

LEBANESE AMERICAN UNIVERSITY

A Study of the Effectiveness of Remediation Programs for
Elementary Students at HOPE Orphanage

By

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A thesis

Submitted in partial fulfillment of the requirements for the degree
of Master of Arts in Education

School of Arts and Sciences

November 2019

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Dedication

To my father and mother, who taught me that the best kind of knowledge to have is that which is learned for its own sake. To my beloved husband, who taught me that even the largest task can be accomplished if it is done one step at a time. To my handsome boys Hussein, Kareem, and Mohammad Ali.

ACKNOWLEDGEMENT

This thesis would not have been possible without the support of many people. Many thanks to my advisor, Dr. Mona Nabahani, who read my numerous revisions and helped make some sense of the confusion. Also thanks to my committee members, Dr. Rima Bahous, and Dr. Lara Al Khatib, who offered guidance and support.

And finally, thanks to my husband, parents, and friends who endured this long process with me, always offering support and love.

A Study of the Effectiveness of Remediation Programs for Elementary Students at HOPE Orphanage

Boushra Helbawi

ABSTRACT

The purpose of this study is to examine the effectiveness of remedial programs employed by the Elementary School of HOPE orphanage in Lebanon. The study aims to do so by assessing students' academic achievement after remediation as well as stakeholders' perceptions of the program. The research design employed is a sequential explanatory design. The grades of a purposive sample of 35 students were compared before and after remediation in Reading comprehension and math. In-depth interviews with remedial tutors and observations of remedial sessions followed. Data results from all instruments were triangulated to ensure reliability. Findings indicate that the remedial program is ineffective because remediation is not well-planned, tutors are not qualified, and the allotted time is not dedicated to academic work only. Findings suggest the need for re-designing the remedial program based on diagnostic assessments of students' academic status and for planning differentiated remedial procedures accordingly.

Keywords: Remedial education, Academic achievements, Low SES, English reading, Mathematics.

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Chapter One

Introduction

1.1 Background of the Study

Although schooling serves an array of objectives and aims, research has shown that one significant objective of schooling is to improve academic performance of students with special emphasis given to struggling student (Kaniuka, 2010; Mcguigan & Hoy, 2006; Wax, 2017). Improving students' academic achievement is a major concern for school personnel and parents (Greene & Kritsonis, 2010; Lalley & Miller, 2006), and low academic achievement of disadvantaged students continues to be a challenge facing many countries all over the world (Abadzi, 2004; Baird, 2012; OECD, 2012).

Though some students are able to achieve the expected standards, others are at risk of performing below grade level standards. Thus, the aim of teachers, administrators, and researchers should be to continuously strive in helping struggling students enhance their performance (Battistin & Schizzerotto, 2019; Ritter, Barnett, Denny, & Albin, 2009; Skourdoumbis, 2010; Woolley & Hay, 2007). There is no agreement on what defines and what measures the notion of underachievement (Smith, 2003). Usually the term "low achievers" is ascribed to a group of learners who fail to demonstrate expected capability in achieving specific grades in the evaluation mechanism, or the ones whose performance is one to two years behind their peers (Chakrabarty & Saha, 2014; Lalley & Miller, 2006).

Traditionally, a wide range of criteria has been used to identify low achievers. These criteria make use of more accurate definitions of underachievement and take into consideration students' backgrounds as well as academic variables. Indicators, such as

individual characteristics, family, neighborhood, and socioeconomic status, play a key role in, not only influencing, but also determining students' educational attainment levels. Moreover, parents' educational level and marital status, family income, and number of siblings can be indicators of a family's socioeconomic status (Ulriksen, Sagatun, Zachrisson, Waaktaar, & Lervåg, 2015). Students belonging to a low socioeconomic status (SES) experience significant educational disadvantages related to learning outcomes and tend to have the lowest grades (Banerjee, 2016; Berkowitz, Moore, Astor & Benbenishty, 2017; Chmielewski, 2019; Duncan & Sojourner, 2013; Skourdumbis, 2010; Ulriksen et al., 2015). In other words, disadvantaged students coming from low (SES) are exposed to several undesirable situations, which potentially prevent them from performing well academically and might place them at a lower performance rate than their advantaged peers. It is worth noting that "the term disadvantage here refers to the absence of certain conditions as in other more privileged sub-groups who face lesser hardships in life and encounter fewer barriers during their learning trajectories" (Banerjee, 2016, p.3). To illustrate, children born into families with socioeconomic hardships are more likely to be in underprivileged positions, hindering their academic achievement.

Accordingly, the need to identify effective instructional strategies and services for low achievers has been gaining attention among researchers. There are countless initiatives providing compensatory education to help disadvantaged students achieve better educational outcomes all around the world. For example, No Child Left Behind (NCLB) was passed by US Congress in 2001 to target disadvantaged students (No Child Left Behind Act, 2001). The goal behind this movement was to provide disadvantaged students equal educational opportunities as peers from better SES. NCLB provides funding to supplement daily instruction by establishing after-school programs (NCLB,

2002). Similarly, Every Child Matters is a British approach that aims at aligning efforts by organizations, including hospitals, schools, volunteer groups, and afterschool programs for youth to gain safe path to adulthood. In June 2005, the British government initiated the Extended Schools Agenda to supplement the “Every Child Matters Framework.” The goal was that, by 2008, 50% of primary schools and one-third of secondary schools would be able to provide extended school programs (Mortlock, 2007). As for the Arab region, Sustainable Development Goal 4 (SDG 4) is one of several objectives of the Education 2030 agenda convened by UNESCO and embraced by all governments in the Arab region since early 2014. This initiative aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030 (as cited in UNESCO, 2019).

On a national level, Lebanon adopted the National Action Plan for Education for All in 2005. This plan aims at offering disadvantaged children a good quality education (Shuayb, 2016). “Although the quality of education improved in public schools, dropout rates continued to be high, particularly amongst the most disadvantaged groups” (Shuayb, 2016, p.1). In the same context, the Centre for Education Research and Development (CERD), a public institution under the Lebanese Ministry of Education and Higher Education (Shuayb, 2018), proposes that a major problem facing the education sector in Lebanon is school dropouts. The effect of this problem extends to affect the whole society by the increased rates of unemployment, by the spread of ignorance and poverty, and by other socioeconomic problems (CERD, 2018).

Many forms of remediation are found in Lebanon and other countries; nonetheless, the focus of this study is on remediation in academic school subjects at an institution serving low SES students. An extensive body of literature focuses attention on compensatory tutoring in academic subjects beyond the hours of formal schooling (Bray,

2006; DuBois, Portillo, Rhodes, Silverthorn & Valentine, 2011; Dietrichson, Bøg, Filges & Klint Jørgensen, 2017). In general, compensatory education takes the form of supplemental programs that provide teaching outside the classroom. Supplementary tutoring, also known as remediation, private tutoring, or out-of-school tutoring, refers to structured tutoring practices in academic subjects that occur outside regular school hours (Curwen & Colón-Muñiz, 2013).

Accordingly, students who struggle to catch up with their peers are usually referred to remedial or supplementary programs. These services are classified based on a sequence of provisions that take place over a specified period of time (Saddler & Staulters, 2008). Teaching can be provided before or after students' initial exposure to the academic material in the classroom. Normally, re-teaching is the most common strategy for assisting students to acquire previously unattained academic objectives and is characterized by instruction and practice following classroom instruction (Lalley & Miller, 2006). This is needed because "students who have had prior history of poor academic achievement...pose a greater risk of dropping out" (Kaniuka, 2010, p.187). Additionally, it is argued that two consistent factors contributing to school failure are early reading failure and the education system's inability to properly identify and assist those with persistent reading disabilities (Hayward, Das, & Janzen, 2007; Okkinga, van Steensel, van Gelderen, van Schooten, Slegers, & Arends, 2018). Therefore, an instructional remediation program may support students and help them conquer the challenges they face during their education.

Unfortunately, minimal research exists on evaluating remedial programs' effects on students' achievement. Most studies' focused attention is merely placed on examining instructional methods and curricular offerings (Hoyt, Howell, & Young, 2009). The

authors of a study comparing the effectiveness of two types of reading material intervention for low-achieving and disadvantaged students state that “To date, no research has been conducted to evaluate the effectiveness of remediation materials” (Chen, Shih-Jay, & Chu, 2015, p.112). On a national level, I visited some local universities’ online databases to locate research on the evaluation of remedial programs efficiency in Lebanon and found minimal research studies that investigate the matter.

1.2 Research Problem

The increased focus on students’ academic progress has led schools and parents to place a great emphasis on remediation programs. The focus on students’ academic achievement brings forth the gap in achievement between advantaged students, coming from a high socioeconomic background, and disadvantaged students, coming from a low socioeconomic background. In this regard, it is proposed that after-school programs can help improve grades and test scores, particularly for disadvantaged students (Saddler & Staulters, 2008; Yue, Rico, Vang & Giuffrida, 2018). Thus, educators must offer additional support to provide more academic opportunities for children of low SES and disadvantaged parents.

Based on an informal interview in HOPE orphanage, I identified a research problem that proved to be worth studying. Despite the continuous investment in the remedial program at the orphanage’s school, assessments show that students’ grades and test scores have not improved as anticipated. Educators at HOPE orphanage believe that some of the learning difficulties their students encounter can perhaps be related to the context where the learning is taking place, such as the background of the family, the student’s peers, and the school environment.

1.3 Research Purpose

The study aims at investigating the effectiveness of the remedial programs employed by the Elementary School of HOPE orphanage. In order to do so, students' academic achievement as well as stakeholders' perceptions of remediation are examined. Inspecting the diverse factors related to the effect of remediation on students' achievement could aid in identifying the causes of success or failure of such programs. This informs administrators' and teachers' quest in finding appropriate recommendations for enhancing students' performance.

This study addresses two research questions, which are the following:

- 1- How is the remedial program at HOPE orphanage planned and implemented?
- 2- How do stakeholders at HOPE orphanage perceive its effectiveness?

1.4 Research Context

The study was conducted at HOPE orphanage, a non-governmental, non-profit organization that was launched in the early 1960s in the south of Lebanon. This institution began its work with a holistic care program primarily targeting orphaned girls in critical social circumstances (extreme poverty, broken homes, and/or victims of domestic violence).

The orphanage's Elementary Department encompasses cycle one and cycle two, from grade one to six. This department caters for the needs of its students through adopting an educational curriculum that is consistent with the Lebanese official curriculum. It also seeks to minimize its students' difficult, social conditions by helping them attain a better education. Based on personal communication, the education provided is believed to

further the students' social development and prepare them to fulfil their future roles in society as independent effective citizens.

In order to promote students' achievement, provide necessary educational support to low achieving students, and fulfil the expectations of teachers and administrators, HOPE orphanage has developed a remediation program for students at its school. This program aims at providing academic and enrichment services to every student enrolled in the school between 2:15 pm and 4:00 pm. The program provides around two supervised hours of academic and social enrichment. Social supervisors offer academic instruction for 45 minutes a day, usually helping students with homework or providing additional instruction and re-teaching when necessary.

The program is designed to enhance students' academic performance in English, Arabic literature, science, and mathematics while offering social support, as well. Every student enrolled in HOPE orphanage's school is entitled to attend this program. Students are classified and grouped based on their sections. For example, grade four students are assigned into two sections, A and B. Section A (18 students) receives remediation on Mondays and Wednesdays, and section B (17 students) receives remediation on Tuesdays and Thursdays. On Fridays, the program includes extracurricular activities and special events. This results in 54 hours of remediation for every section per year. The program assists students in elementary and middle school with an average of 214 students attending per day.

The teaching strategies employed in remediation sessions are aligned with the strategies used in the classroom, and school teachers observe the tutors to ensure this alignment. In addition, the social supervisors (tutors) perform focused observations for students in regular classrooms to gain insight into students' challenges and difficulties.

Remediation tutors also conduct a meeting with parents at the beginning of the year to inform them about the program aims and objectives. Periodic meetings are assigned when necessary (School document).

There are many challenges facing teachers, tutors, and administrators in this remediation program. Parents' educational level, parents' marital status, health conditions, and poverty are some of the student-related factors. In addition, classroom size, number of students, limited time of each session, and scheduling and staffing issues are other challenges that are related to planning and organizing the remedial program. The most significant challenge facing tutors is the growing workload with the insufficient number of social supervisors. Particularly, the time these supervisors dedicate to non-academic duties is unpredictable. This unpredictability takes time away from tutoring tasks. In addition to tutoring, supervisors are responsible for students' school lunch, medical appointments at the school's clinic, regular hygiene inspections, and other unforeseen responsibilities. This normally leaves each tutor with 35 minutes for academic work. The time allocated for academic work is devoted to daily homework completion and supplemental activities. Another important challenge facing tutors is students' behavioral problems. Tutors perceive that these undesirable behavior issues interfere with and hinder teaching and learning. Tutors at this school report an increased level of behavior problems across various grade levels. Hence, it is worth noting that an education is based on a holistic ground. That is, academics, behavioral, social, and emotional issues cannot be treated as separate entities but are rather intertwined.

