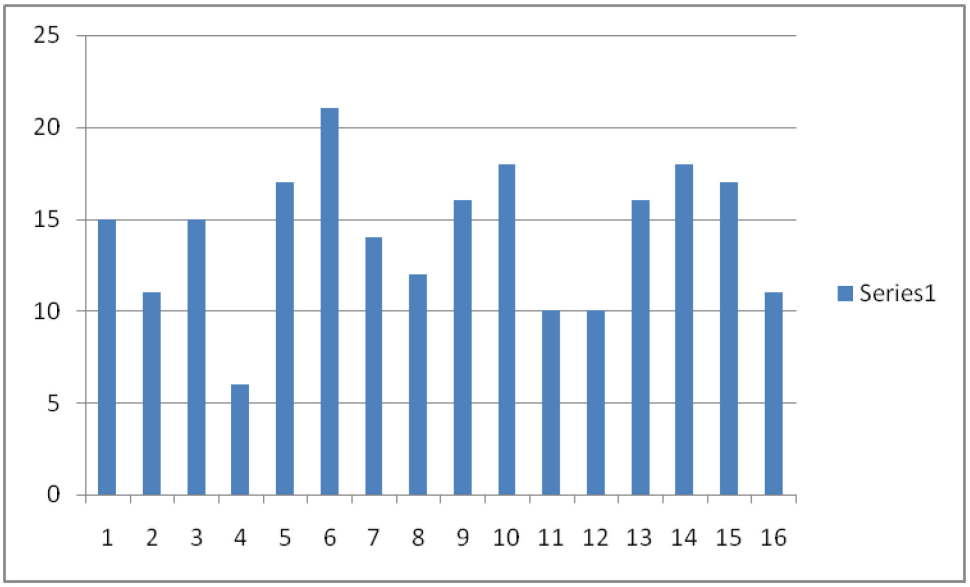

Chart 5. Teachers' performance in classroom management

6.1.5. Cases summary report

This summary report on teachers' performance in the classroom is mainly based on the five elements that were included in the grid. *Chart 6* clearly presents the areas of strengths and weaknesses as demonstrated by the 16 teachers in general within the chosen eight-school sample population, with respect to these elements.

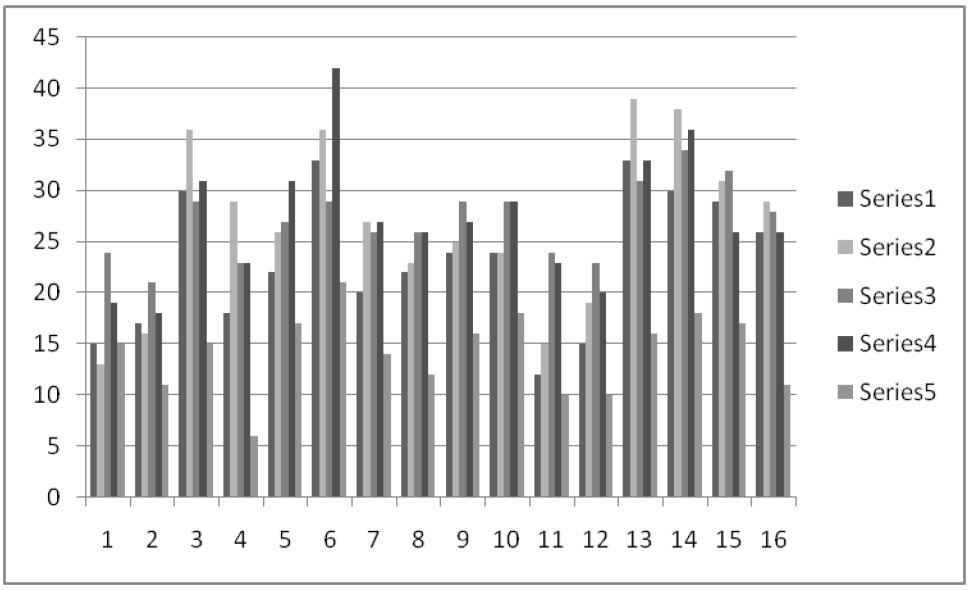

Chart 6. Teachers' performance on all five aspects on the observational grid

This actually compares the performance of all teachers on all those aspects as was explained earlier. However, I will provide a detailed report on the specific items included in each of these aspects. This will actually show the areas where every single teacher excels at, or those where she needs more improvement and eventually more training, follow-up, support and professional development sessions. Moreover, attached in Appendix D are *Charts (D.1* to *D.16*), which demonstrate the areas where teachers' performance was either outstanding: (3), satisfactory: (2) or needed improvement: (1) on an individual basis. Moreover, the typology of teachers will be

indicated as T1: (university graduate), T2: (non-university graduate), or T3: (Faculty of Education graduate).

6.1.5.1. Cases summary report on planning

It would be interesting to refer to some findings related to the detailed aspects of planning on the grid. Concerning the elements of being well-prepared, of providing sufficient time for practice, and of providing enough demonstrations, three got the highest score; one from each typology, and they all happen to be from the first cohort of facilitators (3B, 7A and 7B). Worthy to mention two of them work in the same school. As for organizing and explaining assignments clearly, and providing demonstrations that are visible to all students, four teachers got the highest score, the same previous three teachers plus a university graduate who was among the third cohort of teachers (2A). Regarding having readily available materials necessary for executing the activities, a fifth teacher was added to the previous list of the highest performing teachers. She is a non-university graduate who belongs to the first cohort of teachers as well (8B), and who happens to work with the university graduate from the third cohort (8A). However, only two teachers from the same school and who belong to the first cohort are the ones who provide opportunities for dialogue with peers and/or instructors (7A and 7B). Moreover, there are four teachers who got the maximum score for scheduling time for discussion of results. One of them is a university graduate (2A), another is a non-university graduate (3B), and two are Faculties of Education Graduates (3A and 7A). Worthy to mention that two of them work in the same school, where one is a non-university graduate and the other is a Faculty of Education graduate (3A and 3B). The former belongs to the first cohort, while the latter belongs to the fourth cohort. As for having a clear organized plan, seven teachers got the maximum score. Four of them are two

teams of co-teachers, where three of them belong to the first cohort. Two of them are university graduates (7B and 8A), one is a non-university graduate (8B) and the other is a Faculty of Education graduate (7A). The other three facilitators work in different schools, where one of them is a university graduate who belongs to the third cohort (2A), and the other two are non-university graduates where one of them belongs to the first cohort (3B) while the other is from the third cohort (1A).

6.1.5.2. Cases summary report on pedagogy

It would be necessary though to refer to teachers' scores for specific items on the grid related to pedagogy. Only three teachers got the maximum score for encouraging critical and analytical thinking. Two of them are university graduates from the first and third cohorts (2A and 7B), while the third is a Faculty of Education graduate from the first cohort (7A). As for using instructional aides effectively, explaining difficult concepts in more than one way, and tailoring the content to suit different abilities of students, only two facilitators from the first cohort got the maximum score. One of them is a non-university graduate (3B) and the other is a Faculty of education graduate (7A). Worthy to mention, there is only one teacher who got the maximum score for recognizing when students do not understand (2B). She is a Faculty of Education graduate from the third cohort. Regarding making course content relevant to students' experiences and real world applications, two teams of co-teachers who work in the same school got the maximum score. Each team comprises of one university graduate and a Faculty of Education graduate. One team belongs to the first cohort (7A and 7B), while the other team belongs to the third cohort (2A and 2B). As for encouraging learners to respond to probing discussions through stimulation and engagement , and allowing related questions and debates to

take place incessantly, there were only two teachers who got the maximum score (2A and 7A). (2A) is a university graduate from the third cohort, and (7A) is a Faculty of Education graduate from the first cohort. About the aspect of employing non-lecture learning activities, only four teachers got the maximum score, two are university graduates (2A and 7B) from the third and first cohort respectively, one is a non-university graduate from the first cohort (3B), and one is a Faculty of Education graduate from the first cohort (7A). This shows that there are two co-teachers who got the maximum score in this area. Worthy to mention, there is one non-university graduate facilitator from the first cohort (8B) who got the maximum score in using informal assessment that I aligned with course objectives, while (8A) got the maximum score in monitoring the effectiveness of group work. Finally, 2A, 7A and 7B got the highest score in using open-ended questions that stimulate students' thinking.

6.1.5.3. Cases summary report on interaction

There is a very surprising issue regarding using students names, where only one university graduate teacher from the first cohort got the maximum score (7B). Moreover, the only two teachers who use humor appropriately are working in school 8, where one of them is a university graduate from the third cohort, and the other is a non-university graduate from the first cohort. As for having good eye contact with the students, only schools 7 and 8 got the maximum score. On the other hand, only two university graduate teachers got the maximum score for responding appropriately to students' questions and concerns (7B and 8A) from the first and third cohorts respectively. However, only three teachers scored highest in using gestures to emphasize ideas without causing stressful situations (4B, 5A and 7B). The first two are non-university graduates from the first cohort, and the last one is a university graduate from the first cohort as well.

Regarding treating class members equitably, only five teachers excelled in that (3A, 3B, 4A, 5B and 7B). These constitute two university graduates, two non-university graduates and one Faculty of Education graduate. Three of them are from the first cohort while the other two are from the third cohort. Worthy to mention, only 7A excelled in giving prompt attention to individual problems, and 7B outperformed them all in providing individual constructive feedback. Nevertheless only 3B, 5A and 7A got the maximum score in having good rapport with the students. Interestingly, 3B and 5A are non-university graduates, while 7A is a Faculty of Education graduate. The three belong to the first cohort.

6.1.5.4. Cases summary report on learning community

Concerning the specific items on the grid, teachers' scores regarding the enthusiastic spirit among learners and facilitators were quite high. There were ten teachers who got the maximum score while six teachers got a medium score. The ten teachers were from five schools: 2, 3, 4, 5 and 7, whereas the other six teachers were from schools 1, 6 and 8. School 2 has first and third typology teachers, 3 has third and second, 4 has first and second, 5 has two second typology facilitators, and 7 has third and first. This means that there were three university graduates, four non-university graduates and three Faculty of Education graduates. As for having a participative environment in the classroom, only six teachers from three schools got the maximum score. These were 3A, 3B, 5A, 5B, 7A and 7B. This means that three non-university graduates, two Faculty of Education graduates and one university graduate reached the maximum score in that aspect. Moreover, there are only two teachers from school 3 who got the maximum score for praising students for contributions that deserve commendation, and for responding constructively to students' opinions; where 3A is a Faculty of Education graduate and 3B is a non-university

graduate. Worthy to mention that 7A – who is a Faculty of Education graduate, is the only facilitator who scored the maximum in soliciting students' feedback, while 3B – who is a non-university graduate, is the only facilitator who got the maximum score for not depreciating students' ignorance or misunderstanding, being able to admit mistakes and lack of information, and for respecting constructive feedback. Moreover, both 3B and 7A were the only teachers who reached the maximum score for encouraging students' questions, involvement and debate. As for answering students clearly and directly, only four teachers excelled at it. These were 2A, 3B, 7A and 7B. Two of them are university graduates, one is a non-university graduate, and the other is a Faculty of Education graduate. It is starting to become clear that there are specific teachers who generally score higher than others. So it seems that not only team teaching is an element which needs to be discussed extensively. Obviously there are other variables that need to be considered like personal attributes and aptitude. In addition 3A, 3B and 7A were the only teachers who excelled at encouraging students to answer their peers' questions. These are two Faculty of Education graduates, and a non-university graduate. Moreover, 3A, 8A and 8B got the maximum score for giving students enough time to respond to questions. Two of them are non-university graduates and the other is a university graduate. Nevertheless, 3A outperformed the other 15 facilitators in responding constructively to wrong answers. As for encouraging mutual respect among students, only 3B and 7B excelled, whereas 3A joined them in getting the maximum score for respecting diverse points of views. The first is a non-university graduate, the second is a university graduate and the third is a Faculty of Education graduate.