Consequently, an increase in the number of underachieving students across the different grade levels is evident. This increase is noted by the students' low grades and test scores and, in some severe cases, by class retention.

1.5 Significance of the Study

A major aspect of a successful education program is its regular incorporation of support services to supplement classroom instruction through developing effective re-teaching strategies. Participation in remedial programs is positively related to improved school attendance, more positive attitudes towards school work, higher ambitions for college, less school dropout rates, reduced time spent in destructive behaviors, and improved results (Witt, 2004).

Rather than evaluating the effect of remedial programs on students' academic achievement some previous research mainly focused on examining instructional methods and curricular offerings (Hoyt et al., 2009). This study seeks to contribute to the literature by identifying how effective remedial programs are planned, implemented, and evaluated. Further research seems necessary to provide information concerning the efficiency of remedial programs that are carried out by nonprofessional tutors (Ritter et al., 2009). Despite the focus on and support for remediation programs in the past decades, the development of programs that use nonprofessional adult tutors has yet to be examined (Ritter et al., 2009). As a matter of fact, remedial tutors should be well equipped to deliver professional remedial instruction to their students. This study is important to all students, remedial tutors, educators, and administrators, as it provides a demonstration of how schools can use data to examine the relationship between remedial education and students' academic achievement.

Administrators are responsible for maintaining high standards and quality education in the academic programs they manage. Therefore, administrators must ensure

that the remedial programs employed in their school are positively affecting students' academic achievement.

1.6 Thesis division

This thesis document is divided into several chapters. The above chapter presented the research problem, purpose, context, and significance. Chapter two presents a synthesis of the international literature addressing the posed research questions and two theories that are relevant to this study. Chapter three presents the methodology adopted in this study and describes the research design, sample selection, methods of data collection, and the method of data analysis. Chapter four follows by a presentation of the results yielded. Chapter five is dedicated to analyzing these results and responding to the research questions. Finally, chapter 6, being the conclusion of this study, provides a sum of the entire paper, identifies the study's limitations, and proposes suggestions for future research.

Chapter Two

Literature Review

One of the greatest challenges that teachers encounter is accommodating struggling, diverse, and at-risk students and/or students with learning difficulties or developmental disabilities. Even with the use of effective and research-based techniques, many children fail to perform up to standards and require additional assistance. One way to provide this assistance is through providing extra study hours, such as tutoring. In this chapter, I present a synthesis of the international literature about the influence of remedial programs on students' academic achievement. The literature review is organized according to the posed research questions. In addition, two theories that are relevant to the study are discussed.

2.1 Theoretical Framework

In this study, the view of remedial education is shaped by the concept of scaffolding, a practice that functions within the theory of social constructivism. "This framework views learning as a socially mediated cognitive activity that occurs in a hypothetical zone of proximal development" (Alghamdi & Siddiqui, 2016, p.205). Vygotsky's (1978) work has become the foundation of considerable research and theory in cognitive development over the past several decades. Scaffolding as a model places extensive emphasis on the conceptualization of developing cognitive functions through the theory of the zone of proximal development (ZPD). Kyrö-Ämmälä and Määttä (2011)

explained that a teacher is responsible for identifying students' limits of learning to help them perform at their zone of proximal development, as defined by Vygotsky.

In this regard, Vygotsky (1978), among other educators, believe that the main role of education is to expose children to experiences that are within their ZPD. Correspondingly, there are certain things a child cannot do independently, but he would be able to do with the assistance of someone else. For example, a student is capable of solving simple addition when assisted with a teacher, yet is frustrated when asked to complete the task alone. Through assistance or scaffolding, from an adult, the child will momentarily begin to acquire addition strategies and solve problems independently without the previously provided help. Therefore, the theory of ZPD emphasizes the fact that effective learning entails support and guidance from others.

Vygotsky (1978) described the attainment of the ZPD based on two levels. The first level is the present level of development. It designates what the child is capable of doing without any help from others. The second level is the potential level of development. It defines what the child could potentially be capable of with the help of their mentors.

When it comes to remedial approaches, research states that remedial sessions should be grounded in and shaped by the concept of scaffolding (Alghamdi & Siddiqui, 2016; Denton et al., 2010; Woolley & Hay, 2007). As the central objective of remedial teaching is to provide help to pupils who, for one reason or another, have fallen behind the rest of the class in one or more subjects, scaffolding knowledge through building on previous knowledge is essential in optimizing learning patterns. Therefore, using scaffolding practices appropriately could fulfil the objectives proposed by remediation.

In addition to scaffolding and working within the ZPD, educators need to take into account other factors that ensure effective teaching and learning. Unfortunately, research mainly focuses on students' outcomes and on the characteristics of the classroom or the school with little regards to other factors that might influence acquisition of taught material (Creemers & Kyriakides, 2013). Creemers and Kyriakidis (2010) have put together a dynamic model of educational effectiveness, which is an approach to improving the teaching and learning process signifying the quality of teaching and the surrounding environment of the teaching and learning process. This multileveled model refers to four factors that impact the learning process; those factors include (1) student, (2) teacher, (3) school, and (4) context. Creemers and Kyriakidis (2010) accentuate the importance that students' backgrounds and SES have in achieving a desirable teaching and learning process.

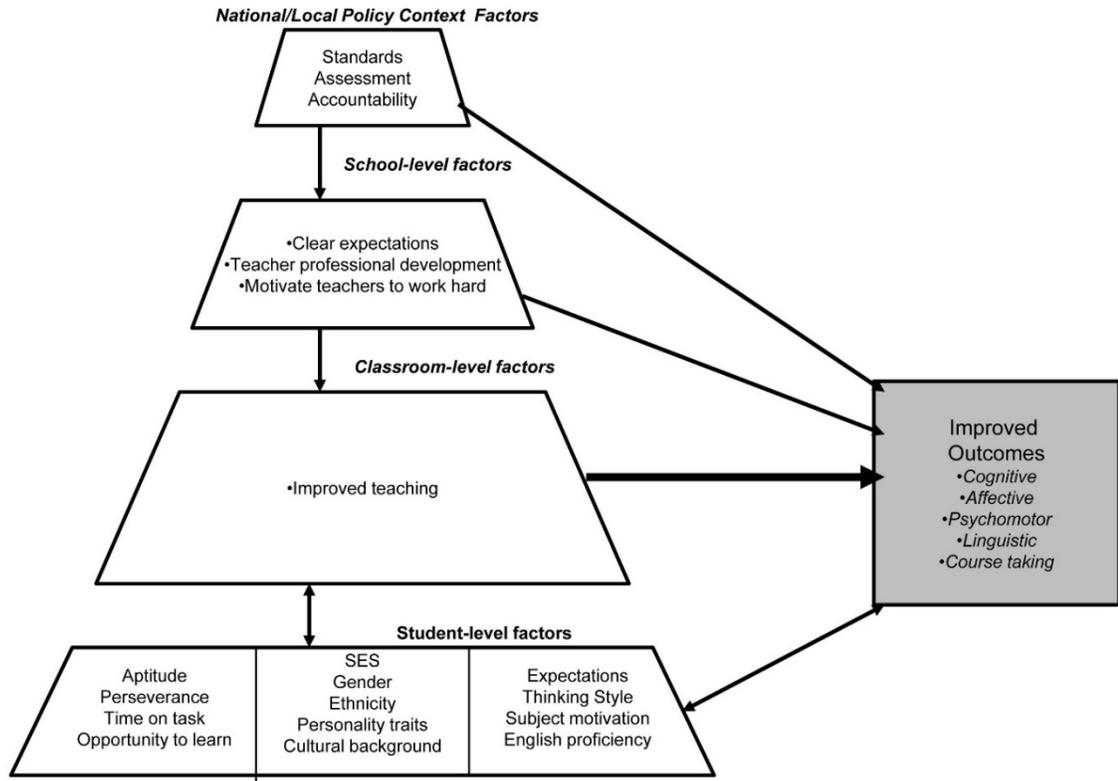


Figure 1
The dynamic model of educational effectiveness (Creemers & Kyriakides, 2013)

Consequently, it worth noting that remedial programs are to be planned taking into account several factors that include academics and go beyond them.

The next section synthesizes literature findings related the main ideas in the two research questions posed: (1) How is the remedial program at HOPE orphanage planned and implemented? (2) How do stakeholders at HOPE orphanage perceive its effectiveness? Moreover, the section reviews available studies concerning the impact of remedial programs on students' academic achievement.

2.2 Planning and Implementing Remedial Programs

Despite the unrelenting concern and effort to meet their needs, low achieving students continue to represent a substantial population in schools (Manning & Baruth,

1996). The focus on examining the effectiveness of remedial programs for students' academic achievements has become increasingly important in recent years.

Moreover, Baker, Rieg, and Clendaniel (2006) provide an overview of an after-school math program that took place in rural Pennsylvania. According to the authors, the keys to success in students' achievement in this investigated program are preparing the mentors, long term commitment, and specific program goals. Remediation programs have a variety of goals, yet, "the rationale for programs can be grouped into three categories: (a) the growing need for child care, (b) the value placed on decreasing negative behaviors and increasing thriving ones, and (c) interest in using the after-school hours for improving educational achievement" (Witt, 2004, p.106). It is worth mentioning that in all the aforementioned cases, allocating caring adult tutors and purposely planned activities are critical program elements and should be taken into account when planning the programs. Therefore, it becomes essential to plan and implement remedial programs with the above-mentioned goals in mind.

In this review, a summary of some published literature about the planning of remedial programs and their effect on disadvantaged, low achieving students is provided.

Foorman, Dombek, and Smith (2016) suggest that successful implementation of early literacy intervention encompasses seven elements. These elements were inferred from research and from the authors' study of effective early literacy interventions in 55 schools across Florida for students in kindergarten through grade 2. The seven elements are the following:

1. the importance of researcher– practitioner partnerships;
2. determining the need for early intervention;
3. assessment selection and data use;

4. evaluating curriculum and instructional materials for use in early intervention;
5. scheduling time for intervention;
6. selecting, training, and supporting interventionists; and
7. locating space and maintaining open communications among interventionists, teachers, and parents (Foorman et al., 2016).

The authors suggested that school administrators must take into account the adequate intensity and duration of intervention to improve students' achievements.

A study reporting on an existing remedial approach held by an English language institute (ELI) at a Saudi University supporting struggling low achieving students provided insight into three significant issues in remedial intervention that will probably increase students' academic achievements. The authors reported that there is a need to (1) thoroughly identify low achievers and monitor their progress, (2) provide simplification and differentiation of material and instruction, and (3) recognize the impact that affective support has on students' motivation and achievement. Additionally, the study highlighted the significance of integrating screening and follow-up procedures for low achievers into the studied remedial program (ELI). The authors hoped that an organized remediation program grounded in examining and reassessing students' needs will develop skills and knowledge that will eventually enhance academic achievements (Alghamdi & Siddiqui, 2016).

Other studies propose that staff training, providing a safe environment, family involvement, an enriching after school curriculum, and evaluating the curriculum and program effectiveness are central elements to successful remediation program (Woodland, 2008; Vandell & Shumow, 1999). These elements were obtained from relevant research

literature that has examined the effectiveness of afterschool programs on youth. Additionally, Zhang and Byrd state that “[...] It is critical for after-school programs to be well-organized and to have quality curricula, implementation, supervision, facilities, and evaluation procedures.” (2005, p.5)

In order to evaluate the effectiveness of an English remedial program, Cheng (2014) examined how remedial teaching affected low-achievers’ learning outcomes in English. Hence, Cheng (2014) employed a qualitative case study approach to uncover the participants’ perceptions on remedial teaching of two students’ learning in English. The study was conducted over a period of 10 months. Students’ improvements highlighted that a personalized remedial program, direct supervision from teachers, and a proper support system led to improved academic outcomes. These results emphasize the significance of identifying students’ individual differences and characteristics in learning (Cheng, 2014).

Another form of evaluating the effectiveness of the program is ensuring that a positive teacher-student relationship is present. A study by Oplatka (2015) explores the emotional relationships between teachers and students in a special support program. In this study, teachers were assigned to provide guidance and consultations to underprivileged students. Semi structured interviews demonstrated that positive emotional teacher-student relationships intensified the climate of trust in the classroom. The findings show that this positive relationship increased students’ achievements and self-development (Oplatka, 2015). To further illustrate, developing a positive student-tutor relationship enables tutors to foster a constructive learning climate. Being understanding, non-judgmental, reliable, and sympathetic, enables students to experience the full benefits of their relationship with their mentors or tutors (Spencer, 2007).