6.1.5.5. Case summary report on classroom management

Regarding the detailed items of classroom management included in the grid, teachers had different areas of strength in relation to that aspect. So, for instance, teachers 2A, 3B, 7A and 7B excelled in using class time effectively, whereas 7A and 7B as well as 5A and 5B excelled in organizing spaces well and in using labels. Two of them are university graduates, three are non-university graduates and one is a Faculty of Education graduate. However, 8A – who is a university graduate, outperformed all the other facilitators in responding to changes in students' attentiveness. Adding to this, 3B, 5B and 8A are the only facilitators who performed exceptionally in using varied spots within the classroom for delivering presentations. Two of them are non-university graduates and one is a university graduate. As for engaging students in classroom management, teachers 3A, 3B, 4A, 4B, 5B and 7A were outstanding. Three of them are non-university graduates, two are Faculty of Education graduates and one is a university graduate. Worthy to mention, only 3B and 8A excelled in responding effectively and constructively to students' distractions. The former is a non-university graduate whereas the latter is a university graduate. Concerning applying consistent classroom rules and management techniques, only 2A, 3A and 3B got the maximum score; that is one from each typology. Yet, none reached the maximum score regarding providing careful safety supervision. Most of them had medium scores except for two teachers who need improvement from school 6 – who are both university graduates; and only one teacher who did not demonstrate any form of careful supervision. That was 2B; a Faculty of Education graduate.

6.1.6. Overall rating

The overall score of teachers was based on the sum of scores of the five aspects on the grid. The range of scores was 120.8 out of a total score of 189. The mean score was 83, and the highest score was 161. Surprisingly enough, both ends of the spectrum scores were achieved by two non-university graduates. The former is from the third cohort (1B), and the latter is from the first cohort (3B). In general, there were nine teachers who scored higher than the range. Three of them are university graduates, three non-university graduates and three Faculties of Education graduates. So, educational qualifications make no difference here. The scores above the range in a descending order were achieved by 3B, 7B, 7A, 2A, 2B, 8A, 5B, 3A and 5A respectively. As for the seven teachers who scored below the range in a descending order as well were 8A, 4A, 4B, 6B, 1A, 6A and 1B. In fact 4A, 6B and 4B are university graduates, whereas 8A and 1B are non university graduates. This means that none of the Faculties of Education graduates scored below the range. Moreover, university and non-university graduates were almost on the same level. *Chart 7* illustrates the overall scores of teachers' performance.

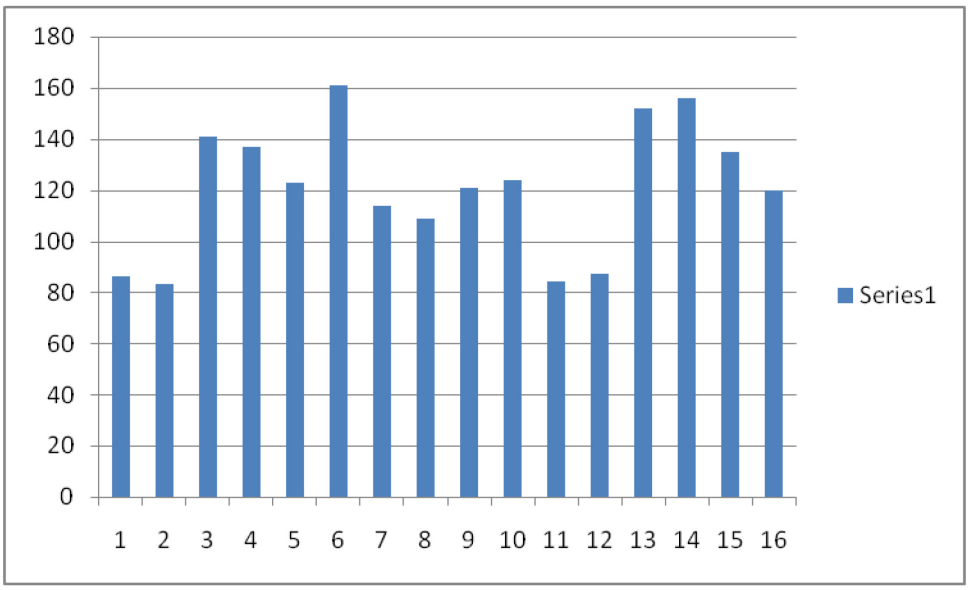

Chart 7: Teachers' overall scores

Moreover, it was obvious that the teachers who got scores above the range were mainly from schools 7, 3, 2 and 5, whereas those who scored below the range belonged to schools 1, 4 and 6. Once again the idea of co-teaching strongly asserts itself and calls for further analysis and research. Nevertheless, the issue of appointment year – meaning the cohort teachers belong to, is also reinforced here, for the three teachers who got the highest scores belong to the first cohort. Worthy to mention, none of the teachers who scored below the range were from the first cohort, but a mixture of the others. So is it a matter of becoming more experienced, or were they better prepared and more meticulously selected? This also needs further examination.

6.1.7. Illuminating findings

Based on the recurring issue of the team teaching effect that was being highlighted throughout the results shown on teachers' performance, in addition to the overall rating mentioned above, it

was necessary to compare the performance of each team of co-teachers within each school to explore this element further. *Charts* (*E.1* to *E.8*) in Appendix E clearly illustrate this point. As shown in the charts, it is obvious how each school is really like as an overall estimation of a single teacher. There are of course differences among teachers in every school, especially in their areas of strengths and weaknesses, and sometimes they are almost the same. Nevertheless, in general, their overall performance is quite similar except for school 3, for instance. This kind of exception makes it necessary to explore further the effect of personal attributes on teachers' performance in addition to the issue of appointment year and training.

It was clear from the cases summary reports as well as from the findings related to the specific aspects on the grid that, on one hand, there were certain teachers whose performance was generally outstanding in many aspects, satisfactory in the rest, and rarely needs improvement in few items. On the other hand, there were teachers who were mostly satisfactory in many items, outstanding in some, and needed improvement in few other aspects. However, there were teachers who needed improvement in so many aspects, were satisfactory in some, and were rarely outstanding.

In an attempt to find the reason behind those major differences in performance among teachers, I wanted to explore if such differences were affected by variables like appointment year, training, qualifications, major or specialization, team teaching or a mixture of two or more. Therefore, chi-square tests were utilized to see how significant the influence of each of these variables and the combination of some of them on the overall rating of teachers' performance. Table 7 shows the results of these tests:

Table 7

Chi-Square Tests for Teachers' Performance

Pearson chi-square tests	
Variable	Significance (2 sided)
Appointment year	.185
Qualifications/status	.396
Major/department	.476
Training	.411
Team teaching/school	.028
Training by school	.79

It is evident from the table that qualifications has no significant effect, nor does the major or specialization. Moreover, training has less significance than the year of appointment which turned out to be a quite influential factor. Nevertheless, as was hypothesized throughout the findings, school or team teaching was a very determining variable. However, when both variables of training and school or team teaching were combined they proved to be the most significant variable that affected the overall rating of teachers' performance.

This means that the effect of team teaching should not be ignored, and so does that of training. This gives hope that the areas where teachers need improvement could easily be addressed on a school-level basis through close mentoring within a precisely delineated program, whereby specific objectives are set within a definite plan and time frame. As for the year of appointment effect on the first cohort teachers' performance, it seems that the curve of the level

of enthusiasm was quite high at the beginning of the initiative, where everything was done by the book. Later the curve slightly decreased with the second cohort, but it started escalating once more with the third cohort as seen earlier. Moreover, the importance of experience and how teachers get better with practice is another influential aspect. Therefore, the whole training and preparation program, including those refresher sessions needs boosting every now and then, raising the morale of both teachers and field supervisors.

6.2. Secondary findings

6.2.1. Supervision support

Among the issues of concern was to explore how far the supervisors are providing adequate support for the teachers. However, one should differentiate between three different types of supervisors found to be involved in the process. First of all, there are field supervisors who belong to the NCCM team and some funding stakeholders who mainly provide the schools and the students with the materials or other items they need, like medicine, but within a specified and limited budget. They also make sure teachers are running the schools as they should, regarding instruction, lesson planning, attendance and community involvement. Second, there are supervisors who monitor the educational process as a whole beside work regulations and job requirements, and those work for the MOE. However, according to the teachers and field supervisors, they have no idea about multigrade pedagogy. So they only give teachers some general comments or inform them of new regulations. The third group of supervisors focuses on subject matter instruction and assessment – one for each of the main subjects as Math, Science and Arabic but without getting into the details of the multigrade aspect since they are not very knowledgeable about it. Having had access to supervisory reports that were available at the

schools, the comments included do not reflect that they are written for a multigrade school. Adding to this, the comments are often repetitive, alternating between two or three points maximum. They seem like cliché sentences that they tend to write in all schools, whether monograde or multigrade ones. Nevertheless, the teachers highly appreciate the efforts of subject supervisors in explaining to them some mathematical concepts that are quite difficult to grasp and deliver to the students. However, during the interviews they all requested to get training in teaching Math, except one or two teachers who were quite competent at it. As for the field supervisors, teachers started to ignore their demands and feedback since they no longer have authority over them after the MOE took over that part and especially when the facilitators got appointed on a permanent basis. This is what the field supervisors said, but the facilitators themselves never mentioned any negative aspect about the field supervisors who supported them with the needed materials. Obviously their supervisory and follow-up role is deteriorating due to complications in their salary payment delay and funding as well.

6.2.2. School day routine

All the girl-friendly schools visited almost follow the same daily schedule which they even hang on the wall. However, there are some slight differences among them in the application. In general, they begin with the morning lines, where children do some fitness exercises, then some of them tell a story, a proverb, a piece of information or news they have prepared earlier. After that they salute the flag – despite the fact that the schools have no flags, and in some schools the children sing the national anthem. Then they enter the classroom, where they have their 20 minute-morning circle used for greeting, taking attendance and for planning who will work in the different corners in the free activity time span for the following 30 minutes. The length of these

time slots, how they make use of them and the time they start the school day differ from one school to another. Usually teachers and students agree on a certain time that is suitable for most of them, considering the students' social and familial obligations in those communities. Thus we find schools starting at 8 o'clock, others at 8:30 or maybe 9:00am. After the free activity time, students present to each other their work, whether they worked in a group or individually. Sometimes every student talks about what she worked on, and at other times the leader presents the group work accomplished. Often there is a chance for getting feedback from colleagues and teachers about their work. When presentations and discussions are over, teachers take over and introduce an introductory skit, story, activity or demonstration that prepares the learners for the following guided practice time which lasts for 45 minutes. Later there is a break time for 30 minutes followed by two guided practice sessions. In between those sessions, facilitators let students sing a song, say a funny riddle, or do some exercises to boost their energy for the rest of the day. Usually these guided practice time slots are categorized into subject matters on a weekly basis for all grade levels. So one finds that in each of these slots all grade levels are working on the same subject but divided in three groups. Often there is one to three grade levels in each group, depending on the number of grade levels enrolled in each school. At the end of the school day facilitators should stay one extra hour for planning, preparing materials and reflecting on their performance, but this is not always the case. Some of them mentioned during the interviews that they started to feel that going through this process of reflection at the end of the school day has become useless and monotonous since they are getting more used to the multigrade system and better experienced as facilitators, and that they know the curricula very well by now so they planned all those lessons before. However, active learning pedagogy is a never-ending process that demands endless creativity on the part of the teachers who would impart this spirit to their

students. Others expressed that it would be better to have a supervisor who incites them to do so. Yet, there are few teachers who still stay for reflection and planning, but maybe not on a daily basis.

6.2.3. Student development

One of the issues that I wanted to explore was the type of skills that students in multigrade schools develop; whether students are becoming autonomous learners, whether they are enjoying the learning process, and how they interact with each other and with their teachers. In some of the schools, the sense of empowerment, independence, confidence and knowledge-seeking is highly felt among the learners. It is amazing how some of them pursue their own natural anxiety to find a piece of information in an encyclopedia, or a simple story book. What was also impressive was the way that many of them presented the kind of work they did. This is in addition to the process of developing their leadership skills through the rotation of class responsibilities among the learners. This actually enhances their sense of self-worth and empowerment. The way they defend and answer questions asked by peers and instructors shows that it gives them confidence to speak up but in a nice and polite manner, that is without hurting and embarrassing others. In most cases, respect is demonstrated among learners and instructors based on their own cultural settings. These were the most striking findings in relation to students. Moreover, this is more evident with regards to older students, despite the fact that there were some younger students who were quite marvelous in the way they present their ideas and work to others. Among them was a third-grader who could be a very successful teacher. Actually, while looking at the chart dedicated for students' career wishes, it turned out that she did want to be a teacher. In many schools some wanted to be teachers, others physicians, many lawyers, some

engineers, and few ambassadors. It is quite fascinating to find out that their aspirations have no limits or boundaries. They feel they can make it, and hopefully they will.