In addition, and in aims of promoting a positive and safe student-teacher relationship, Chien (2015) conducted a study, which focused on pre-service elementary English teachers' planning and implementation of remedial education in Taiwan highlighted their attitudes toward the design and delivery of the remedial education program. One teacher identified the importance of integrating games and activities in elementary school English instruction. Another teacher expressed that having teaching materials ready ahead of class was important so that she can save time and effort during the sessions. Another reflection was on the importance of knowing the learners' proficiency levels before planning and implementing remedial education. This implies that teachers should examine their students' existing knowledge and seek out strategies to help them develop new understandings (Chien, 2015).

An article on planning consideration for afterschool programs notes professional development as a key aspect in ensuring successful implementation of remedial programs. Findings suggest that professional development improves the quality of afterschool programs by enriching staff performance and knowledge. It is emphasized that professional development helps staff attain the knowledge and skills needed to address students learning (Bradshaw, 2015).

Another study by Beck (1999) investigated prevention and intervention strategies and identified planning factors that result in positive outcomes among students. According to the research conducted in the context of a successful program, the Manchester Youth and Development Centre (MYDC), six factors were identified significant to the programmatic success of a remedial program. These factors include autonomous space that provides students with enjoyable environment, support for academics, the

incorporation of cultural patterns, committed adults that are role models for their students, child-centered leadership, and providing a safe environment.

Finally, the effect of implementing evidence based classroom management strategies on tutor-student relationships has been investigated. The findings demonstrate that students in classrooms with low rates of classroom management practices were less engaged in instruction (Gage, Scott, Hirn & MacSuga-Gage, 2018).

Table 1 below synthesizes the essential findings presented by the above-mentioned studies when it comes to planning and implementing remedial programs.

Table 1
Essential findings presented by studies on planning and implementing remedial programs

Planning and Implementation Propositions	Researcher(s)
(1) the importance of researcher– practitioner partnerships; (2) determining the need for early intervention; (3) assessment selection and data use; (4) evaluating curriculum and instructional materials for use in early intervention; (5) scheduling time for intervention; (6) selecting, training, and supporting interventionists; and (7) locating space and maintaining open communications among interventionists, teachers, and parents	Foorman, Dombek, and Smith (2016)
(1) thoroughly identify low achievers and monitor their progress, (2) provide simplification and differentiation of material and instruction, and (3) recognize the impact that affective support has on students’ motivation and achievement.	Alghamdi and Siddiqui (2016)
(1) staff training, (2) providing a safe environment, (3) family involvement, (4) an enriching after school curriculum, and (5) evaluating the curriculum and program effectiveness	Woodland (2008); Vandell and Shumow (1999)
(1) Positive and safe student-teacher relationships	Oplatka (2015) and Spencer (2007)
(1) Integrating games and activities, (2) Having teacher material ready and at hand before sessions, and (3) knowledge of student proficiency levels	Chien (2015)
(1) Professional development for teachers	Bradshaw (2015)
(1) autonomous space that provides students with enjoyable environment, (2) support for academics, (3) the incorporation of	Beck (1999)

cultural patterns, (4) committed adults that are role models for their students, (5) child-centered leadership, and (6) providing a safe environment

(1) Classroom management strategies	Gage, Scott, Hirn and MacSuga-Gage (2018)
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The planning and implementation propositions above indeed corroborate the four factors put-forth by Creemers and Kyriakides, which are the (1) student, (2) teacher, (3) school, and (4) context. Hence, it is of utmost essentiality to ensure that all four factors work together and are synchronized in ensuring optimal learning levels.

Table 2 below places the planning and implementation propositions into their corresponding factor. It is worth noting that some of the propositions below overlap between different factors.

Table 2
Planning and implementation propositions into corresponding factor

Student	Teacher
positive and safe student-teacher relationships child-centered leadership students' motivation and achievement	the importance of researcher– practitioner partnerships determining the need for early intervention assessment selection and data use evaluating curriculum and instructional materials for use in early intervention thoroughly identify low achievers and monitor their progress provide simplification and differentiation of material and instruction recognize the impact that affective support has on students' motivation and achievement Integrating games and activities Having teacher material ready and at hand before sessions knowledge of student proficiency levels positive and safe student-teacher relationships

support for academics
Classroom management strategies

School	Context
assessment selection and data use scheduling time for intervention selecting, training, and supporting interventionists; and locating space and maintaining open communications among interventionists, teachers, and parents staff training/professional development an enriching after school curriculum evaluating the curriculum and program effectiveness committed adults that are role models for their students	family involvement a safe environment autonomous space that provides students with enjoyable environment the incorporation of cultural patterns

Hence, all four components of the teaching and learning journey, in varying degrees, are influential in achieving desirable outcomes and a successful remediation program. Any lack may result in a synchrony-malfunction and may impact the teaching and learning process.

2.3 The Effectiveness of Remediation in English Reading and Mathematics

In order to promote students' achievement, provide necessary educational support to low achieving students, and ensure effective implementation, a remedial program must be planned and organized carefully. It is essential to provide evidence for the effectiveness of remediation by establishing evidence-based programs. Providing evidence from program evaluations is becoming increasingly important to validate the impact of remediation programs on student success and academic achievements (Hausheer, Hansen & Dumas, 2011).

In an efficacious attempt to provide evidences for the effectiveness of remediation programs, a research employing a meta-analysis presents the evaluation of 73 mentoring programs that cater for children and youth. The authors proposed the effectiveness of mentoring programs in fostering a healthy development among children. Additionally, the findings of this study suggested that mentoring programs are effective in improving students' academic outcomes (DuBois et al., 2011).

Furthermore, Šťastný (2016) conducted a study to identify the reasons for seeking out private supplementary tutoring and to assess the factors underlying its demand. The results indicated that extra tutoring may improve students' learning, provide constructive activities for students during out-of-school hours, or help them keep up with their peers. The same notion was earlier reinforced by the works of Saddler and Staulters (2008) who provide evidence suggesting that after-school programs can help improve test scores and grades, especially for low-income students.

The sections below provide an overview of other research studies have tracked the academic achievement of students enrolled in remediation programs, particularly in English reading and mathematics.

2.3.1 English

Remediation mainly intends to make learners aware of their errors and engage them in possible correction that might help them improve their performance. A remediation study by Hayward, Das and Troy (2007) was driven by the challenge of improving the reading expertise of children who have struggled in reading for several. Results showed that students receiving classroom intervention over the school year experienced the greatest gains in communication skills. Moreover, James and Folorunso

(2012) conducted a quasi-experimental study to examine the effects of feedback and remediation on 240 junior secondary school students' achievement in Mathematics. The result of the study indicated that students provided with feedback along with remediation performed better than those provided with feedback without remediation.

Another study, conducted by Lindo, Weiser, Cheatham, and Allor (2018), investigates the effectiveness of highly structured intervention on struggling readers provided by minimally trained tutors. Although the tutors in the program were insignificantly trained, they received supervision and a structured reading curriculum. In this study, students in grades k-6 were randomly divided between a control group and a tutoring group. The findings showed that tutored students demonstrated more significant progress in letter-word identification, decoding, and passage comprehension, compared to control group students (Lindo et al., 2018).

In an effectiveness study, Denton et al. (2010) examined supplemental reading intervention. First-grade at risk students from 31 schools were randomly assigned to receive Responsive Reading Instruction (RRI). This instructional approach provides early assistance to children who are facing difficulties in learning. The authors concluded that intervention was more effective than the instruction these schools typically provided their first-grade at-risk readers.

Moreover, Ritter et al. (2009) suggest that with respect to particular subskills, students who work with volunteer tutors are likely to earn higher scores on assessments related to letters and words, oral fluency, and writing when compared to their non-tutored peers.

Based on the above-mentioned studies, similar, positive results accentuate the importance of remediation programs in ensuring academic success in English reading.

2.3.2 Mathematics

As for mathematics, a study conducted by Fuchs et al. (2009) assessed the effectiveness of two remediation protocols for third-grade students with mathematics difficulty. The results of the study demonstrated the efficacy of tutoring procedures for remediating basic deficits of third-grade students with Mathematics difficulty.

In addition, a study that inspects the effects of the Detect, Practice, and Repair (DPR) on multiplication fluency development in third grade students examined DPR using a multiple-probe design to inspect its effect on seven students in grade three in multiplication fluency. The strategies implemented in DPR provided teachers with individualized instructional objectives for every student in the group. Results of the current study propose that DPR is an effective method in improving multiplication fluency (Poncy, Skinner & Axtell, 2010).

Using a pre-test-post-test experimental design, Lalley and Miller (2006) examined and compared the effectiveness of pre-teaching and re-teaching on Maths achievement of third grade students identified as low achievers. Supplemental instruction was provided to small groups of four students per group over approximately twenty-eight weeks providing 90 minutes of supplemental math intervention per week. The findings portrayed that both pre-teaching and re-teaching were effective in enhancing students' achievement. These findings are correspondent with previous research indicating that supplemental instruction effectively promotes achievement among low achievers.

Another study aims to examine the effectiveness of remedial early numeracy education in kindergarten. The purpose of the study was to investigate whether remediation helps develop early numeracy acquisition of kindergarten students with language deficiencies. Students' language proficiency was measured in the mid of the first and second years of kindergarten. Remedial education was offered to small groups of students and took place twice per week. The findings of the study concluded that remedial early numeracy education is effective for kindergarten students with language deficiencies (Luit & Toll, 2015).

Baker et al. (2006) provide a summary of an after-school Math program that took place in rural Pennsylvania. The authors suggest that the keys to success in the investigated program are preparing the mentors, long term commitment, and sustaining specific program goals. The study reported improved achievements by students and satisfaction from tutors and parents.

2.4 Limitations of Remedial Programs

It is widely perceived that remedial education helps mitigate students' achievement gaps and increase their grades. However, a study examining the effectiveness of an afterschool reading program indicates that students' reading comprehension grades were not improved after intervention. The afterschool program provided reading intervention for 419 students with reading difficulties. Students received 30 minutes of computer-based instruction and 30 minutes of group tutoring 4 to 5 times every week. The findings of this study exhibit that post-test reading comprehension grades were statistically insignificant (Roberts, Capin, Roberts, Miciak, Quinn & Vaughn, 2018). Consequently, this study insinuates that afterschool interventions may be ineffective

because they are provided after study hours when students are exhausted. According to the study, "... it may be reasonable to address domains that offer instruction demanding fewer cognitive resources or to practice recently acquired but still developing skills as compared with the instruction provided in this intervention" (Roberts et al., 2018, p. 140).

Another study, conducted in 12 schools and 26 afterschool centers and encompassing 2308 elementary students, proposes that there were no statistically significant effects on students grades in English, math, or science. The participating programs in the study registered improved outcomes in students' feeling of safety but no improvement in academic achievements (James-Burdumy, Dynarski & Deke, 2007).

Research also proposes that remedial programs can bring about mixed results. A study examining the effect of a remedial program targeting low achieving students indicates that remediation had a positive effect on students' grades in Japanese language, yet there was no significant effect on mathematics grades (Bessho, Noguchi, Kawamura, Tanaka & Ushijima, 2019).

2.5 Sum-up

The purpose of this chapter was to gather, summarize, and integrate the empirical research on the effect of remedial programs on students' academic achievements. A theoretical framework that supports the purpose of the study was presented. The research questions that identify this study were also addressed by revising relevant international literature.

Chapter Three

Methodology

This section presents information about the methodology followed in this study. The proposed study seeks to investigate the academic achievement of students at HOPE orphanage upon implementing a remedial program at the elementary level. Specifically, the purpose of this study is to examine the effect of remedial education in Mathematics and English reading comprehension on the academic achievement of grade 4 students.

This study is designed to respond to the following research questions:

- 1- How is the remedial program planned and implemented at HOPE orphanage?
- 2- How do stakeholders at HOPE orphanage perceive its effectiveness?

The subsequent section presents the methodology adopted in this study and describes the research design, sample selection, methods of data collection, and the method of data analysis.

3.1 Research Design

A mixed-methods research design was used to study the effect of remedial education on students' academic achievement at HOPE orphanage. This research methodology encompasses the use of both quantitative and qualitative methods within different stages of research in the same study (Tashakkori & Teddlie, 1998). "Those who engage in such research argue that the use of both methods provides more complete understanding of research problems than does the use of either approach alone" (Fraenkel, Wallen & Hyun, 2012, p. 557). Therefore, in order to examine this topic in greater detail and from multiple perspectives, a mixed method design is adopted.

This study employed a sequential explanatory design, as described by Creswell (2012), entailing two phases, quantitative followed by qualitative. Nonetheless, the qualitative phase is dominating; that is, more weight is placed on the qualitative analysis (Creswell & Plano-Clark, 2007). A sequential explanatory design is used so that data gathered from the observations and in-depth interviews would help explain the quantitative results from analysis of students' grades (Creswell, 2012). The rationale behind this approach is that quantitative data results offer a broad explanation of the research problem, and qualitative data collection entails more analysis and is provided to refine and clarify this broad explanation (Creswell, 2012; Fraenkel et al., 2012).