Another concern was related to discipline problems; how teachers deal with disruptive behavior, and whether or not they have a discipline ladder. On the walls in all schools, there are classroom rules in addition to students' oath for sticking to these rules. Moreover, during the interviews the teachers explained how they discuss and put these rules with the students and even the students are the ones who determine the consequences and not the facilitators. As a matter of fact, during the observation period there was minimal disruptive behavior. There were very rare cases with younger students who hit one another in practice time or in their break time. Surprisingly enough some teachers when they see this happening, they ignore it altogether, while others reprimand the students and very few reinforce positive behavior. Accordingly, it would be necessary to have some workshops and training sessions to help teachers deal with this issue in a more professional way, while understanding the rationale behind the way they should be dealing with disruptions. This was also voiced by some teachers as one of the difficulties they face and the areas where they need more training.

6.2.4. Assessment

Among the questions that I wanted to find some answers for was how teachers view and apply assessment; whether it is *for* or *of* learning, whether all schools use portfolios, and if teachers know how to use them as guiding tools in their instructional planning. Actually, assessment is done in two ways. One of them is done through monitoring students' work in the free or guided practice time, the fact which enables the teachers to know the varied levels of competence of the students. However, even though the facilitators said in the interviews I had with them that they

received training about multiple intelligence, they do not seem to consider that aspect in assessment. Moreover, using what they discover while monitoring students' work in their planning is still not quite clear to them. This means they need some training on how to use assessment *for* learning and not just *of* learning. The other means of assessment that they use is the exams provided by the MOE. Regarding portfolios, there is nothing of the sort in the sample schools population. However, there were some records for the students, where some were some sort of students' achievement records based on the MOE examination results, and others are teachers' evaluations of the students in different subject areas. Nevertheless, these latter evaluation records were very generic and do not include the specific areas or skills where the students needs improvement so they could work on their development.

6.2.5. The number of students and grade levels

Based on the information obtained from the documents or the school visits, it was found that the highest enrollment rate is in grade 2, followed by grade 1 whereas the lowest is in grades 3 and 5, followed by grade 6. Yet, the number of students in grade 6 is an indicator that very few students continue their schooling. Moreover, based on the interviews with the teachers, not all those enrolled attend regularly. They said that some of the older students are either about to get married, or cannot come because they have to help their parents in the field or house work, where they finish such chores by the end of the school day. They even explained the fact that some parents send their younger children to school, and keep the older ones at home to help them out, buy things from the market, or baby sit their younger siblings. This explains the decline in the number of students as they move higher in grades. As for the rate of absenteeism, it is not fixed based on socio-economic and safety factors. Moreover, some older students have to help

their families on market day which may differ from one school to another depending on its location and traditions. This day used to be off in addition to Friday, but ever since the MOE decided to have Friday and Saturday as a fixed weekend for all schools, some students miss school on market day. This actually makes these schools lose one of its prominent assets, which is the issue of flexibility and adaptability to the school community needs.

6.2.6. Managing multigrade levels

Concerning the point mentioned earlier in the presentation of data that some schools have three grade levels, while others have four, five or six, it was observed that not all teachers manage more than three grade levels in the school. Moreover, based on the interviews with the teachers, field supervisors and some key informants, teachers seem to find it easier to manage less number of grades, specifically three grades, because in the guided practice time students are divided into three groups, and each teacher sit with a group besides a student leader in the third group, and then they switch groups later. At other times when the school consists of more than three grades, two grade levels or more sit together in one group in practice time, and a lot of learning time is sometimes wasted when students sit idle waiting for the teacher to finish working with the other grades within the same group and at the same table. This was also asserted through the field observation. It was clear that teachers often could manage three grades quite well but not always. This depended on the quality of teaching and classroom management, and the ability to manage more than one grade at the same time, especially when they are sitting in one group. Obviously, most of them need extensive training in that crucial aspect which constitutes the core element of the whole multigrade education initiative.

6.2.7. Teaching English

Among the findings was that teachers expressed their complaint in the interviews that they are not competent in English, so they believe that they should not be teaching English to the students because they feel that they are not really benefitting the students. Based on the observations, it was very hard for the facilitators to teach English, but they are really trying. They suggested either to receive more training in teaching English as a foreign language or to have teachers who mainly teach English. As a matter of fact, the MOE provided some English teachers who were on sabbatical leave so they could go to some of the sample schools population two or three days per week. During the school observations, I met some of them; precisely three. Two of them were Faculties of Education graduates whose major was teaching English, and the third was a Faculty of Arts graduate who majored in philosophy. Of the two Faculty of Education graduates, only one was using some cue cards in lesson demonstrations, but the other was not. The former said she has just received some refresher training about active learning pedagogy and was eager to incorporate it in her teaching. However, a common aspect that needed improvement was the rote learning employed in teaching new vocabulary to the students despite the activities used. So having facilitators who mainly teach English is a good step but it needs more tuning. First of all, they need to apply this throughout all the schools, and not just in some of them. Second, as an alternative, facilitators could be trained to teach English since they do not mind that, but they just lack the knowledge.

6.2.8. Multigrade education major

One of the issues that needed some examination was whether Faculties of Education offer their undergraduate or graduate students any courses related to multigrade education. All the key

informants interviewed, whether from the MOE or NCCM, were totally criticizing the fact that there are no such courses or majors in Faculties of Education all over the country except in Zagazig. Worthy to mention, according to the NCCM reports and statistics, the total number of girls-friendly schools in Egypt is 1167. This means that the total number of facilitators is 2334. Let alone the teachers working in the one-classroom and community schools. In fact, according to the MOE reports and statistics, the total number of multigrade schooling to date is 4921, which is quite a lot and is likely to increase. Thus we could say that the total number of facilitators is a minimum of 9842, because as was explained earlier, some one-room schools have three teachers. Moreover, according to an MOE official, some of the newly appointed teachers in one-room and community schools received no training at all, so their level of performance is unsatisfactory – especially, as the official said, the non-university graduates. However, as was demonstrated in the findings, qualifications was of no high significance, and many of the non-university graduates outperformed their counterparts who were university graduates and Faculty of Education graduates, and in many cases were on the same standing. Yet, those teachers are willing to go for a degree, but they need the support of MOE. Luckily, the MOE official expressed the willingness of the MOE to offer financial assistance, and working hour flexibilities to facilitate the promotion and retention of those facilitators. It would be a great idea if there are higher education institutes in the governorates which offer specialized courses for multigrade teaching, besides Faculties of Education. This will make it worthwhile studying instead of having to study any other major just for the sake of being a university graduate. So why not be a university graduate and at the same time gain more professional development and preparation related to their careers. This will also serve the whole initiative.

Actually, all those findings that were referred to – whether the main or the secondary ones deserve more analysis and discussion based on the literature. This will be in the following section.

7. ANALYSIS OF FINDINGS

In order to make sense of the data findings, and to find solid ground on which to base my argument, it would be inevitable to discuss those findings in relation to the literature found about the topic under discussion within the field of International and comparative education. This analysis will focus on the major aspects in both the main and the secondary findings and the relative implications.

7.1. Caliber of teachers

The main findings began by referring to the selection process of facilitators. It is obvious that such a process constitutes the corner stone for choosing the right caliber that is apt for preparation and training. According to Zaalouk (2004), "experiences, competencies, personality traits, and preferences" are among the key factors to be considered before selecting facilitators (p.40). This issue of personal attributes and aptitude was also referred to by one of the key informants, and was clear in teachers' performance observation results as shown earlier. We have seen teachers who had the same training, and educational background, but when it comes to how they put this into practice within the school setting, each has her own input and level of competence. Those facilitators need to have peculiar qualities for the whole pedagogical system depends mainly on teachers' innovative skills (Zaalouk, 2004), who in turn imparts them to the students. Moreover, the National Commission on Teaching and America's Future (NCTAF) asserted that the teacher's personality "affects all core tasks of teaching" (1997, p'8). Adding to this, the research findings have shown that qualifications have no significant effect on teachers' performance. Thus, it is quite obvious that it is not a matter "of adequate academic credentials or

degrees" (Zaalouk, p.40). Actually, when facilitators are carefully selected, and then well-trained and prepared before and on-the-job, this makes all the difference.

7.2. Preparation programs

Teacher preparation and training also proved to have its effect on teachers' performance when combined with team teaching. However, a carefully designed preparation program, for pre- and in-service training is the one that yields good results. According to James H. Stronge (2007), there are many research studies that proved how well- prepared teachers have good knowledge about how their students learn best, and what would be the most appropriate teaching methods to incorporate. Even though many studies refer to the preparation received in traditional teacher education programs offered at schools of education, Stronge (2007) points out the importance of training pedagogy in relation to the programs designed for alternative teacher preparation. Such kind of preparation is sometimes referred to as 'shortcut programs'. M. Allen (2003) shows how many research studies in favor of these alternate routes for teacher preparation have proved that such programs offer a great opportunity to win over some exceptional calibers that were born to be teachers but never had the chance to take a degree in education. We have seen for instance, teacher 3B who was outstanding and outperformed not only her co-teacher who is a Faculty of Education graduate, but also all the other teachers included in the study. She was not even a university graduate, but she turned out to be a very competent teacher. The way she dealt with the students showed how the training she received prior and during her appointment benefitted her. But one can never ignore the fact that she was fit for the profession in the first place, because there were other teachers who were appointed on the same year with the same qualifications, but their performance was not on equal footage. In fact, some of those teachers

requested to have more training in subject matter methodologies in Math, Science and English as was mentioned earlier. It seems to be a universal concern among 'fast-track' teachers. Stronge (2007), for example, mentions that such kind of teachers voiced their concerns regarding receiving more training in subject content, in addition to better practicum strategies. Otherwise, as Strong points out, these teachers will not be fit to teach. So maybe it would be a better idea that those paraprofessional facilitators when recruited would work with another experienced teacher as a kind of supervised fieldwork, through techniques like peer observation and mentoring that gained consensus as one of the most effective preparation modes. "If inexperienced teachers are more influenced by peers than are experienced teachers, it is important that new teachers be assigned to schools with good mentor teachers" (Clement Jackson et al, 2009; p.4) Worthy to mention, teachers who went through alternative preparation routes that offered them mentorship, pedagogical training and 'clinical' fieldwork had higher levels of self-efficacy, and even expressed their willingness to stay in the teaching profession (Darling-Hammond et al, 2002).

7.3. Supervision and follow-up

"A tight and supportive system of supervision ensures the quality of schooling and learning" (Zaalouk, p. 41). In the initial phases of the project until two years ago, the supervision and follow-up system was achieving its objectives in relation to mentoring and evaluating the application of the multigrade girls' education initiative, and especially within the school sample population. However, based on recent political upheavals and consequent repercussions, the supervisory team did not have the kind of authority they used to have. Some of them were even released for budgetary cuts. Those who are still on board expressed during the interviews

conducted with them that the teachers no more value their input or accept their feedback, especially after getting appointed and supervised by the MOE. They now feel only accountable to the MOE, even though the teachers themselves said they lacked support, and needed more follow-up in multigrade pedagogy and Math teaching, since the MOE supervisors had no idea about the kind of active learning they are supposed to be implementing. Some of them even said they missed the refresher training sessions they used to have, and other periodical meetings where they shared their expertise, voiced their suggestions for better practice, and designed activities collaboratively. "Improvement in teacher effectiveness over time, particularly in the first few years of teaching, is a consistent finding in the literature. This finding suggests that on-the-job learning is very important for teachers." (Jackson et al, 2009, p.6). Worthy to mention, there are observation grids that field supervisors were using for some time. it is quite different from the one used in the study because it focuses on many issues other than the teacher, like maintenance, shortages in materials, educational stability and many others. They should use the results of such observation as a means to assess the type of training teachers might be in need of, and the areas where they need more professional development workshops. The on-going follow-up and supervision is urgently needed to ensure the sustainability of the whole project. "This is the ultimate insurance of continued capacity-building and quality control" (Zaalouk, p.41).

7.4. Self-efficacy and empowerment

These are two aspects that both teachers and students developed in the process of teaching and learning within the multigrade schools sample population. Obviously the child-centered active learning pedagogy has deeply affected both parties. "Educational reformists have pointed out that the origin of the meaning of learning is to 'draw out' from the learner, to educe, …. while

respecting him or her as a valuable person, worthy of trust, confidence and esteem" (Zaalouk, p. 14). As was mentioned in the findings regarding student development, it was natural that teachers themselves developed in the process. The findings described how students were able to express their thoughts, needs and queries. This was demonstrated in practice and presentation time. This was a result of the active learning pedagogy employed in those multigrade schools, where students take charge of their own learning in the free practice time, and are trained to lead groups of students throughout the day in the different practice time spans. In fact, this whole multigrade education initiative views learning as developing "the capacity of the learner to learn and teach him or herself, and to find meaningful answers to her own questions" (Zaalouk, p. 14).