For this study, quantitative data was gathered and analyzed first, and the results are used to plan the qualitative phase. According to Creswell (2012), the qualitative data was used to supplement, clarify, or elaborate upon results gained from quantitative data. Accordingly, the quantitative data was collected by comparing students' grades in English reading and Math before and after remediation for the academic year 2017. The school administration claims that students' grades are not improving even with remediation. They compared the class final grades with the preliminary class average without examining every student as a separate case. However, conducting a t-test to compare grades of students individually over one year may help identify students who showed progress and those who did not make any progress at all. This analysis of individual student's grades provides insight into the factors that should be further examined during in-depth interviews. The interviews results will provide a better understanding of what should be emphasized during observations.

Figure 2 below outlines the data collection processes and sums-up the goal of this mixed-methods analysis.

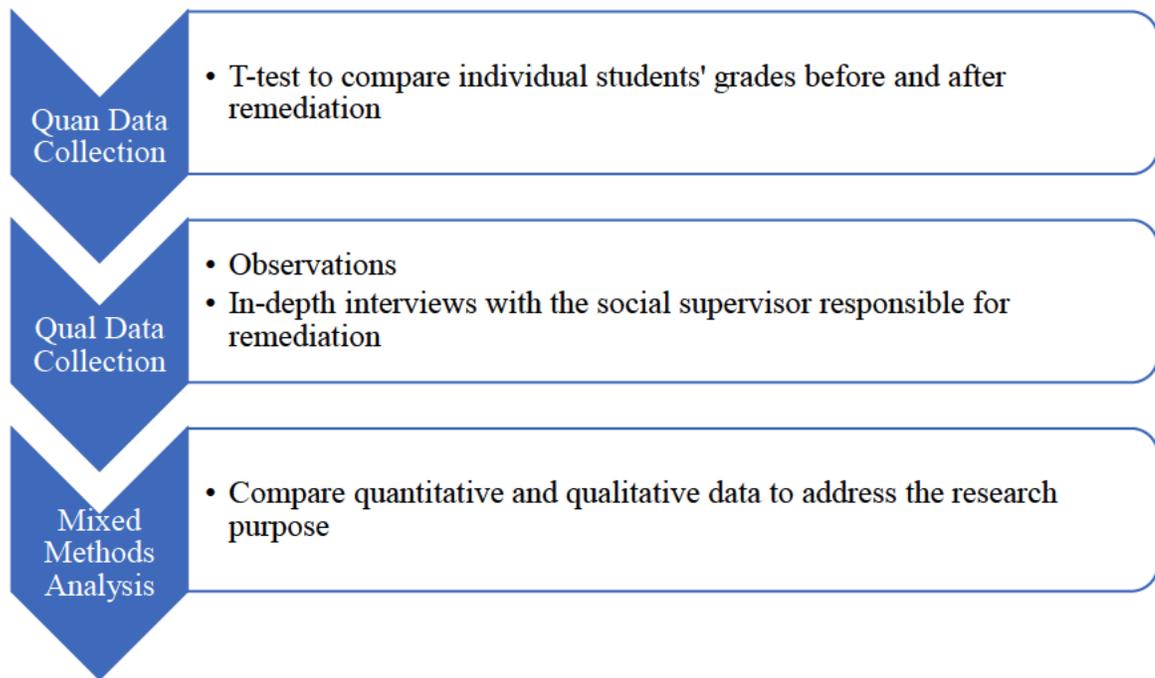


Figure 2
Explanatory sequential mixed methods design (Creswell & Plano-Clark, 2011)

3.2 Sampling

According to Fraenkel et al. (2012), the sampling design in each study depends on what is being measured. The sample for this study includes two sections of grade four students enrolled in the remediation program at HOPE orphanage elementary school. The school chosen was selected based on convenience of access.

Fraenkel et al. (2012) state that a purposive sample is chosen when a researcher uses personal judgment to select a sample based on previous knowledge of the school's population. The purpose of the study might be another reason for choosing to select a purposive sample. Therefore, purposeful sampling is used to identify two sections of grade four students, representing all the students going through remediation (Creswell, 2012). Observations took place in both sections.

Furthermore, purposive sampling was used to choose the adult interviewee participant, who is the social supervisor who is exclusively responsible for planning and

implementing remediation. “Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (Merriam, 2009, p.77). This involves selecting a participant who is well-informed about the topic under examination.

3.3 Data Collection

To answer the proposed research questions, quantitative and qualitative data were gathered from various sources. The grades of students from the two sections of grade 4 are compared before starting the remediation program and after completing the school year (2017-2018) with remediation. Then, in-depth interviews were conducted to gather information related to the different aspects of the remedial program from the main resources (tutor and/or supervisors). Finally, observations were carried out to gather data related to the teaching and learning process during remediation sessions.

3.3.1 Instruments

3.3.1.1 In-depth interviews

A face-to-face in-depth interview was conducted with the social supervisor to elicit views and information on planning, organizing, and implementing the remedial sessions, such as what actually happens during remedial sessions and recommendations for better implementation of the program.

Interviews are widely used for collecting qualitative data (Merriam, 2009); they are verbal questionnaires consisting of questions that are planned in a way to elicit answers from participants, they probe for further information, and they facilitate questioning the unobservable behaviors and actions that took place in the past (Fraenkel et al., 2012). Interviews also help interviewees express their thoughts using their own terms. Basically,

the researcher must take into consideration the importance of compiling simple questions that are directly related to the study's research questions and be prepared to add questions, change the sequencing of posed questions, and ask for clarifications when needed.

The interview questions posed in this research study mainly revolve around (1) the factors considered when planning remediation, (2) any modifications that have been conducted since the commencement of the program, (3) and the strengths and the weaknesses of this program. Another set of questions targeted (1) the methods used for re-teaching, (2) teaching methods that help meet students' needs, and (3) changes noticed in students' knowledge or skills. Finally, the participant was asked to delineate the challenges facing educators in the execution of remediation.

3.3.1.2 Observations

Fraenkel et al. (2012) note that interviews are often used to acquire information that can later on be compared to observational data. Thus, observing the tutor after interviewing her allowed comparing her claims to what is practically happening on the ground. After conducting in-depth interviews, observations were conducted over a period of three weeks to closely observe the process of remediation and its implementation.

Some research questions are best answered by observing how people naturally act or how things appear (Fraenkel et al., 2012). A researcher can interview a certain person and ask him about his work, yet a more precise way to develop an awareness about this work is by observing its occurrence. Observations provide an understanding of the complex details and different specifications of the remedial program. Besides, students' and teachers' attitudes and behaviors are thoroughly examined as well.

The degree of the observer's participation in the events taking place can vary considerably depending on research aims. In this study, I chose to be a non-participant observer attending remediation courses without taking part in the teaching and learning in order to keep the class activities running naturally. Being a non-participant observer allowed me to observe students and tutors without causing distraction (Fraenkel et al., 2012).

The focus was on observing factors related to the teaching and learning process. For example, the tutor's preparedness, the teaching methods employed, the content provided, whether teaching is conducted at the student's pace, and whether the tutors offer practice exercises to reinforce learning and assessment of what students have learned. An observation checklist (refer to Appendix B) was used to record the behaviors of the students during remediation, and the observations were recorded in the form of written field notes that were tape recorded after observations.

3.4 Procedures

A preliminary permission to conduct this study was granted by the administration of the school. A request to get access to students' grades was approved by the school's elementary department administrator.

Informal conversations occurred to gather raw data about the specifications of the remedial program. These informal discussions were used in the primary stages of gathering information to develop an understanding of the process of remediation. Informal conversations help expose new issues of interest that may support this study. Conversations with informants were recorded as brief notes that were transformed into

field notes directly after the end of any conversation held. After receiving a notification of approval from the IRB, appointments for the interviews and observations were immediately scheduled.

To answer the proposed research questions, quantitative and qualitative data were gathered from various sources. For the quantitative phase of this study, the grades of the students enrolled in the remedial program prior to remediation at the beginning of the academic year 2017-2018 were obtained. Then, grades of the same students at the end of the academic year were obtained and compared to pre-remediation grades using a t-test (Fraenkel et al., 2012). This was followed by in-depth interviews to examine the perceptions of tutors towards the remedial program. These interviews were tape recorded in order to be transcribed later on. Based on interview interpretations, observations were conducted over a period of three weeks to closely examine remediation sessions. These observations were recorded in the form of field notes using a checklist (refer to Appendix B).

3.5 Data Analysis

Fraenkel et al. (2012) claim that the process of examining and comparing the mean scores of the same group before and after a certain type of treatment is done through a test (t-test) that observes any significant gain. In the current study, I investigated the effect of remediation programs on students' academic achievement in English reading and Mathematics by comparing each student's previous and final grades (that is, pre-remedial sessions and post-remedial sessions). A t-test was conducted for the grades over year 2017-2018 to obtain a t-statistic. The grades of students from the two sections of grade 4,

pre-remediation and post-remediation, were compared. An excel statistical analysis software was used to display the grades and to conveniently analyze changes.

3.6 Validity, Reliability, and Triangulation

The items of the instruments used in this study are derived from the research questions and the literature review, respectively. This ensured the validity and reliability of their interpretations. Moreover, Fraenkel et al. (2012) state that triangulation encompasses using different instruments to study the same research question. If the results of different instruments are consistent, then findings of each instrument are validated. In other words, triangulation involves the use of more than two instruments to check that questions from various instruments are parallel and provide similar information about the subject of study from different perspectives.

Merriam (2009) defines validity as the degree to which the researcher's inferences are appropriate, meaningful, correct, and useful. She infers that validity is essential when preparing an instrument to test if the information obtained through the use of this instrument serve the research purposes.

Moreover, reliability refers to the consistency of answers from one instrument to the other and from a set of items to another (Fraenkel et al., 2012). For example, to check for reliability, the researcher can ask an interviewee the same question in two different ways; if the information is consistent, then reliability is ensured.

In-depth interviews were piloted prior to conducting them with tutors to ensure validity, highlight ambiguities, and confirm that the posed questions elicit adequate responses. "Pilot interviews are crucial for trying out your questions" (Merriam, 2009, p.117). Essentially, piloting requires ensuring whether interviews will serve their purpose

by exposing them and conducting them on a number of people. The purpose of this procedure is to guarantee that everyone in the sample understands the questions in the same way. Fraenkel et al. (2012) explain that piloting is, not only a practice for discovering errors, but also helps in pointing out problems with wordings and measurements.

3.7 Ethics

Participants in this study were provided with an explanation of the purposes of the research and the details of the actions they are involved in during the study. Informed consent from the schools' administration was obtained. Participants' confidentiality is maintained and students' names remained anonymous. Required consents were attained prior to the data collection process through the International Review Board (refer to Appendix D).

3.8 Sum-up

In conclusion, this chapter presented the methodology used. Quantitative and qualitative data were gathered from various sources. The grades of students from the two sections of grade 4 were compared pre- and post-remediation. Then, in-depth interviews with tutors were conducted to gather information related to the different aspects of the remedial program. Finally, observations were carried out to gather data related to the teaching and learning process.

Chapter Four

Findings

4.1 Overview

The study's aim is to investigate the effectiveness of Elementary remedial programs at HOPE orphanage. Through comparing students' achievement pre- and post-remediation and through examining stakeholders' perceptions of the programs' effectiveness, the study yielded results that are discussed in this chapter. The chapter presents results in accordance with the two research questions posed.

4.1.1 Qualitative Data from research question one

How is the remedial program at HOPE orphanage planned and implemented?

4.1.1.1 Interviews

4.1.1.1.1 Background information about remedial program

In-depth interviews with the coordinator and the tutors of remediation provided background information about the remedial program implemented in HOPE. Through these interviews, it was noted that the program commenced in 2003 after the school board decided to academically support HOPE's students. Students were mainly challenged by their poor socio-economic backgrounds. This major challenge may have yielded poor academic performance, lack of motivation and interest in school, learning difficulties, and absence of parental guidance, among others. Consequently, the remediation program was launched in order to provide students with extra guidance on academic work and in order to enhance academic performances. The program has undergone a number of structural

changes since 2003. However, since the school board failed to provide a written policy on the provision of this remedial program, it was hard to track the changes over the years.

4.1.1.1.2 Structure of remedial program

Moreover, data results from interviews have revealed the structure of the remedial program. The program provides two after-school hours intended to support students. Within those two hours, students have lunch, receive social support, undergo medical examinations, and follow through academic support (remediation). Hence, a duration of 45 minutes is allocated to academic support. With the help of classroom teachers and social workers, tutors evaluate students' academic level and the difficulties they might be facing in their studies. Evaluations are based on students' grades and their social behavior in the classroom. Students are then divided into categories before commencing remediation. Thus, students are categorized into four groups as follows: (1) failing students, (2) students with an average of 10 out of 20, (3) students with an average less than 12, and (4) students with an average of 16 and above. One tutor indicated that students' progress is measured by grades. She stated that "a personalized plan is set and reported to the students' guardians to inform them about their child's academic and behavior performance."