Moreover, teachers stood up for their rights when they knew of the ministerial decree that insisted that facilitators should be university graduates, otherwise they will be turned into administrators. They actually started to seek information about this issue in other governorates and discovered there are some discrepancies regarding their status, position and title; whether they are regarded as facilitators, teachers or teacher assistants. Teachers need some sort of transparency as far as their status is concerned. It was a total surprise to know that those teachers announced that they were on strike, but continued working in the schools, because they thought students should not pay for it. They just declared their position against that decision which they thought was unfair, and which the findings of the study proved it is not based on solid grounds of scientific research. They even expressed their willingness to go for a degree, and that the MOE should support them in that. They have helped the learners to have no limits for their own aspirations. They do feel the worth of being highly educated, and this became crystal clear to them during the training phases where they penetrated totally new horizons, and opened their eyes towards new modes of teaching and learning that made them see education from a whole

new perspective. Role modeling as an effective teaching strategy is herein enforced. According to the Child-Friendly Schools Manual (2009), "children spend half their waking hours in school. It is therefore reasonable to expect that schools and teachers will help forge students' development and destinies.

7.5. Team teaching

It was quite obvious from the findings demonstrated earlier that team teaching had a significant effect on teachers' performance. "We document that a teacher's own performance is affected by the quality of her peers." (Jackson et al, p. 28) In one of the reviews about an article produced by Wisconsin Center for Education Research (WCER), it was mentioned that Jeffery Watson (2007) who is a researcher at the WCER has defined team teaching as a situation that "occurs when more than one teacher plans and delivers instruction to a student or group of students." (p.1). Based on the literature found on team teaching, there is consensus that peer learning for teachers is an influential aspect in improving teachers' performance. Peer coaching also has an equal status and position with respect to teaching effectiveness as the instructional follow-up conducted by supervisors, heads of teachers or senior teachers (McQuarrie and Wood, 1991; Wood and Killion, 1998).

"Team teaching can have a highly positive impact on student learning outcomes." (Melissa C. Leavitt, 2006, p.3). Moreover, Theresa Wadkins et al (2006) pointed out that having two co-teachers within the same classroom provides more chances for better teacher-student interaction. They relate this to the fact that co-teaching guarantees some sort of prolonged feedback and discussion time. Adding to this, the individual differences between the two co-teachers highlight the issue of respecting diversity and individuality. This encourages learners to take an active part

in class discussions; assured that their input will count or at least will be considered as valuable (R. Anderson and B. Speck, 1998). Nevertheless, to make this team teaching process a more effective one, facilitators working in the sample schools population visited through the field observation of this study should not neglect the hour allocated at the end of the school day for reflecting on their performance, and on refining their planning or pedagogical strategies that would promote a better learning community. According to M. George and P. Davis-Wiley (2000), in order to make team teaching a more successful endeavor, teachers have to meet on a regular basis in order to evaluate and modify their instructional objectives as they go along, while considering students' achievement and involvement in classroom activities and discussions from their different perspectives. Leavitt (2006) also refers to the positive aspects involved in team teaching when they share ideas, inspire one another, and in turn modify and tune their modes of thinking; all of which "can help create a dynamic and interactive learning environment" (p.3). Therefore, we could say that having two teachers in the same classroom – as was the case with the multigrade schools sample population included in this study, enriches the learning opportunities and expands the development of both the learners and instructors, but requires constant reflection.

7.6. Portfolios

It was mentioned in the findings that teachers in the schools sample included in the study do not use portfolios for students' assessment. This is somehow contradictory with the type of child-centered, active learning pedagogy involved in such multigrade schooling. They rather use the end of term test as the sole accountable means of assessment. Maybe the MOE should reconsider this issue. According to Zaalouk (2004), "it has become increasingly clear that using one

assessment task or testing occasion to generalize about an individual student, … cannot lead to authentic and useful knowledge. " (p.22). What she mentioned about the advantages of using portfolios is so true, for portfolios do not only help teachers to measure the progress of students over time, it will also provide the chance for the learners themselves to reflect upon their own work. This would help the students to recognize their strengths and capabilities, and be able to work on their weaknesses. This will perfectly suit the unique nature of the multigrade pattern of schooling. In fact, during the field observations, as was mentioned in the findings, facilitators informally assess students' abilities through monitoring their work and behavior in the free and guided practice time sessions, so they can easily use child logs to record their observations about the students as a starting point to making portfolios for each student where they could also include other concrete academic and social input done by the students themselves.

7.7. Multigrade education as a major

As was mentioned earlier in the findings, the MOE key informant mentioned the fact that there is only one faculty which has a multigrade educator major, and that it is found in Zagazig at the Faculty of Specialized Education in El Sharkeya governorate. I need to explore this issue further. I have found very few research studies that referred to this aspect either in the studies themselves or in their recommendations. It turned out that the faculty itself was established in 1991, but the multigrade educator department was inaugurated in the academic year 1994-1995. This was and still is one of a kind all over the country. In fact, Noha El Aasi (2003) relates this to the fact that El Sharkeya governorate had the greatest number of multigrade schools at that time which she estimated as 370 schools out of a total number of 2435, constituting 15.2% in the school year 1999-2000. As a matter of fact, this is still the case. For according to the documents accessed

from the MOE, the number of multigrade schools in El Sharkeya still exceeds all the other governorates. The documents state that the number of multigrade schools in El Sharkeya governorate is 402 schools out of a total of 4921 schools, constituting 8.2% in the school year 2010-2011.

Yet, this does not justify not establishing this major in other similar faculties in other governorates. Faculties of Specialized Education are widely spread. So, it would not be that difficult to have a multigrade educator department in each of these faculties and why not in the Faculties of Education as well. Nevertheless, El Aasi refers to the decline in the number of students in that major after the inauguration of the department of Teaching English as a Foreign Language. It also happened to be at the same year when the first cohort of this major was graduating. Moreover, there are no graduate studies available for that major. So the graduates had to go for other majors to obtain their MA and PhD degrees, and they even ended up getting appointed in other departments as instructors (El Aasi, 2003). However, nothing was mentioned about whether or not studying that major affected the performance of the graduates who became multigrade teachers. Accordingly, before expanding this major in other faculties, a careful assessment of the objectives and strategies should be undertaken to be able to overcome such drawbacks, so that creating such departments in other faculties will yield positive outcomes.

8. CONCLUSIONS AND RECOMMENDATIONS

Many students want to enroll in those multigrade schools; however there is not enough space for them. It would be better to have more of these schools in the surrounding areas of the schools or even a little farther. Many students still have to walk a long way even though this does not stop them from going to school. Accordingly, careful selection of sites for the new schools is advisable. Teams from the communities, supervisors and teachers' representatives could work together on compiling a detailed accurate census that would help in reaching the right decisions regarding location and other technical and societal considerations.

Considering having some of the schools start at noon to make it more convenient to the older students who have to help out their families at home or at the market till noon is another element that ought to be taken into consideration. It was found during the school visits that this was one of the reasons for the rate of absenteeism for older students in upper elementary grades with lower enrollment rates.

Decentralizing the day where the school is off besides Friday. Every district has a different market day, where students have to help their families. However, it was decided by the MOE to have the same two days off for all schools at the weekend – Friday and Saturday. This was another reason that made many students especially the older ones to miss that school day. So it would be better to decide this other holiday within every district separately, depending on the social circumstances and obligations of those students.

Expanding the whole multigrade initiative to include preparatory students is another crucial aspect. Many of the graduates of these schools drop out in the preparatory stage because their social needs are not met in public schools. If building more schools for those willing learners

would be difficult or will take some time, maybe it will be a good idea to consider having evening class sessions for them.

Inaugurating more departments in different faculties that focus on multigrade education is imperative. They should provide multigrade teaching pedagogies with a special focus on active learning theories and strategies that would help all kinds of teachers, and not just the multigrade facilitators. It should also provide some basic related human development theories.

After the selection process, facilitators should receive a more extended pre-service training period. This means that some of the in-service training sessions will have to be delivered prior to appointment so that teachers would feel more confident. Moreover, if it was discovered that some teachers are not ready yet for taking over, they should do some peer observation for a while, then become participant observers with close mentorship till they demonstrate better understanding of the type of responsibilities required from them. Moreover, maybe the Professional Academy for Teachers (PAT) could be an integral part of such preparation processes in addition to further on-the-job training and professional development sessions specifically designed for multigrade teachers.

Constant follow-up and supervision is required. This should allow teachers to sense that there is someone to provide them with support and expertise when needed. Moreover, on-going assessments should be undertaken to be able to identify positive aspects of the application of multigrade schooling to reinforce them and recognize the areas where there are drawbacks to be able to work on those aspects as well.

The issue of teachers' qualifications should be handled very carefully and tactfully. Otherwise these schools will lose some of the most efficient teachers. Instead more care should

be given to preparing the teachers who are already appointed as university or non-university graduates whose performance is not that good as we have seen. Moreover, it is the teachers' right to know where they stand in terms of status, position and salary. In addition, they should be given the chance and support to earn a suitable degree within a reasonable time span, or having an equivalence measurement for alternative systems.

Keeping the tradition of facilitators meetings, whether on the school or the district level, is vital. This encourages sharing their ideas, reflecting on their practices, exchanging expertise, complementing one another, modifying their plans or strategies, and highlighting their objectives. Supervisors should be there too as part of the team. Teachers or supervisors could even bring along some of the articles they found in books or on the internet about multigrade teaching practices or other related topics for both professional and personal growth. They can also share how to present specific lessons or concepts that some think are difficult to be applied within the active-learning multigrade pedagogy. These would be great professional development opportunities for those involved.

Math-oriented multigrade workshops to be delivered for the teachers are necessary. The majority of teachers feel they lack this skill. This is in addition to handling discipline problems and learning difficulties. The need was clearly depicted for English language teaching skills, and using the computer efficiently as another source of information they can use with the students in class to expand the students' horizons and for their own development as well.

Using portfolios as a means for assessment and not count on the traditional forms of assessment that do not say a lot about the student development, especially where life skills are concerned.

Last but not least, it is great to have students salute the flag in the morning lines on a daily basis. The only thing missing is the flag. Therefore, flags should be provided to every single school as a symbol of patriotism and solidarity.

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APPENDICES

APPENDIX A

The main topics discussed with key informants and supervisors:

- The application of multigrade education in Egypt.
- Teachers' qualifications
- The kind of teacher preparation
- The nature and mechanism of follow-up and supervision
- Strengths of this type of education
- Challenges faced
- Its effects on students
- Suggestions for further improvement

APPENDIX B

Interview questions addressed to teachers:

- When were you appointed?
- What kind of preparation and training did you receive? How often? How many sessions?
- Do you think this type of preparation was sufficient?
- What do you think of this multigrade initiative?
- Do you have certain mechanisms for classroom management and in dealing with discipline problems?
- How do you deal with low-performing students?
- What about lesson planning?
- How do you manage multigrade levels?
- What's the effect of this type of education on the students?
- What difficulties do you face?
- What about supervisors' role? How far does their follow-up support you?
- Do you feel you need more training? Which areas?
- How do you divide the responsibilities among you as two teachers in the class?

APPENDIX C

Classroom Observational Grid

The grid comprises of five main aspects that were used to evaluate teachers' performance. These areas are planning, pedagogy, interaction, learning community and classroom management. They include 67 items that were evaluated. The rubrics used for each item comprised: Not Demonstrated (=0), Needs Improvement (=1), Satisfactory (=2), and Outstanding (=3).[4]

I. Planning:

Appears well-prepared

Blackboard writing is large and legible

Clearly organizes and explains assignments

Has instructional aides to be employed ready and set

[4] Adapted from:

http://www.austincc.edu/hr/eval/procedures/ClassObservCheck.pdf

http://www1.umn.edu/ohr/teachlearn/resources/peer/instruments/index.html

www.cravencc.edu/.../forms/observation

http://www.scsd.us/~fforword/Imbeau%20handouts.pdf

www.colum.edu/.../Classroom%20Observatio.doc

http://www.gadsdenstate.edu/faculty-and-staff/ie/documents/ClassroomObservationChecklist.pdf

http://www.ccac.edu/files/PDF_Document/b1578a72911d40f3b0180b0c9f822ec4.pdf

http://www.usciences.edu/teaching/ClassroomObservationForm.pdf

Provides sufficient time for practice/completion

Facilitates discussions about the activity with all class members

Schedules time for discussion of results

Incorporates sufficient demonstrations

Demonstrations are clear and visible for all learners

Leads effective transitions

Has clear organizational plan

Gives enough time for clean-up

II.PEDAGOGY:

Encourages critical and analytical thinking

Incorporates various instructional aides

Uses instructional aides effectively

Selects teaching methods appropriate for the content

Adapts the curricula to suit different types of learners

Is aware when learners find difficulties in understanding

Selects examples relevant to students' experiences and course content

Adapts content to students' backgrounds and experiences

Presents concepts in varied methods

Facilitates learners responses and discussions through encouragement and stimulation

Makes room for learner participation and interaction without interruption

Incorporates interactive class work and activities, through class discussions and activities where learners take the lead

Uses informal assessment which suits the course objectives

Monitors effectiveness of team/group work

Uses open-ended questions that stimulate students' thinking

III.INTERACTION:

Uses students' names

Uses humor appropriately

Does not embarrass or belittle students in any way

Has good eye contact with students

Responds appropriately to students' questions and comments

Repetitive words like "alright?" are not distracting

Uses clear and understandable words

Uses appropriately semi-formal language

Employs gestures to emphasize ideas without creating stressful situations

Treats class members equitably

Provides adequate attention to all learners

Gives learners constructive comments

Good rapport with learners

IV.LEARNING COMMUNITY

Students AND teacher ARE interested and enthusiastic

The atmosphere of the classroom is participative

Provides students with positive reinforcement

Seeks learners' views and participation

Responds constructively to learners' opinions

Does not depreciate students' ignorance or misunderstanding

Has the courage to admit mistakes and lack of information

Appreciates constructive feedback

Encourages learners' questions, involvement, and debate

Answers students' questions with clarity and precision

Allocates enough time for learners to answer

Deals with incorrect responses in a constructive manner

Encourages learners to answer their peers' concerns

Promotes mutual respect among learners

Respects diverse points of view

V.CLASSROOM MANAGEMENT

Uses class time effectively.

Organizes spaces well and uses labels

Deals adequately with inattentive students

Chooses varied spots in the class for presentations

Engages students in classroom management

Responds to distractions effectively yet constructively

Careful safety supervision is obvious

Consistent classroom rules and management techniques

Overall rating:

APPENDIX D

Teachers' Performance

Charts (1 to 16), which demonstrate the areas where teachers' performance was either outstanding: (3), satisfactory: (2) or needed improvement: (1) on an individual basis. Moreover, the typology of teachers will be indicated as T1: (university graduate), T2: (non-university graduate), or T3: (Faculty of Education graduate).