Before tutoring sessions, tutors dedicate a considerable amount of time observing students in regular classrooms. They observe students' engagement in the learning process, their behaviors in class, and the different causes behind their frustration. Based on the detailed notes gathered by tutors throughout these observations, personalized plans for individual students are compiled before starting remediation. The teaching methods employed in remedial sessions are thus aligned with those in the regular classroom. Additionally, the tutors collaborate with the classroom teacher to set a personalized plan

for each student. For example, one tutor mentioned that “multiplication and subtraction are taught using the same method in both remedial sessions and regular classroom.”

4.1.1.1.3 Efficiency of the remedial program

Data results also show that there are several factors influencing the effectiveness of this remedial program.

Unfortunately, tutors believe that the efficiency of personalized plans is jeopardized by the lack of time and resources. For instance, one tutor who is responsible for providing remediation for both sections A and B of grade 4 stated “I feel overwhelmed by the huge number of additional non-academic tasks I am responsible for, such as medical examinations and hygiene inspections.”

Tutors also stated that the limited time given to plan, organize, and implement the tasks that are demanded of them is another challenge. They feel compelled to be a social worker, a counsellor, and a tutor in order to help and support students. Even though they lack the professional qualifications and training for performing these roles, they are willing to try because they care for these students’ welfare.

Moreover, the absence of a research-based assessment strategies is a major drawback of this program. The tutors are incapable of tracking and analyzing students’ progress regularly; thus, they would have to refer to classroom teachers in order to obtain information about students’ assessments and evaluations.

Furthermore, the lack of a specialized diagnostic assessment hinders the tutors’ ability to assess students’ individual strengths, weaknesses, and skills prior to remediation. Tutors try hard to assess students and compile personalized support plans for individual students; however, the absence of specialized and research-based diagnostic assessments prior to instruction limits tutors’ ability to assess student needs. An example of this is the

absence of assessing students' phonemic awareness, vocabulary development, and reading fluency prior to English reading comprehension remediation. One interviewee stated "I am aware of the importance of these diagnostic assessments, yet these tools are not available".

Another challenge facing tutors in the remediation process is the language barrier. Some tutors are French educated, so they struggle to provide instruction for English educated students. Tutors' substandard language skills present a struggle especially in teaching English reading comprehension.

Finally, tutors accentuate that extreme underprivileged backgrounds of the students and their acute behavioral problems are influencing the effectiveness of the program. One tutor thinks that the absence of parental guidance and support at home is negatively affecting students' performance in school and that some students are facing health-related problems that impede effective academic conduct. One interviewee claimed: "A number of our students suffer from disabilities, such sensory impairments, chronic diseases, and psychological problems. These disabilities are definitely affecting their academic achievements." The seriousness of these conditions and the fact that medical examinations are scheduled during remedial sessions obstruct the efficacy of the remedial program and consume time that is meant to be dedicated to actual teaching and learning.

4.1.1.1.4 Tutor-student relationship in remedial programs

The tutor-student relationship in the implemented remedial program have yielded positive results.

One tutor described the nature of her relationship with most of her students by using terms, such as constructive, strong, meaningful, and friendly. The subsequent quotes express the tutors' perceptions about their connections with their students.

The nature of the relationship differs from a student to another, but all are positive relationships that matured to be significant for certain students. Our students are extremely disadvantaged and are facing multiple failures on a regular basis. When they interact with me and feel my guardianship, they tend to see me as a "safe place"; this situation creates trust and appreciation towards me. My relationship with them also depends on its informal element, knowing that they can resort to me whenever they have any problem regardless of its nature. (S., remediation tutor, April 10, 2019)

Another tutor provided an example of a girl that lost her father during the academic year and resorted to her tutor for emotional support.

Girls tend to share with me their problems, concerns, anxieties, and even the challenges they are facing in everyday life. In some severe cases, a couple of girls expressed their hopes to stay at school and never return to their homes. For me, the personal connection with these girls is the main cause for my motivation and devotion in my work. These girls deserve to receive support and love so that they can face their underprivileged realities.

During these interviews, tutors reflected selfless devotion towards their students, as shown below:

I am aware that the limited time of actual academic support we deliver is hindering the success of the remediation process, but I am willing to devote all the needed time if the girls are to improve. I can literally stay here and never leave for the sake of these girls' progress. I know that they are counting on me and that they have no other alternative at home.

To conclude, interview results have shown that remediation is not adequately planned and implemented. Due to the following challenges:

1. the fragmentation of remedial sessions into lunch time, hygiene inspections, medical examinations, and other unanticipated non-academic tasks is a major problem
2. The absence of research-based assessment strategies
3. Tutors' substandard language skills also present an obstacle to effective tutor-student communication
4. Students' underprivileged background and their behavior problems

Nonetheless, as discussed by tutors, it is important to note that tutor-student relationship is positive, as tutors openly seek to establish connections with their tutees.

4.1.1.2 Observations

Observations were conducted in six remediation sessions over a period of three weeks in the two sections A and B of grade 4. During these observation sessions, a checklist was used to document information related to the research questions.

One tutor demonstrated proficient knowledge of the concepts she was discussing. She managed to inform the students about the instructional outcomes of the session. Throughout this session, the tutor's main objective was to help students complete their homework. She seated the students randomly and asked them to start working on the next day's assignments. It was obvious that the tutor is familiar and well-acquainted with the students. To illustrate, the tutors have accompanied these students for three consecutive years; they worked on building trust by respecting and caring for their students. Tutors appeared to be thoughtful, accepting, and supportive, which was reflected in creating a caring environment among students. For instance, one tutor manifested detailed

knowledge of her students' strengths and weaknesses by providing the needed support accordingly.

Students took turns in asking questions related to their homework. The tutor then started to answer their questions, yet she was not able to cater for the whole class. She asked the students to work in groups and assigned peer tutors to help the ones that are having problems in their homework. The tutor also encouraged students to ask about any concept or new information they learned in their regular classroom. Afterwards, the tutor began answering their questions on an individual basis. Students had many questions, and the session's duration was limited to 45 minutes. The lack of time negatively affected her ability to maintain a coherent sequence for the learning outcomes and activities.

The tutor also asked students to solve extra sheets related to the objectives covered in the regular classroom. Students used prior-knowledge acquired in the regular classroom to solve the extra sheets. The tutor monitored the students as they solved the extra exercises. However, she realized that a good number of students had some difficulties with some questions. Thus, she did a quick revision to remind them of what was discussed in the classroom. The students applied the teacher's instructions and reviewed their work again. However, most of the students failed to complete their sheets correctly.

During observations, I noticed that the tutor struggled with managing her students. There was excessive side-talking, and some students were too loud. This caused chaos. While interviewing the tutor later on, she mentioned that managing difficult students is one of the most frustrating challenges she faces on a daily basis.

The tutors managed to create an environment of respect and rapport, yet the large number of students and the unorganized physical space did not help them. The students were seated on large round tables and not in individual desks. This resulted in a clutter

and insufficient space for all students' belongings. In addition, some students were difficult to control no matter how hard tutors tried to manage their behavior.

Based on the results from observations, it has been established that the studied remedial program is ineffectively planned and implemented. Again, it was observed that the time-constraints negatively affect the tutors' ability to maintain a coherent sequence of the learning activities. Additionally, students' behavioral misconduct and the tutors' inability to manage these infractions pose further challenges.

This section provided qualitative data findings from interviews and observations. The above-mentioned results addressed the first research question. The section below provides quantitative data in the form of statistical analysis of students' grades to address research question two.

4.1.2 Quantitative data from Research Question 2

How is the remedial program evaluated?

Using the Microsoft Excel statistical analysis software, this study inspected each student's grades in English reading and math before and after remediation for the academic year of 2017-2018. A t-test was conducted for the grades to obtain a t-statistic. The grades of students from each of the two sections of grade 4 are compared before starting the remediation program to their grades after completing the academic year with remediation. Additionally, students' grades in English reading and math were compared between terms 1, 2, 3, and 4. The purpose was to track progress in these two main school subjects.

4.1.2.1 English

The figure below shows fluctuations in reading comprehension grades for section A across the four terms.

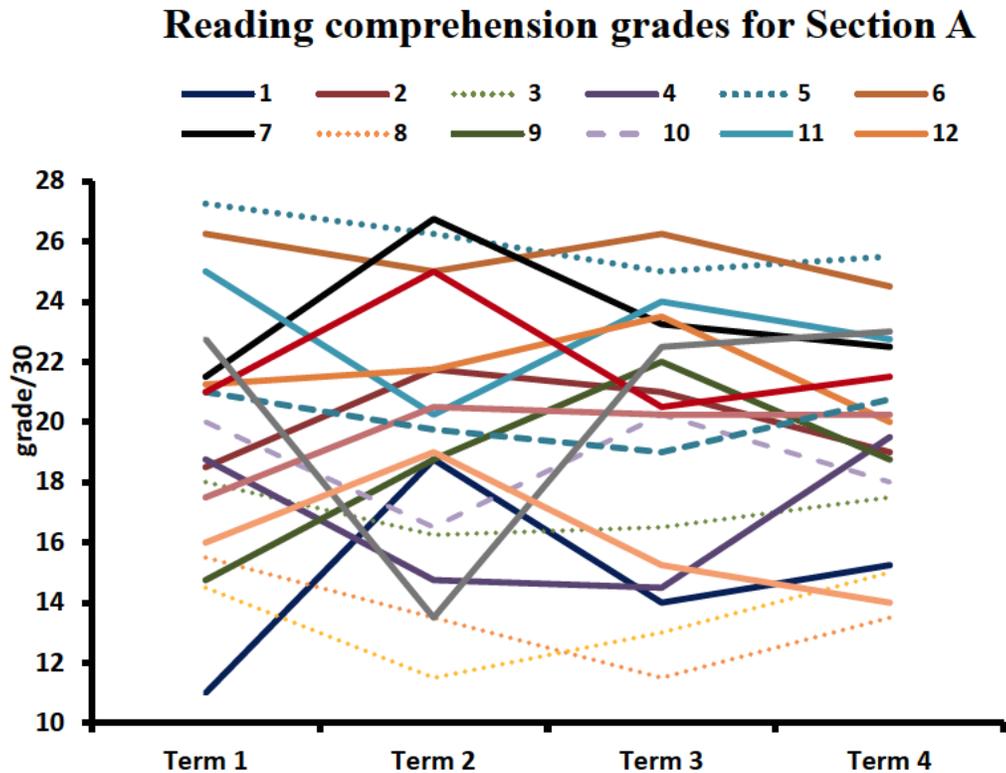


Figure 3
Reading comprehension grades for each participant of section A across terms

This line graph above illustrates students' English reading grades between term 1 and term 4 for the eighteen students of section A. Upon examining the data in Figure 3, it was noted that out of 18 students of section A, the grades of 8 students (44.4%) increased significantly between term 1 and term 2. However, these students' grades decreased significantly between term 2 and term 3. On the other hand, the grades of 6 students (33.3%) decreased significantly between term 1 and term 2. Three of these students, 6, 11, and 17, improved between terms 2 and 3.

The data analysis also shows that, in section A, students who failed in English reading are as follows:

- Term 1: student 1, 9, and 13 failed and scored below 15 out of 30 in term 1
- Term 2: student 4, 8, 13, and 17
- Term 3: student 1, 4, 8, and 13
- Term 4: student 8 and 18

The fluctuations in students' grades in English reading between the 4 terms are clearly displayed in figure 3. This variation demands further research in order to indicate reasons behind these deviations in students' grades.

Individual fluctuations presented in the line graph might be due to different reasons, some of which might be learning difficulties and the gaps in learning as indicated in the qualitative results. Moreover, the tutors of grade 4 assume that students' grades are usually better in the first 2 terms due to the simplicity of learning objectives in the beginning of the year. After term 2, the grades tend to fall because the learning objectives become more complex and sophisticated.

As for section B, the figure below shows fluctuations in reading comprehension grades across the four terms.