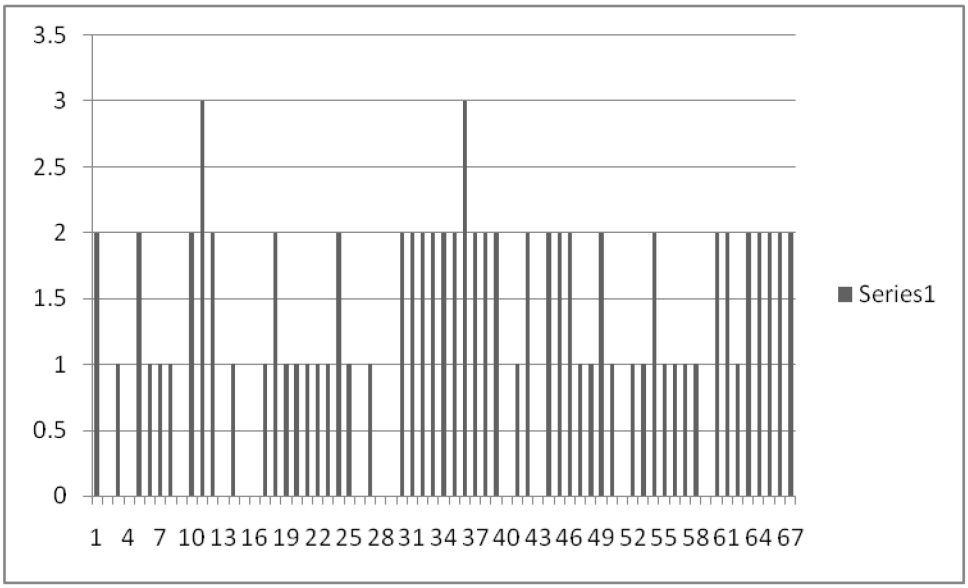


Chart D.1. 1A performance on every item on the grid – T2

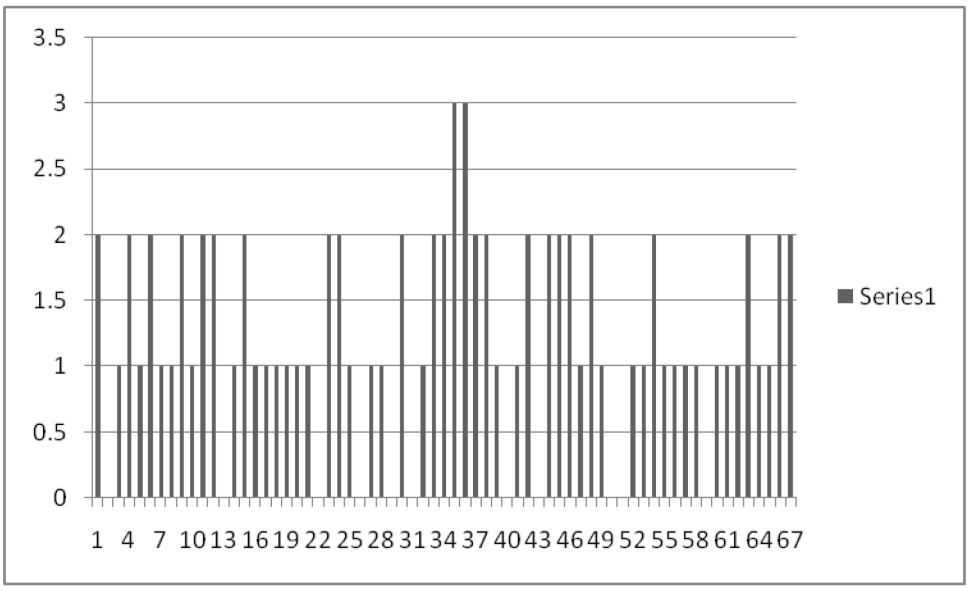


Chart D.2. 1B performance on every item on the grid – T2

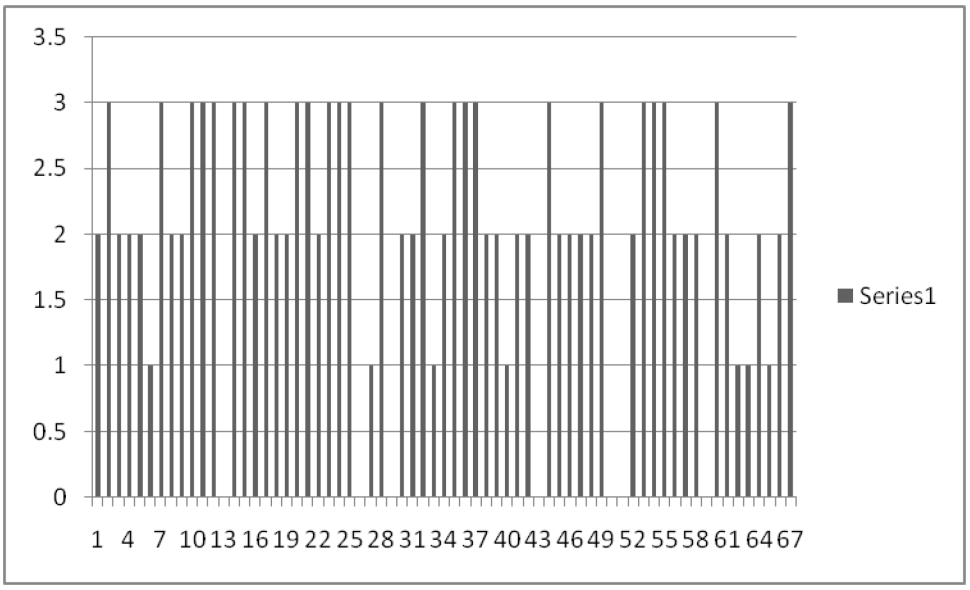


Chart D.3. 2A performance on every item on the grid – T1

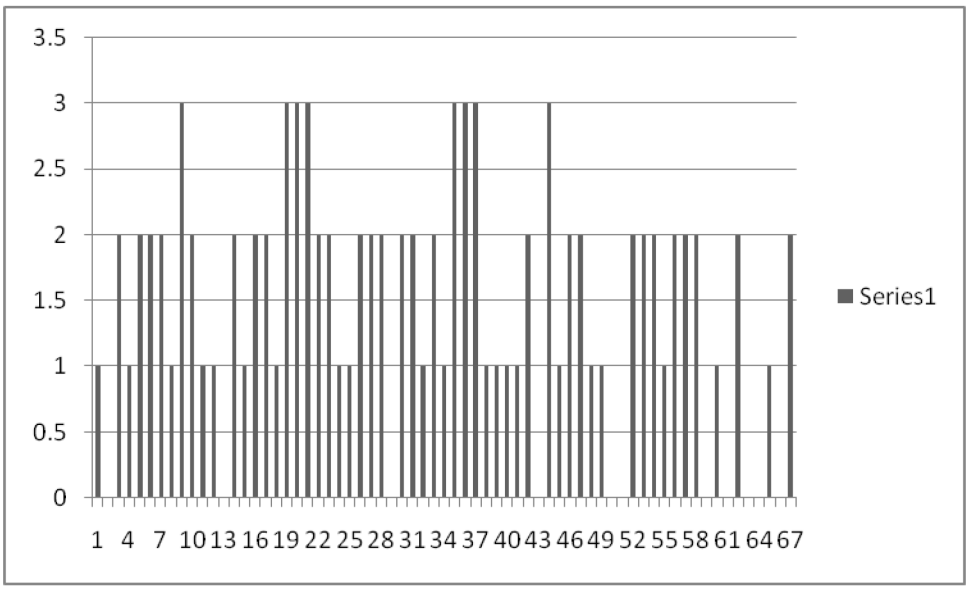


Chart D.4. 2B performance on every item on the grid – T3

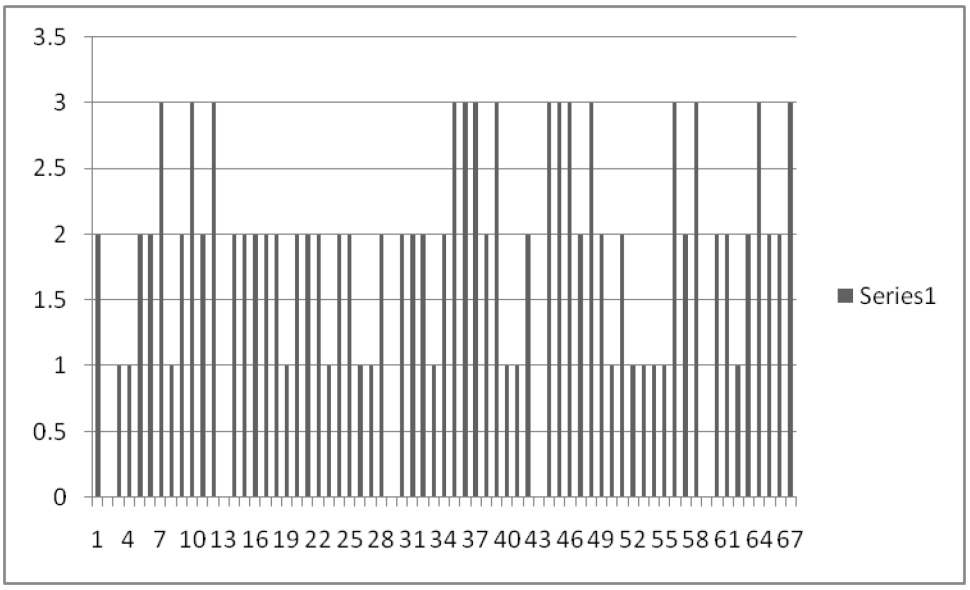


Chart D.5. 3A performance on every item on the grid – T3

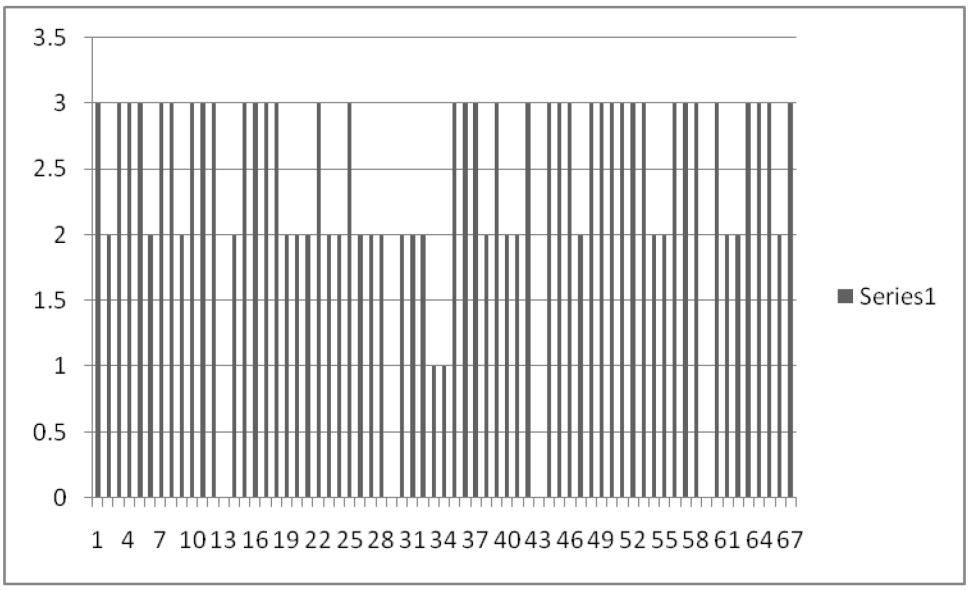


Chart D.6. 3B performance on every item on the grid – T2

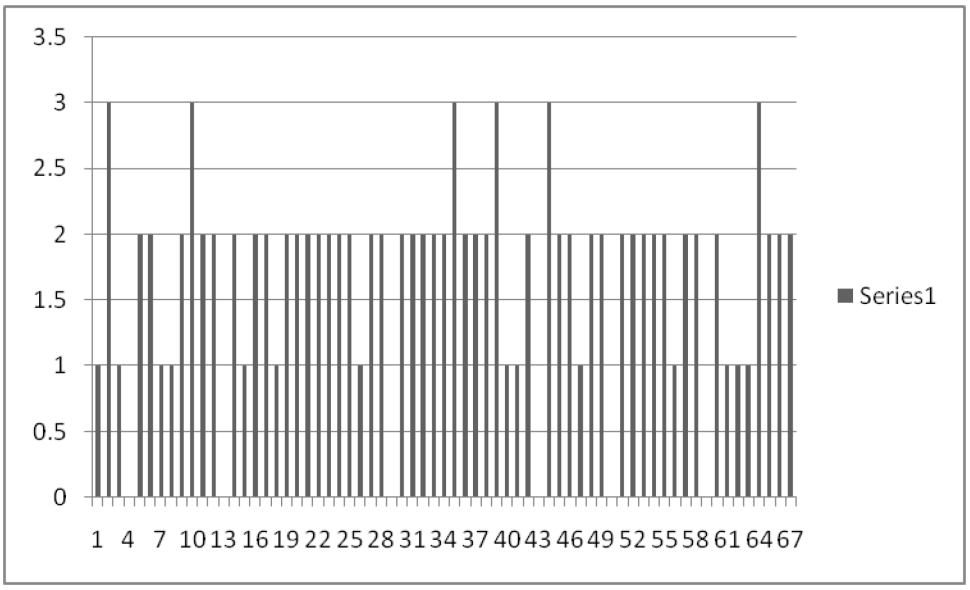


Chart D.7. 4A performance on every item on the grid – T1

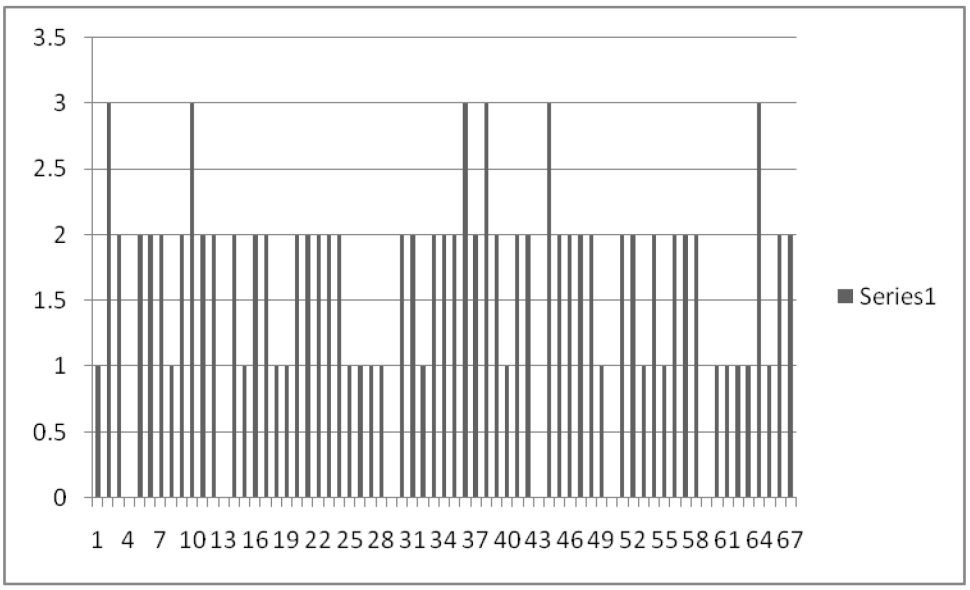


Chart D.8. 4B performance on every item on the grid – T2

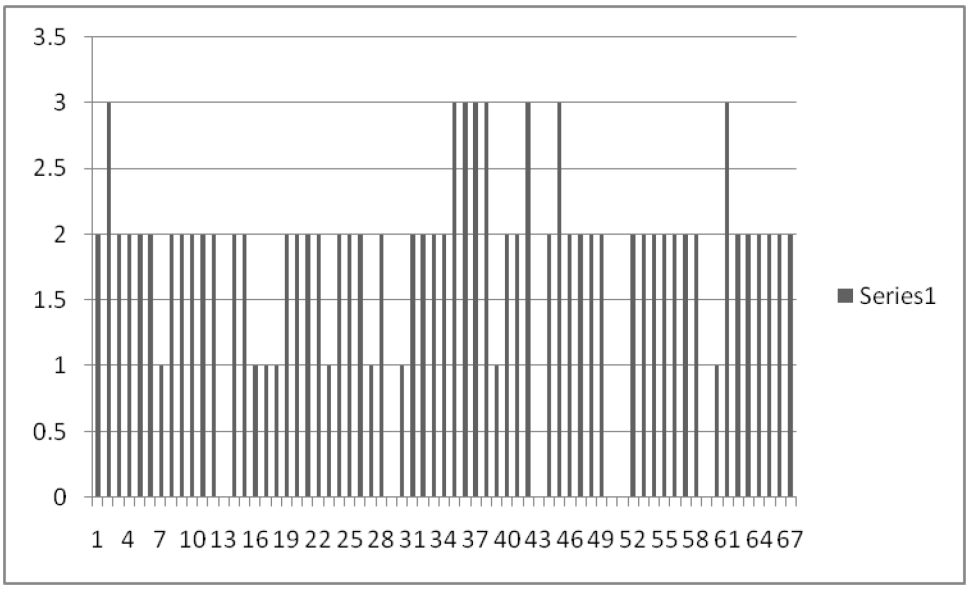


Chart D.9. 5A performance on every item on the grid – T2

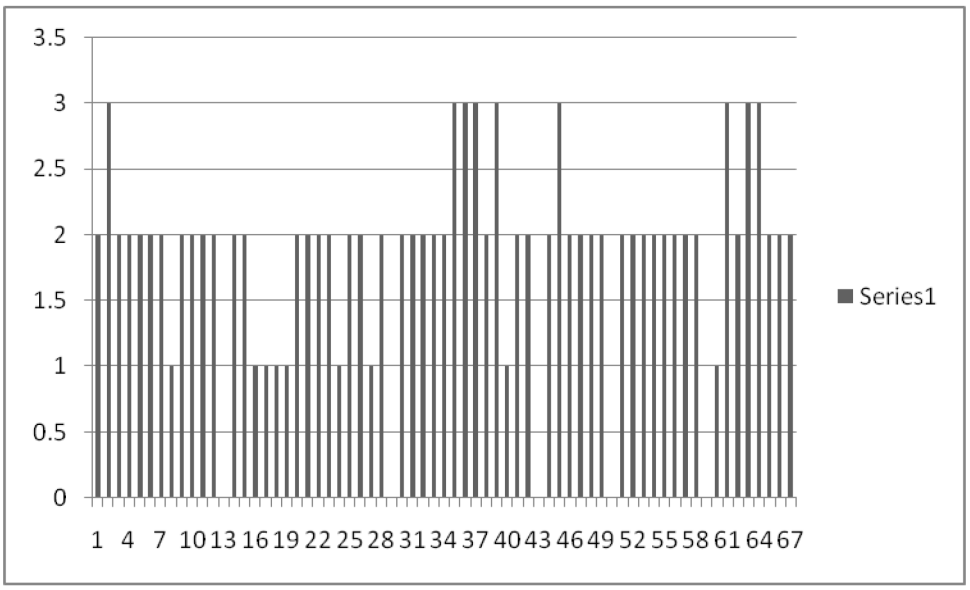


Chart D.10. 5B performance on every item on the grid – T2

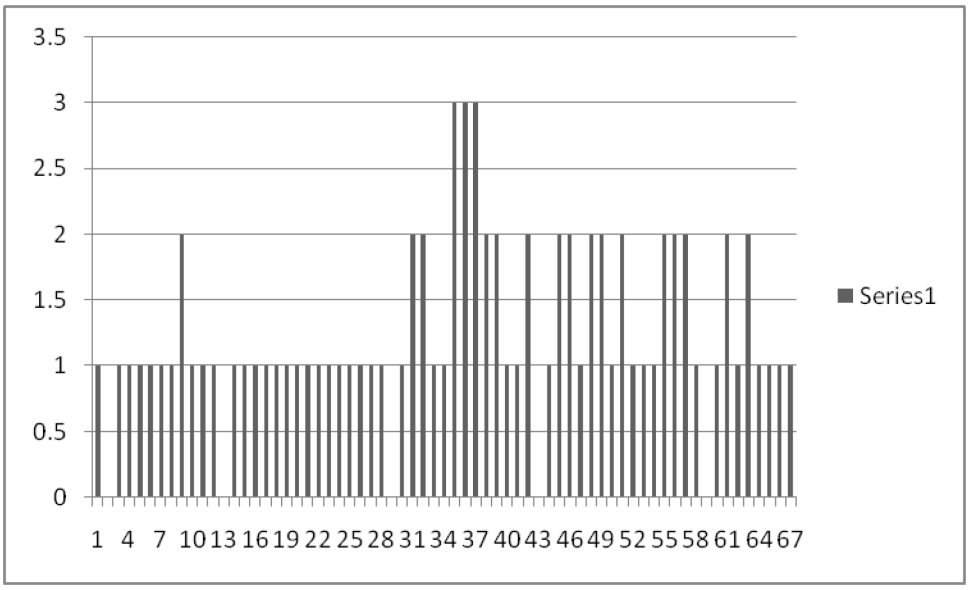


Chart D.11. 6A performance on every item on the grid – T1

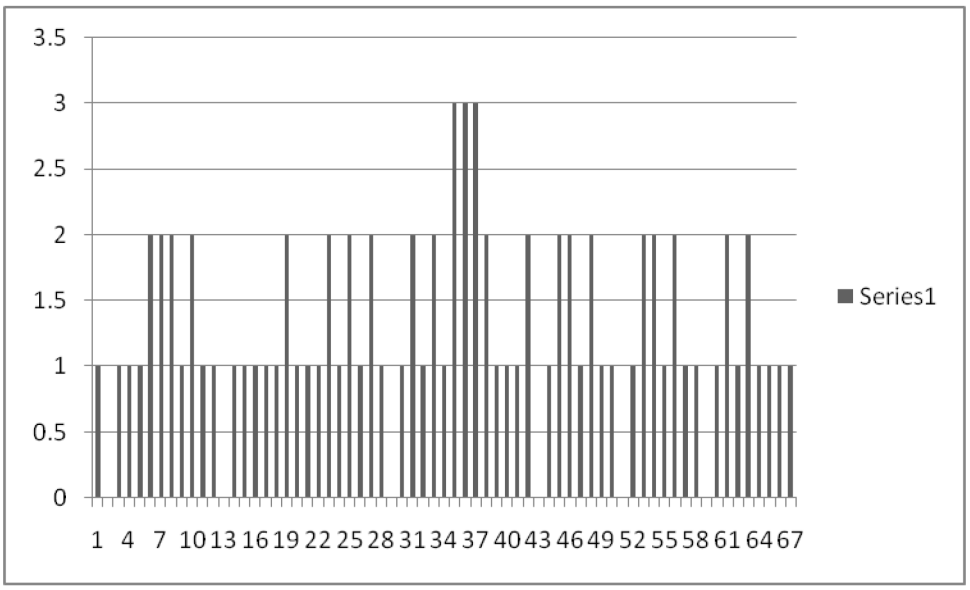


Chart D.12. 6B performance on every item on the grid – T1

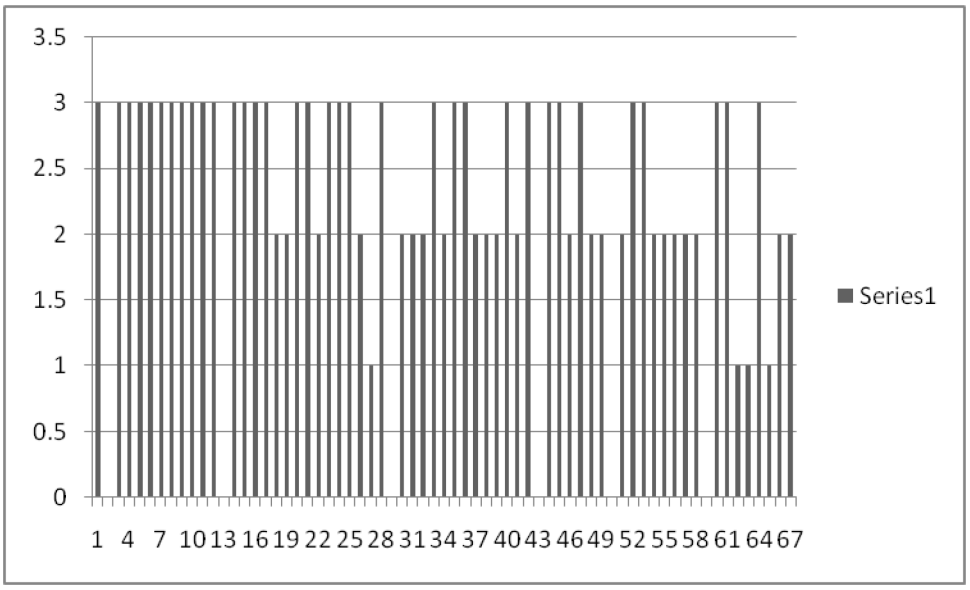


Chart D.13. 7A performance on every item on the grid – T3

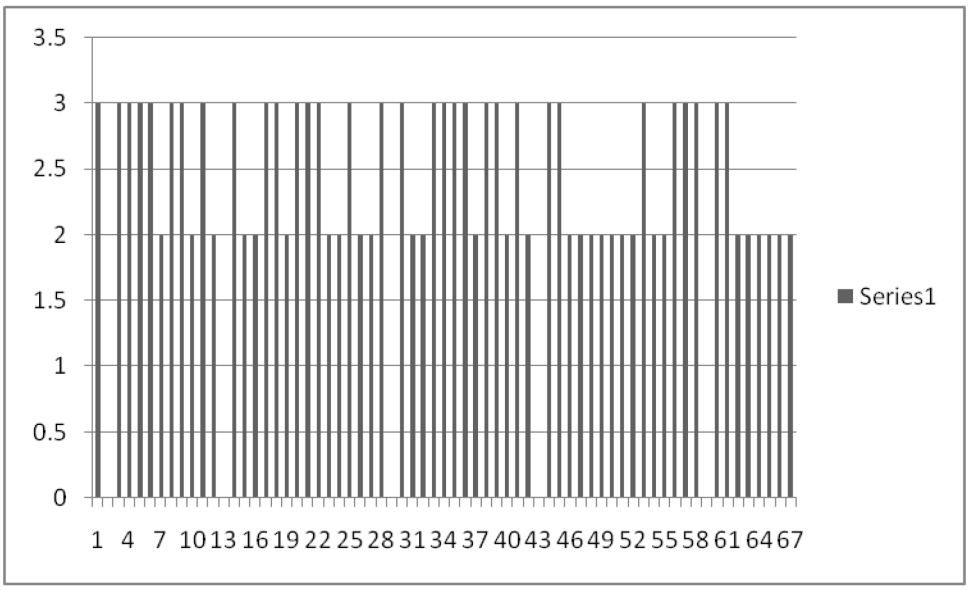


Chart D.14. 7B performance on every item on the grid – T1

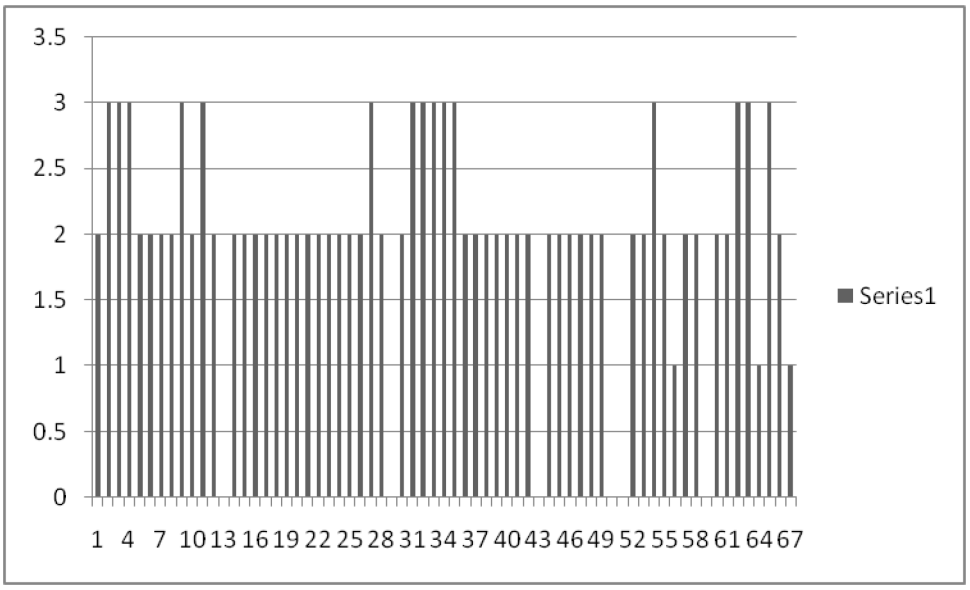


Chart D.15. 8A performance on every item on the grid – T1

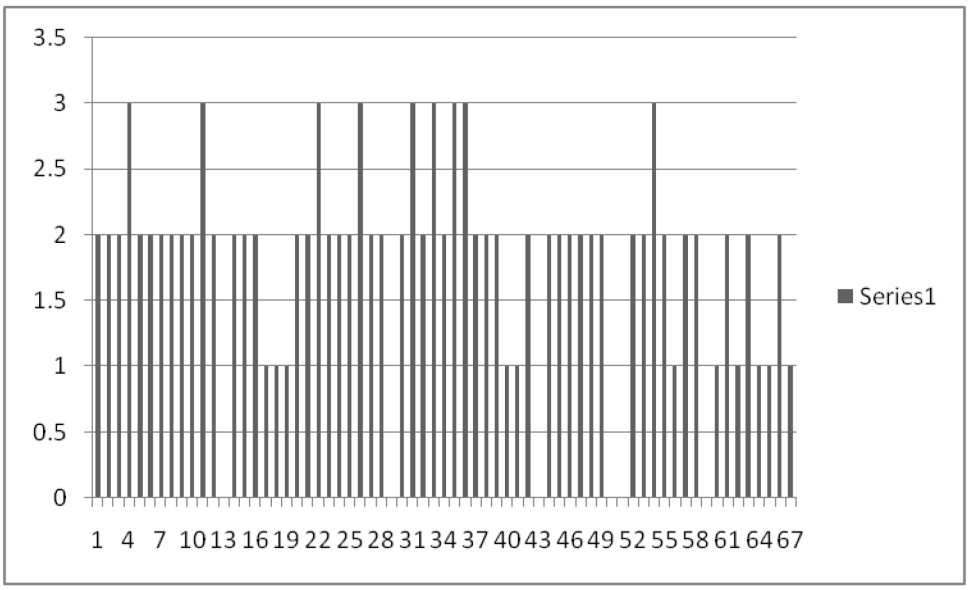


Chart D.16. 8B performance on every item on the grid – T2

APPENDIX E

Teachers' Performance per School

Based on the recurring issue of the team teaching effect that was being highlighted throughout the results shown on teachers' performance, in addition to the overall rating mentioned above, it was necessary to compare the performance of each team of co-teachers within each school to explore this element further. Charts 1 to 8 in Appendix E clearly illustrate this point.