Reading comprehension grades for Section B

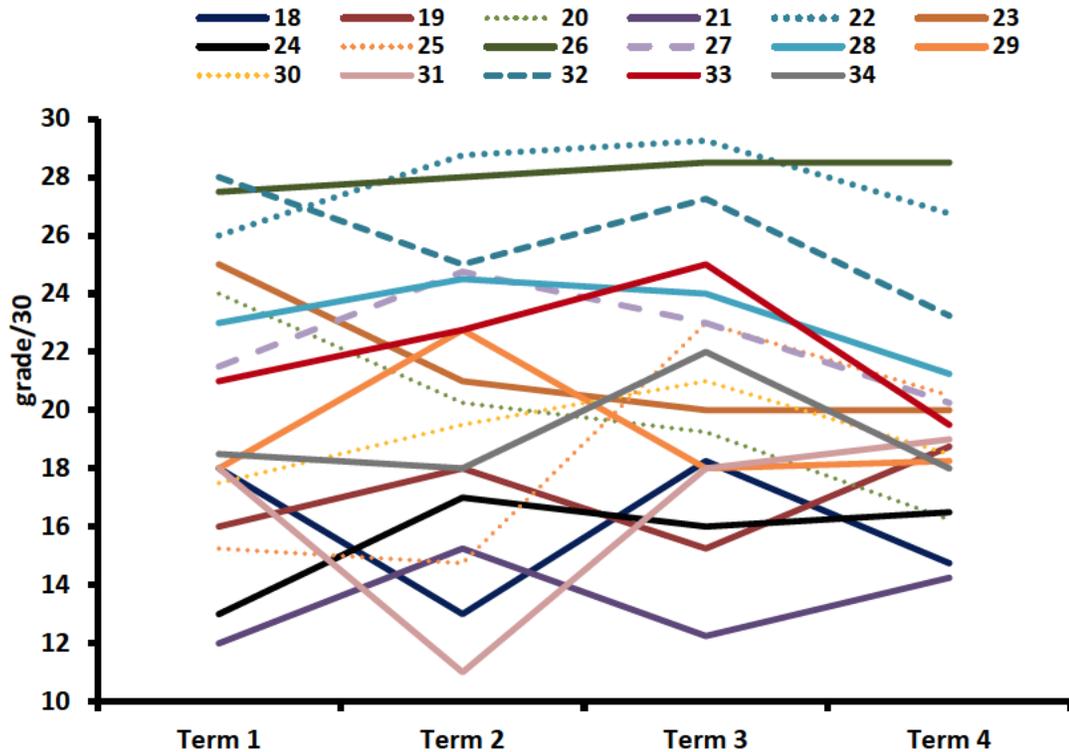


Figure 4
Reading comprehension grades for each participant of section B across terms

Figure 4 shows that, out of 17 students of section B, the grades of 10 (58.8%) students increased significantly between term 1 and term 2. On the other hand, the grades of 5 students (29.4%) decreased significantly between term 1 and term 2. Yet, the grades of the student 25 and 34 fall outside the norm, where both maintained constant result between terms 1 and 2.

It is worth mentioning that in section B, student failing rates were as follows:

- Term 1: Student 22 and 25
- Term 2: Student 19, 26, and 32
- Term 3: Student 22
- Term 4: Student 19 and 22

In order to compare English comprehension between terms and sections, mean, standard deviation, minimum and maximum value of the reading comprehension grade for students in section A and section B for terms 1, 2, 3 and 4 are illustrated in the following table.

Table 3
Reading comprehension grades for each section across terms

		N	Minimum	Maximum	Mean	Std. Deviation
Section A	Reading Comprehension Term 1	18	11	27	19.47	4.299
	Reading Comprehension Term 2	18	12	27	19.42	4.536
	Reading Comprehension Term 3	18	12	26	19.57	4.436
	Reading Comprehension Term 4	18	14	26	19.51	3.521
	Reading Comprehension Total	18	14	26	19.49	3.755
	Section B	Reading Comprehension Term 1	17	12	28	20.13
Reading Comprehension Term 2		17	11	29	20.25	5.129
Reading Comprehension Term 3		17	12	29	21.18	4.751
Reading Comprehension Term 4		17	14	28	19.66	3.770
Reading Comprehension Total		17	13	28	20.31	4.218

In table 3, the mean and standard deviation for students' grades in English reading comprehension were calculated for both sections A and B in terms 1, 2, 3, and 4. This helped in calculating the p value presented in table 4 below. A probability value helps determine the significance of research results in relation to the null hypothesis; which states that there is no relation between two variables in a study. A p-value that is ≤ 0.05 is statistically significant indicating evidence against the null hypothesis.

Table 4
Mean reading comprehension grades for each section across terms

	Term 1	Term 2	Term 3	Term 4	Total	-p-value
Section A (N=18)	19.47 ± 4.30	19.42 ± 4.54	19.57 ± 4.44	19.51 ± 3.52	19.49 ± 3.76	0.998
Section B (N=17)	20.13 ± 4.88	20.25 ± 5.13	21.18 ± 4.75	19.66 ± 3.77	20.31 ± 4.22	0.094
Total (N=35)	19.79 ± 4.54	19.82 ± 4.78	20.35 ± 4.60	19.59 ± 3.59	19.89 ± 3.95	0.292
-p-value	<i>0.673</i>	<i>0.614</i>	<i>0.308</i>	<i>0.905</i>	<i>0.550</i>	

Table 4 revealed that the mean English reading comprehension grade did not change significantly between term 1, term 2, term 3, and term 4 for students in section A (-p-value=0.998) and section B (-p-value=0.094). Moreover, the mean English reading comprehension grade did not change significantly between term 1, term 2, term 3, and term 4 in the overall sample (-p-value=0.292).

The mean reading comprehension grade was not significantly different between section A and section B at term 1 (-p-value=0.673), term 2 (-p-value=0.614), term 3 (-p-value=0.308) and term 4 (-p-value=0.905). Moreover, the mean total reading comprehension grade was not significantly different between section A and section B (-p-value=0.550).

Statistical analysis showed that students grades in English reading comprehension in both sections, A and B, did not improve from term 1 to term 4. This statistical analysis supports the tutors' evaluation of the remedial program and the program's effect on students' grades. The tutors stated that the current remediation plan is not leading to any improvement in students' academic achievements and attributed any recorded progress to individual effort and parental support.

4.1.2.2 Mathematics

For mathematics, the table below presents statistical analysis of students' grades between terms 1 and 4 for section A.

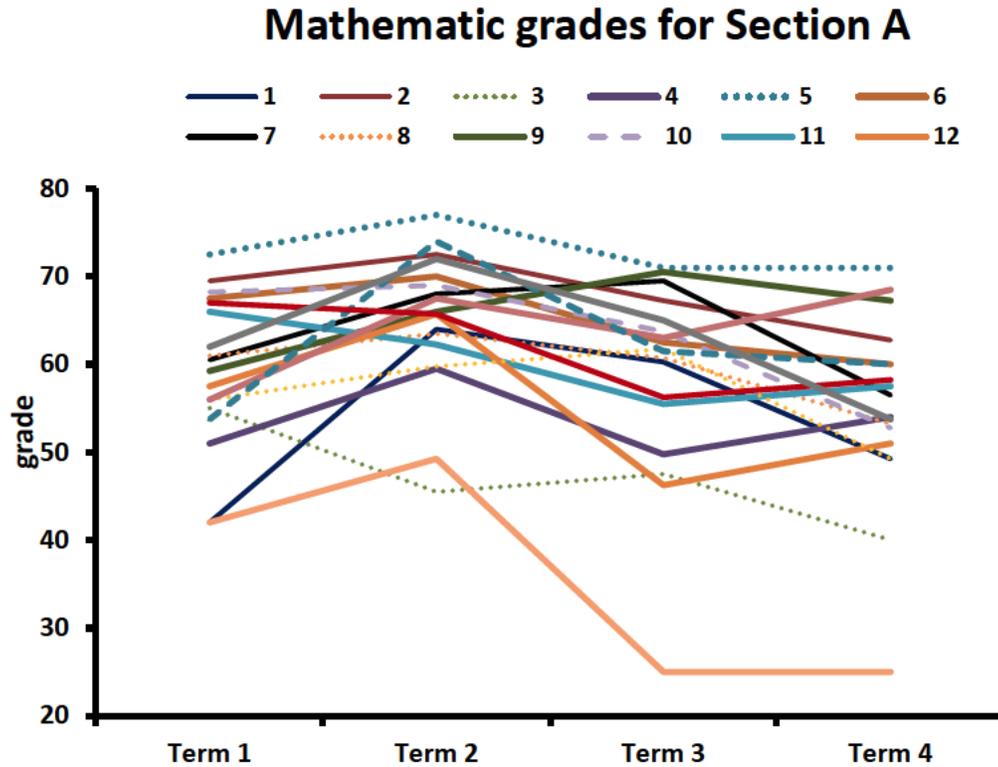


Figure 5
Mathematics grades for each participant of section A across terms

The line graph in figure 5 illustrates students' grades in mathematics between term 1 and term 4 for the eighteen students of section A. Upon examining the data in figure 5, out of the 18 students of section A, the grades of 15 students (83.3%) increased significantly between term 1 and term 2. However, these students' grades decreased significantly between term 2 and term 3. On the other hand, the grades of 3 students (16.6%) decreased between term 1 and term 2. Two of these students' grades, students 11 and 16, decreased between terms 2 and 3. The grade of student number 3 decreased between term 1 and term 2, did not vary between term 2 and term 3, and decreased again

between term 3 and term 4. The data also demonstrates that in section A, student number 18 failed in mathematics and scored below 40 in term 3 and term 4.

As mentioned before, individual fluctuations presented in the line graph might be due to learning difficulties and the gaps in learning as indicated in interviews and observations data results. Again, the tutors of grade 4 propose that students' grades are usually better in the first 2 terms due to the simplicity of learning objectives in the beginning of the year. After term 2, the grades tend to fall because the learning objectives become more complex and sophisticated.

The table below presents statistical analysis of students' grades between terms 1 and 4 for section B.

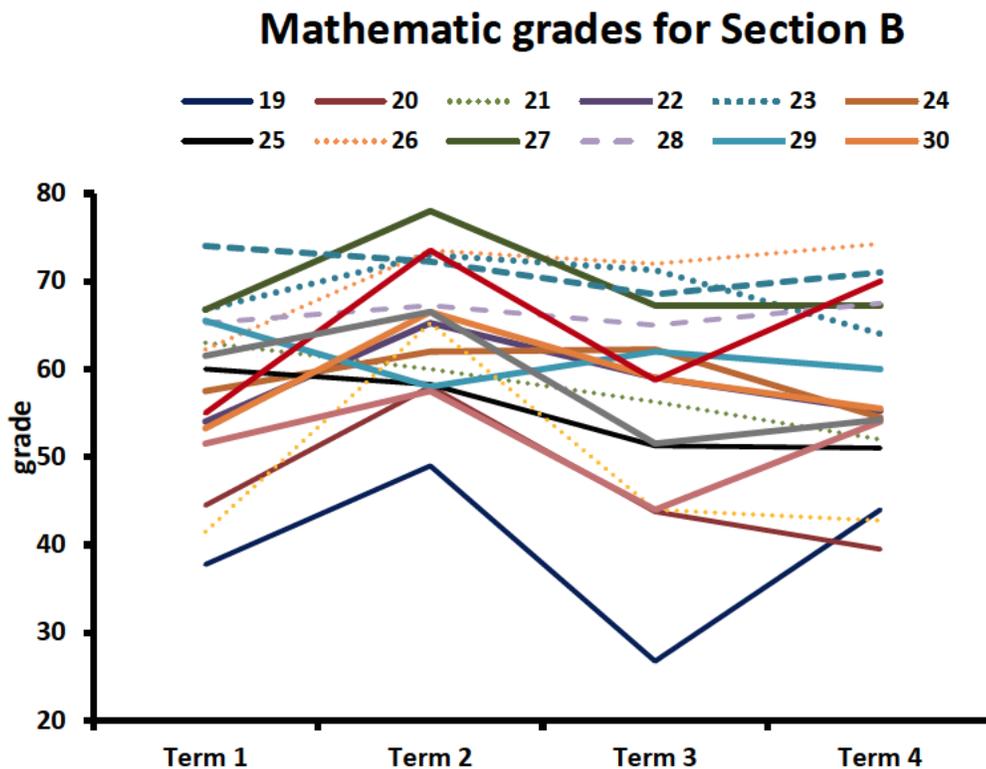


Figure 6
Mathematics grades for each participant of section B across terms

Figure 6 shows that out of 17 students of section B, the grade of 13 students (76.4%) increased between term 1 and term 2. Grades of students' numbered 19, 20, 22, 27, 30, 31, 32, 34, and 35 decreased significantly between term 2 and term 3. Yet, students number 23, 24, 26, and 28 maintained the same grade between term 2 and term 3.

On the other hand, the grades of 4 students (23.5%), namely students 21, 25, 29, and 33, did not change significantly between the terms.

It is worth mentioning that in section B two students failed in mathematics and scored below 40 out of 80. Students number 19 failed in terms 1 and 3, and student number 20 failed in term 4.

Table 5 below shows the differences between mathematic grades for each section and across terms.

Table 5
Mathematics grades for each section across terms

		N	Minimum	Maximum	Mean	Std. Deviation
Section A	Mathematics Term 1	18	42	72	59.26	8.688
	Mathematics Term 2	18	46	77	65.07	7.991
	Mathematics Term 3	18	25	71	58.72	11.153
	Mathematics Term 4	18	25	71	55.00	10.670
	Mathematics Total	18	35	73	59.51	8.520
Section B	Mathematics Term 1	17	38	74	57.65	9.778
	Mathematics Term 2	17	49	78	64.93	7.622
	Mathematics Term 3	17	27	72	56.62	11.945
	Mathematics Term 4	17	40	74	57.46	10.307
	Mathematics Total	17	39	71	59.16	9.049

Mean, standard deviation, minimum and maximum value of the mathematic grade for students in section A and section B for terms 1, 2, 3 and 4 were illustrated in the table above. Table 6 below displays calculated mean and standard deviation per term in order to help calculate the -p-value.

Table 6
Mean mathematics grade for each section across terms

	Term 1	Term 2	Term 3	Term 4	Total	-p-value
Section A (N=18)	59.26 ± 8.69 ^b	65.07 ± 7.99 ^c	58.72 ± 11.15 ^b	55.00 ± 10.67 ^a	59.51 ± 8.52	<0.001
Section B (N=17)	57.65 ± 9.78 ^a	64.93 ± 7.62 ^b	56.62 ± 11.95 ^a	57.46 ± 10.31 ^a	59.16 ± 9.05	<0.001
Total (N=35)	58.48 ± 9.13^a	65.00 ± 7.70^b	57.70 ± 11.42^a	56.19 ± 10.42^a	59.34 ± 0.91	<0.001
-p-value	<i>0.608</i>	<i>0.957</i>	<i>0.593</i>	<i>0.494</i>	0.906	

Table 6 exhibits that the mean mathematics grade changed significantly within terms for students in section A (-p-value<0.001). The mean grade was significantly lower in term 4, intermediate in terms 1 and 3, and higher in term 2; the difference was not significant between terms 1 and 3 (-p-value=0.774).

For students in section B, the mean mathematic grade changed significantly within terms (-p-value<0.001). The mean grade was significantly higher on term 2, and the difference was not significant between terms 1, 3 and 4 (-p-value=0.826).

In the overall sample, the mean mathematics grade changed significantly within terms (-p-value<0.001). The mean grade was significantly higher on term 2, and the difference was not significant between terms 1, 3 and 4 (-p-value=0.218).

This comparison shows that the grades of students in mathematics fluctuated between terms 1, 2, 3, and 4.

As for comparison between sections, the mean of mathematics grade was not significantly different between section A and section B in term 1 (-p-value=0.608), term 2 (-p-value=0.957), term 3 (-p-value=0.593), and term 4 (-p-value=0.494). Moreover, the

mean total mathematics grade was not significantly different between section A and section B (-p-value=0.906).

Statistical analysis showed that students' grades in English reading comprehension and mathematics in both sections A and B did not improve from term 1 to term 4. Upon inspection of the graphs, it was revealed that there is a fluctuation in the grades of all students between terms 1 and 4. Fluctuations in grades could be due to a number of factors, socioeconomic factors related to the students and their families is considered one important reason for grades instability. Students facing academic difficulties due to the introduction of new material after term 1 is another factor. The quality of remediation provided to support students' academic achievements in these subjects might as well be another factor that is affecting grades and performance.

This analysis supports the results from the other two instruments, observations and interviews, regarding the effectiveness of this remedial program. When asked about tutors and coordinators' perceptions regarding the program, it was stated that the program needs more planning and organization. The tutors explained that students are not improving and the program is not serving its purpose. They have also stated that students' unprivileged backgrounds, lack of parental support, and other family related factors are obstructing the program's effectiveness. The tutors emphasized that the lack of periodical assessments of the program's effectiveness impedes the ability to examine its strengths and weaknesses. Observations also supported these findings. When observing students' demonstration of knowledge by the end of the remedial session, the evaluation was unsatisfactory.

In depth analysis of individual students' grades in English reading comprehension and mathematics before and after remediation provides the basis for answering the above-mentioned research questions.

4.1.3 Answering research questions

Regarding research question 1, it is clear that teachers and tutors are struggling due to the planning and implementation of the remedial program in this school. After thorough interviews and observations, it is evident that many factors including the allocated time for remediation, available resources, and classroom conditions are hindering the purpose of this program. The perceptions of tutors and coordinators regarding the evaluation of this program aligns with these results. Tutors are overwhelmed with chores regarding students' physical, behavioral, and social needs and end up barely providing the teaching support this program intends to deliver.

To answer research question 2, statistical analysis revealed that students' grades are fluctuating between term 1 and term 4. In addition, the t-test indicates that there is no significant difference in students' grades between terms 1 and 4. This result applies to both sections A and B in English reading and mathematics. As mentioned before, personal reasons that are related to students and their families can affect students' grades. Besides, a student might be facing academic difficulties, such as learning disabilities, poor performance, or disinterest in the topics studied. In addition, it is gathered that students' grades are usually better in the first two terms due to the simplicity of learning objectives in the beginning of the year. After term 2, the grades tend to fall because the learning objectives become more complex.

In conclusion, chapter 4 presented results of data analysis of individual students' grades before and after remediation in English reading comprehension and mathematics. The t-test shows that students' grades in both sections A and B did not improve after one academic year of remediation. The graphs show that students' grades fluctuated between

the terms. In addition, qualitative data gathered from interviews and observations established that the studied remedial program is not planned and implemented efficaciously.

The discussion of the findings is presented in the next chapter.

Chapter Five

Discussion of Findings

Chapter five presents a discussion of the findings and associates them to previously discussed literature on effectiveness of remediation.

In attempt to examine the effectiveness of remedial programs, this study investigates student achievement pre- and post-remediation at HOPE orphanage's elementary school. The study also takes into account stakeholders' perceptions about the remediation program implemented.

The research questions posed are the following:

- 1- How is the remedial program planned and implemented at HOPE orphanage?
- 2- How do stakeholders at HOPE orphanage perceive its effectiveness?

The findings revealed by interviews, observations, and statistical analysis have highlighted the ineffectiveness of the studied program. Hence, remediation is not fulfilling its goal in improving students' grades and academic achievements. Those results are in accordance with James-Burdumy et al. (2007). Nevertheless, the tutors providing remediation are purposefully trying to help and support students on different educational, emotional, and social levels. It is of high importance to mention that the program is also considered a refuge for many students that do not feel safe at home. The non-academic services, such as medical examinations, are also an advantage to many students who cannot afford healthcare outside of school.

In order to promote students' achievement, provide necessary educational support to low achieving students, and ensure effective implementation of remediation, a remedial

program must ensure the presence of several key elements. Some of these elements are providing proper organizing practices, instructional strategies, and assessment exercises with feedback as well as helping break larger tasks into smaller ones. The absence of these elements in the studied remedial program have led to its ineffectiveness. Those findings are in accordance with Hausheer et.al (2011).

Similarly, it is stated that effective remedial programs “... (1) need to systematically identify low-achievers and monitor their progress, (2) the significance of simplification and differentiation of material and instruction and (3) the impact that affective support has on learners’ motivation and attitude (Alghamdi & Siddiqui, 2016, p.211).” Unfortunately, the studied remedial program does not employ strategies that identify any of the abovementioned criteria.

Additionally, a personalized remedial program, direct supervision from teachers, and a proper support system might as well improve students’ academic outcomes (Cheng, 2014). Yet, the aforementioned inadequacies in the plan of the studied remedial program, impede the effectiveness of remediation.

Findings demonstrated that remediation should be planned in accordance with recent research studies to ensure best practices with a written policy as a guidance for tutors and teachers in implementation. This finding is compatible with previous research proposing that research-based remedial programs serve the purpose of remediation and eventually enhance students’ academic achievements (Denton et al., 2010; Lalley & Miller, 2006; Saddler & Staulters, 2008; Šťastný, 2016). These researchers suggest that effective remedial programs are based on personalized plans that are continuously updated to fit students’ needs and support their achievements.

Besides, it is important to provide evidence from program evaluations to validate the impact of remediation programs on student success and academic achievements. Zhang and Byrd (2005, p.5) state that “[...] It is critical for after-school programs to be well-organized and to have quality curricula, implementation, supervision, facilities, and evaluation procedures.”

Findings from observations and interviews show that the time factor is viewed as a major challenge facing tutors. Tutors are full-time teachers that are responsible for teaching mainstream classrooms in the morning and remedial sessions in the afternoon. Thus, they are left with minimal time to plan and prepare for remediation. The fragmentation of the remedial sessions is another issue influencing the effectiveness of the program. The afterschool program encompasses lunch, medical inspection, hygiene check-ups, and other non-academic activities; this might be another reason for the ineffective results of the program. This finding is supported by Burdumy, Dynarski, and Deke (2007), who explain that ineffective remediation might be due to the fact that students are not spending sufficient time on beneficial academic activities. The tutors claim that these non-academic activities are time consuming and leave less than 45 minutes for academic instruction.

Findings also show that organizing remediation should incorporate adequate educational strategies to provide students with the necessary support. In addition, planning remediation must encompass strategies that enable teachers to detect students’ strengths and weaknesses prior to the process of remediation. This finding is reinforced by earlier studies, including Chien (2015) and Hausheer, Hansen and Dumas (2011), which accentuate the importance of knowing the learners’ proficiency levels before planning and

implementing remedial education. This implies that teachers should implement diagnostic assessments prior to remediation to examine their students' existing knowledge and seek out strategies to help them develop new understandings.

Additionally, the results revealed that some tutors are required to teach in English are French educated. These tutors struggle to provide professional instruction to accommodate English educated students. Consequently, tutors' substandard language skills present a challenge especially in teaching English reading comprehension.

Besides, it was indicated that some of the factors influencing the effectiveness of the remedial program are related to students. For instance, due to students' disadvantaged background, parents' educational level, and low socioeconomic status; these students perform less academically than other advantaged students. This is also emphasized by previous literature, including Banerjee (2016), Duncan & Sojourner (2013), Skourdoumbis (2010), and Ulriksen et al. (2015), proposing that disadvantaged students coming from low (SES) are exposed to several negative situations that make them perform less academically than their advantaged peer. Banerjee (2016) proposes that children born from deprived families are vulnerable and may experience challenges in terms of educational outcomes.

Another factor highlighted by the findings and related to students is behavioral problems. These misconducts disrupt the flow of the session and consume the tutors' time and energy. Students with behavioral problems, such as disruptive side talking, disobedience, and harassing their classmates, are considered a challenge for tutors. A study examining the implementation of evidence-based classroom management practices suggests that there is positive relation between teachers' classroom management practices and student outcomes (Gage et al., 2014).

It was emphasized that the remediation program at this school is considered a safe place for their students. The support they provided, though inadequate in its nature, provides students with educational and psychological provisions, such as referring students to periodic counselling and social support to maintain psychological health. In addition, my interviewees acknowledged that remediation is not enhancing students' academic achievements, in general, and in English reading and mathematics, in particular.

The tutors highlighted the importance of developing a positive student-tutor relationship that enables tutors to foster a constructive learning climate. Similar to Spencer's (2007) claims, the tutors mentioned that being understanding, non-judgmental, and trustworthy enables students to connect with their tutors. A study exploring emotional relationships between teachers, who were hired to support underprivileged students in a special support program, and their students provides insights into educators' emotional support in underprivileged Communities. The study employed semi-structured interviews with 15 former students that reflected positive emotions towards their guides or tutors. This study concludes that positive guide-student relationships and the climate of trust in the classroom resulted in emotional commitments in the class between tutors and students. Another significant result was the increase in students' academic achievements (Oplatka, 2015).

Furthermore, the statistical analysis of grade 4 students' academic grades in English reading comprehension and mathematics show that students' grades did not improve after applying remediation through one complete academic year. This analysis supports the results revealed from the two other instruments, observations and interviews, regarding the ineffectiveness of this remedial program.

The analysis of students' grades before and after remediation expresses fluctuations of grades between the terms. Grades fluctuation is caused by several factors; some factors are related to students, such as behavioral problems or learning difficulties. Besides, some students may experience lack of motivation or interest in learning. Students' disadvantaged backgrounds can also cause fluctuation in grades. For instance, students living in underprivileged conditions are susceptible to encounter difficulties in their learning (Banerjee, 2016). Another reason for grades fluctuation was highlighted during the interviews. Tutors claimed that students' grades fluctuate after first term due to the introduction of more complicated learning objectives.

To conclude, this chapter presented the discussion of the study findings. First and foremost, results have shown that planning the remedial program is not research-based and lacks rigorous structure and organization. Second, the fragmentation of remedial sessions into lunch time, hygiene inspections, medical examinations, and other unanticipated non-academic tasks is a major concern. Third, the absence of diagnostic assessment strategies is another problem impeding the effectiveness of this program. Fourth, the tutors' substandard language skills also present an obstacle to effective tutor-student communication. Fifth, students' underprivileged background and their behavior problems is considered a significant challenge that is obstructing the program's effectiveness. Moreover, the statistical analysis of grade 4 students' academic grades in English reading comprehension and mathematics show that students' grades did not improve after one complete year of remediation.

Chapter Six

Conclusion

6.1 Overview

The proposed study aimed at evaluating the effectiveness of the elementary remedial programs being implemented at HOPE orphanage. An examination into students' academic achievement pre- and post- remediation and into stakeholders' perceptions of the remediation program was conducted. For the purposes of identifying the causes of failure or success that remediation programs have on student achievement, diverse factors need to be considered in order to prompt school personnel in taking effective steps to enhance academic achievement.