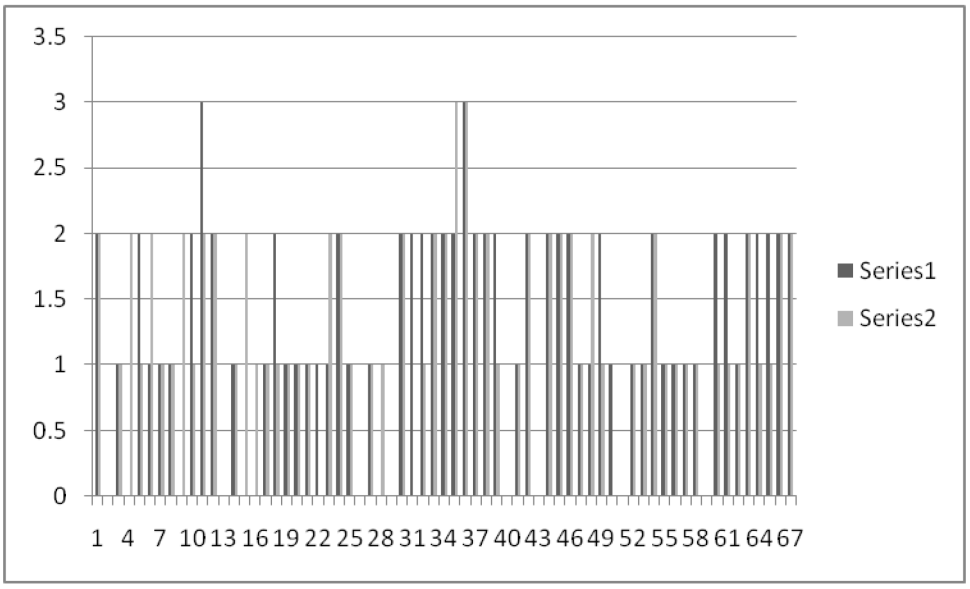


Chart E.1. School 1 teachers' performance: 1A – 1B: T2 – T2

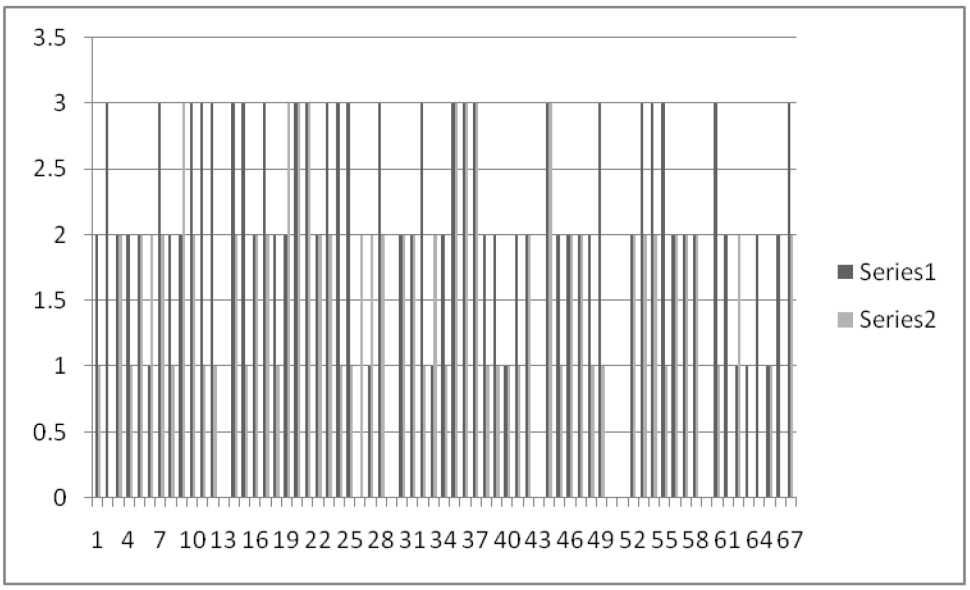


Chart E.2. School 2 teachers' performance: 2A – 2B: T1 – T3

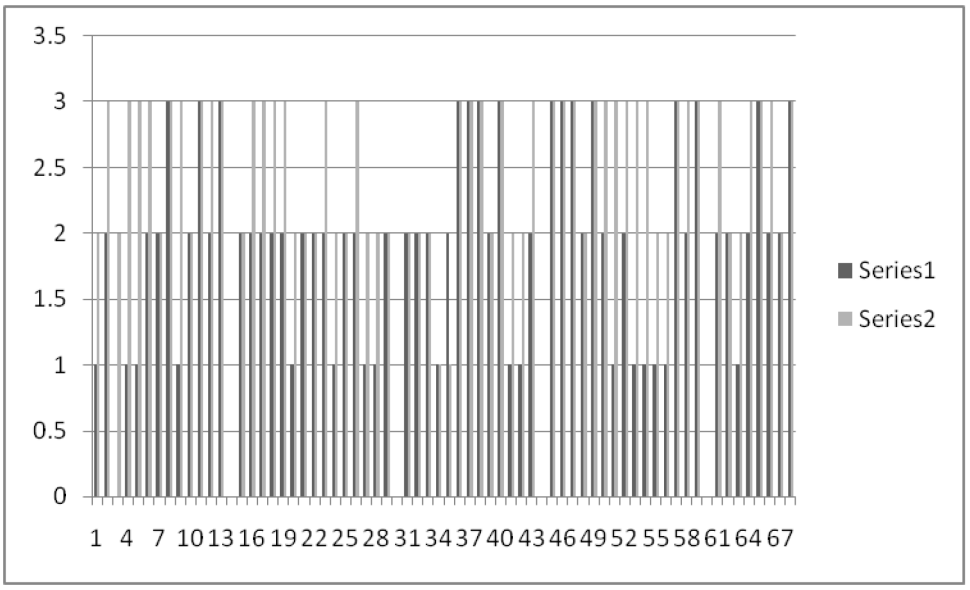


Chart E.3. School 3 teachers' performance: 3A – 3B: T3 – T2

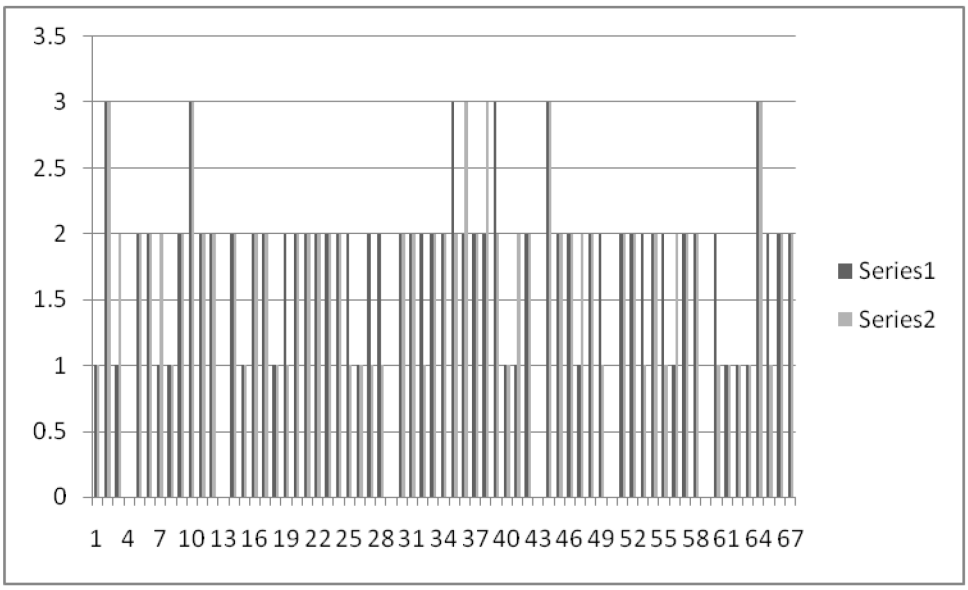


Chart E.4. School 4 teachers' performance: 4A – 4B: T1 – T2

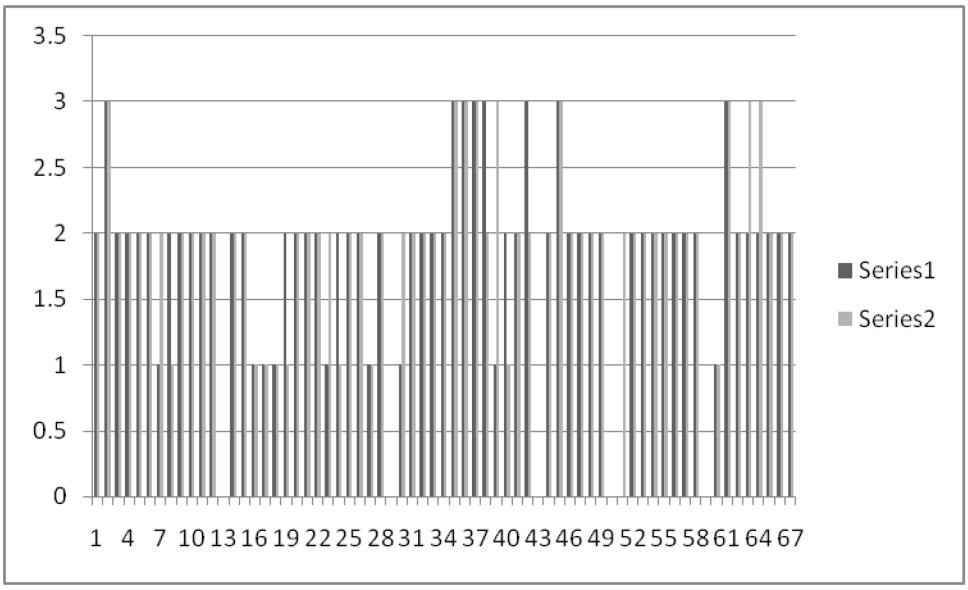


Chart E.5. School 5 teachers' performance: 5A – 5B: T2 – T2

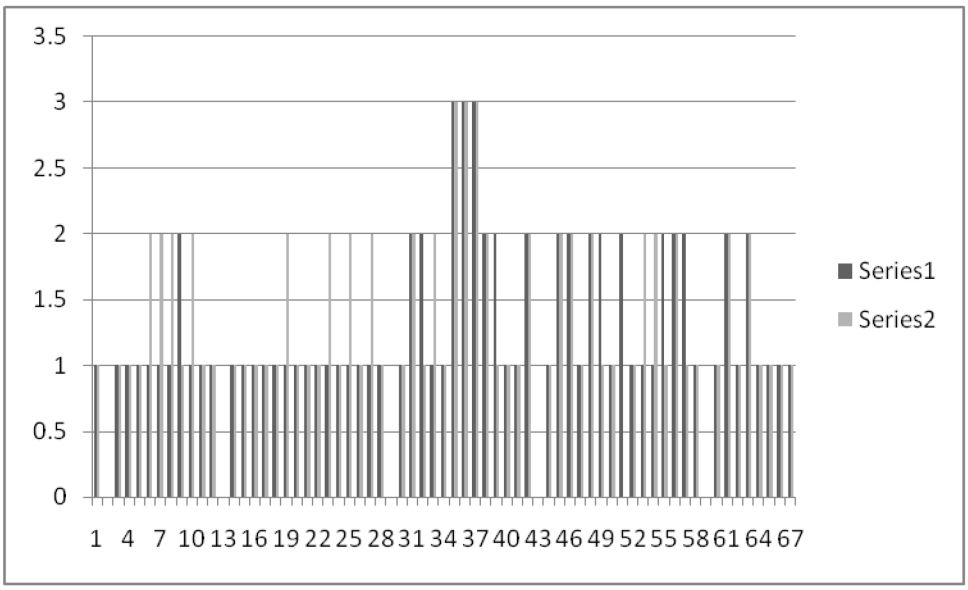


Chart E.6. School 6 teachers' performance: 6A – 6B: T1 – T1

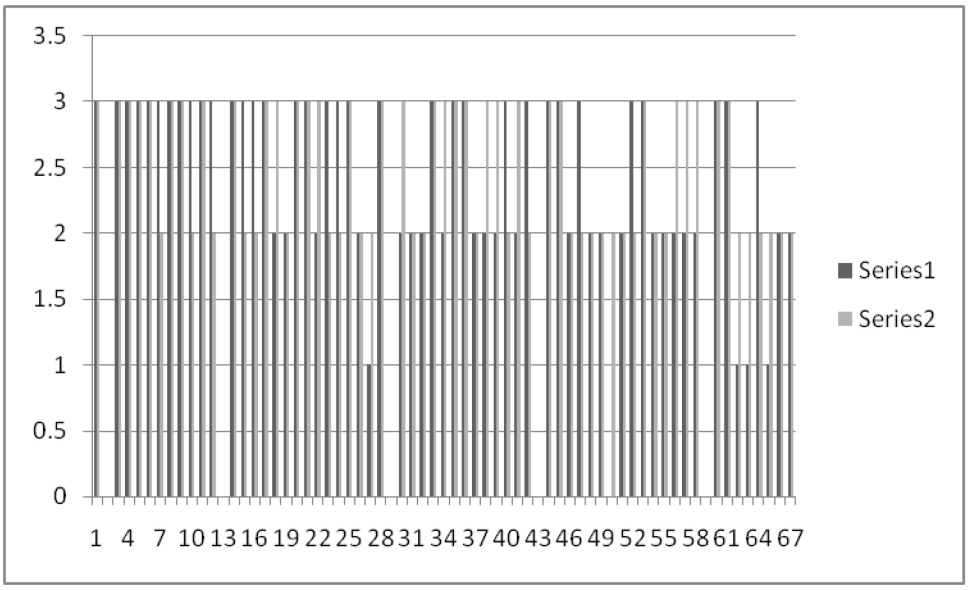
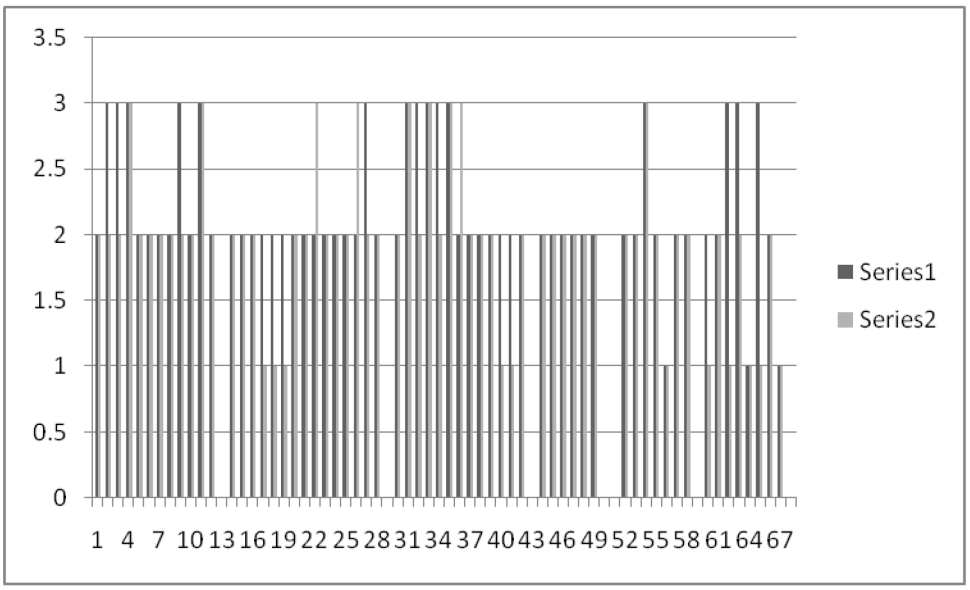


Chart E.7. School 7 teachers' performance: 7A – 7B: T3 – T2



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LIST OF ABBREVIATIONS

MOE: Ministry of Education

NCCM: National Council for Childhood and Motherhood

GEI: Girls' Education Initiative

OCS: One-classroom Schools

CFS: Child Friendly Schools

GFS: Girl Friendly Schools

PAT: Professional Academy for Teachers

NGO: Non-Governmental Organization

INGO: International Non-Governmental Organization

EFA: Education For All

MDGs: Millennium Development Goals