Consequently, the study answers the following research questions.

- 1- How is the remedial program at HOPE orphanage planned, implemented?
- 2- How do stakeholders at HOPE orphanage perceive its effectiveness?

6.2 Findings of the Study

Findings from statistical analysis, observations, and interviews provide explanations about the extent of effectiveness of the remediation program in this school.

The lack of research based strategies in the planning and implementation of the program is considered a major drawback. The absence of diagnostic and ongoing assessments in this remedial program hinders the tutors' ability to be aware of students' individual academic standings. Additionally, the deficiency in technical and human resources is a significant barrier for this program to meet its purpose. Furthermore, the

fragmentation of remediation hours limits the tutors' ability to provide sufficient academic activities.

Students' background characteristics, such as low socio-economic status, parents' education, and out of school support levels, affect students' academic achievements. It is essential to note that background characteristics influence students' academic achievements as cited in previous literature. Also, students' acute behavioral problems might be another reason contributing to the ineffectiveness of remediation.

Statistical analysis of grade 4 students' grades in English and mathematics show that students' grades did not improve after one complete academic year of remedial education.

6.3 Limitations of the Study

The main limitation to this study is its sample size. The sample in this study encompasses 35 fourth graders. Therefore, the sample might not be representative of elementary students' population in HOPE orphanage. Moreover, the fact that this orphanage caters for students with learning difficulties is also considered a limitation due to the lack of special support the students need. Nevertheless, students with special needs or learning difficulties were excluded from the sample in order to maintain the study's focus, which was studying the effectiveness of remediation on students' academic achievements.

6.4 Recommendations for Future Research

Further experimental research should examine the effect of remedial education on students' academic achievements. An experimental research design consisting of both experimental and control groups will assist in comparing the achievements of students

receiving remediation and those who are not. Lastly, it is highly recommended to study the effect of remedial education on students' self-esteem and motivation.

6.5 Research implications

Examining the effectiveness of remedial education on students' academic achievements has significant implications for planning and implementing remediation. The findings exhibit that for remediation to be effective, the program should be research-based, should comprise diagnostic and ongoing assessments, and should control remedial time fragmentation. For instance, teachers should be provided with individualized instructional objectives for every student in the remedial program (Poncy et al., 2010).

This study is important to all students, remedial tutors, educators, and administrators. This study also provides an example of how schools can use data to examine the relationship between remedial education and students' academic achievement.

Moreover, the studied school can also benefit from the results of this study in re-designing the current remedial program to ensure its effectiveness. This study provides opportunity for practitioners to be attentive to the complications in the program, and it may help school administration develop action plans that support remedial coordinators and tutors who implement remediation.

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Appendices

Appendix A

Purpose of the study	Research questions	Interviews	Observations
<p>The purpose of this study is to examine the effectiveness of remedial education in Math and reading on the academic achievement of 4th grade students.</p>	<p>1- How is remedial program at HOPE orphanage planned and implemented?</p>	<p>1- How is remediation organized, implemented and assessed?</p>	
		<p>2-What are the factors that were taken into consideration when planning the remediation program?</p>	
	<p>2-How do stakeholders at HOPE orphanage perceive its effectiveness?</p>	<p>3-Can you cite any examples of students (names remain anonymous) whose performance was enhanced significantly due to the program?</p>	
		<p>4- Is there some sort of a strategy or plan or mechanism that measures the program's success? Please explain.</p>	

Appendix B

Domain 1: Planning and Preparation	<u>Unsatisfactory</u> <input type="checkbox"/>	<u>Basic</u> <input type="checkbox"/>	<u>Proficient</u> <input type="checkbox"/>	<u>Exemplary</u> <input type="checkbox"/>
<p><i>Components:</i></p> <p>1a – Demonstrating Knowledge of Content and Pedagogy (Standard 4) 1b – Demonstrating Knowledge of Students (Standard 3) 1c – Setting Instructional Outcomes (Standard 4) 1d – Demonstrating Knowledge of Resources (Standard 4) 1e – Designing Coherent Instruction (Standard 4) 1f – Designing Student Assessments (Standard 5)</p> <p>Evidence:</p>				

Domain 2: The Classroom Environment	<u>Unsatisfactory</u> <input type="checkbox"/>	<u>Basic</u> <input type="checkbox"/>	<u>Proficient</u> <input type="checkbox"/>	<u>Exemplary</u> <input type="checkbox"/>
<p><i>Components:</i></p> <p>2a – Creating an Environment of Respect and Rapport (Standard 6) 2b – Establishing a Culture for Learning (Standard 6) 2c – Managing Classroom Procedures (Standard 6) 2d – Managing Student Behavior (Standard 6) 2e – Organizing Physical Space (Standard 6)</p> <p>Evidence:</p>				

Domain 3: Instruction	<u>Unsatisfactory</u> <input type="checkbox"/>	<u>Basic</u> <input type="checkbox"/>	<u>Proficient</u> <input type="checkbox"/>	<u>Exemplary</u> <input type="checkbox"/>
<p><i>Components:</i></p> <p>3a – Communicating with Students (Standard 2) 3b – Using Questioning and Discussion Techniques (Standard 6) 3c – Engaging Students in Learning (Standard 6) 3d – Using Assessment in Instruction (Standard 6) 3e – Demonstrating Flexibility and Responsiveness (Standard 2)</p> <p>Evidence:</p>				

The Framework for Professional Practice (Danielson) as a supplemental resource

Educator's signature: _____ Date: _____

Administrator's signature: _____ Date: _____

Appendix C

In-depth interview questions:

Research question 1:

How is remediation organized, implemented and assessed?

- 1- What is the name of the remedial program? Describe how it is designed?
- 2- Who started this program and when was it initiated?
- 3- Is there a written policy on the provision of the remedial program? If yes, please provide a copy of the policy statement.
- 4- What is your understanding of remediation?
- 5- How is process of remediation organized, implemented and prioritized?
- 6- Can you describe the structure of your remedial program?
- 7- How is the program designed, and what are its main aims?
- 8- What are the program's goals for your students? Are they personalized?
- 9- What are some societal factors that impact the remediation in your school?
- 10- Do you assess students' level of knowledge and skills in different areas before you start with remediation? If yes, cite assessment strategies used.
- 11- How do you identify underachieving students within English reading and mathematics?
- 12- Is the remedial program at your school a evidence based program?
- 13- Do you offer small group instruction? Give an example.
- 14- Do you offer individualized instruction? Give me examples.

- 15- Is there some sort of data collection regarding faculty satisfaction regarding the remedial program?
- 16- What are factors that teachers took into consideration when designing the remediation program?
- 17- What teaching methods are you using while re-teaching during the program? Are they any different from teaching methods used in regular non-remedial classroom? If yes or no, why so?
- 18- What are the program's strengths and weaknesses?
- 19- Has the program been through any modifications and updates since it started in (year)?
- 20- Do you collaborate with classroom teachers or supervisors to improve the program?
- 21- Is professional development offered to remedial tutors in your school? If yes, what sort of professional development?
- 22- In your opinion, what changes can be made to help tutors deliver the program in an effective way?
- 23- Is there any progress in the grades of the students due to the remedial program?
- 24- Are there cases where students' grades don't improve after remediation? In your opinion, what is the reason behind this?
- 25- In such cases (no improvement), what do you normally do?
- 26- Is there a criterion to measure students' improvement in remediation?
- 27- Do you provide practice exercises to support learning and applying new knowledge?
- 28- Do tutors assess students' learning before moving forward to other tasks?

29- What training and support do you think you need to improve the program's effectiveness?

Research question 2:

How do stakeholders at HOPE orphanage perceive its effectiveness?

- 1- What are the perceptions of teachers regarding the current remediation program?
- 2- How do you measure the effectiveness of this program?
- 3- How effective is the program's structure?
- 4- Can you cite examples of students (names remain anonymous) whose performance enhanced significantly due to the program? What about the student's background?
- 5- Is there some sort of a strategy or plan or mechanism that measures the program's success?
- 6- Cite examples of students whose level remained the same.
- 7- What improvements are realized in the students' knowledge or skills?
- 8- Do you think that this program has a positive effect on students' achievements in English reading and Mathematics?
- 9- How are you gathering this assessment data? What have the results been?
- 10- How is student performance observed in the remedial program? How is this data utilized?
- 11- Based on your experience, have you witnessed a relationship between remediation and students' academic achievements?
- 12- Do you provide tests or assignments to effectively evaluate students' progress?

Social emotional component:

- 1- Do you think that remedial hours are a safe haven for you?
- 2- At your school, is students' social emotional learning valued?
- 3-
- 4- How confident are you that you can motivate students that are not engaged in your classroom?
- 5- Are you aware of your students' mental health issues and conditions?
- 6- How do you deal with students' that have self-confidence and self-esteem problems?
- 7- Do students' self-confidence affect their learning?
- 8- How do you contribute to your students' social emotional development?
- 9- What are the challenges that you face in addressing students' social and emotional development?

Appendix D



المؤسسة اللبنانية للدراسات والبحوث
Lebanese American University
Institutional Review Board (IRB)

لجنة الأخلاقيات

NOTICE OF IRB APPROVAL

To: Ms. Boushra Helbawi
Dr. Mona Nabhani
Associate Professor
School of Arts & Sciences

NOTICE ISSUED: 16 April 2019
EXPIRATION DATE: 16 April 2020
REVIEW TYPE: EXPEDITED

Date: April 16, 2019

RE: IRB #: LAU.SAS.MN2.16/Apr/2019

Protocol Title: A Study of The Effectiveness of Remediation Programs at HOPE Orphanage

The above referenced research project has been approved by the Lebanese American University, Institutional Review Board (LAU IRB). This approval is limited to the activities described in the Approved Research Protocol and all submitted documents listed on page 2 of this letter. **Enclosed with this letter are the stamped approved documents that must be used.**

APPROVAL CONDITIONS FOR ALL LAU APPROVED HUMAN RESEARCH PROTOCOLS

LAU RESEARCH POLICIES: All individuals engaged in the research project must adhere to the approved protocol and all applicable LAU IRB Research Policies. **PARTICIPANTS must NOT be involved in any research related activity prior to IRB approval date or after the expiration date.**

PROTOCOL EXPIRATION: The LAU IRB approval expiry date is listed above. The IRB Office will send an email at least 45 days prior to protocol approval expiry - Request for Continuing Review - in order to avoid any temporary hold on the initial protocol approval. It is your responsibility to apply for continuing review and receive continuing approval for the duration of the research project. Failure to send Request for Continuation before the expiry date will result in suspension of the approval of this research project on the expiration date.

MODIFICATIONS AND AMENDMENTS: All protocol modifications must be approved by the IRB prior to implementation.

NOTIFICATION OF PROJECT COMPLETION: A notification of research project closure and a summary of findings must be sent to the IRB office upon completion. Study files must be retained for a period of 3 years from the date of notification of project completion.

IN THE EVENT OF NON-COMPLIANCE WITH ABOVE CONDITIONS, THE PRINCIPAL INVESTIGATOR SHOULD MEET WITH THE IRB ADMINISTRATORS IN ORDER TO RESOLVE SUCH CONDITIONS. IRB APPROVAL CANNOT BE GRANTED UNTIL NON-COMPLIANT ISSUES HAVE BEEN RESOLVED.

If you have any questions concerning this information, please contact the IRB office by email at irb@lau.edu.lb

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The IRB operates in compliance with the national regulations pertaining to research under the Lebanese Minister of Public Health's Decision No.141 dated 27/1/2016 under LAU IRB Authorization reference 2016/3708, the international guidelines for Good Clinical Practice, the US Office of Human Research Protection (45CFR46) and the Food and Drug Administration (21CFR56). LAU IRB U.S. Identifier as an international institution: FWA00014723 and IRB Registration # IRB00006954 LAUIRB#1



Dr. Joseph Stephan
Chair, Institutional Review Board

DOCUMENTS SUBMITTED:

LAU IRB Initial Protocol Application – Social Behavioral	Received 8 March 2019, amended 13 April 2019
Research Proposal	Received 8 March 2019. Amended 13 April 2019
Letter to Al Sader Foundation	Received 8 March 2019, amended 13 April 2019
Parental Consent	Received 8 March 2019, not approved
Participant Assent	Received 8 March 2019, not approved
Data collection tools	Received 8 March 2019
Interview Questions	Received 8 March 2019, amended 7 April 2019
Observation Checklist	Received 7 April 2019
IRB Comments sent: 14 March 2019 9 April 2019 16 April 2019	PI response dated: 7 April 2019 13 April 2019 NA
NIH Training – Mona Nabhani	Cert.# 207839 Dated (1 April 2009)
CITI Training – Boushra Helbawi	Cert.# 30825636 Dated (6 March 2019)