A Qualitative Investigation into Co-education in Elementary Schools and Its Impact on the Students' Behaviours and Learning Environment: United Arab Emirates

تحقيق نوعي في التعليم المختلط في المدارس الابتدائية وأثره على سلوكيات الطلاب وبيئة التعلم: الإمارات العربية المتحدة

by

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Abstract

The focus of this research is on the analysis of co-education in the UAE for elementary school students. The study is of high significance given the expanding scope of the education global. In order to achieve the findings as per the research objectives, this research has used a qualitative analysis approach based on a semi-structured interview approach. A total of twenty elementary school teachers were interviewed concerning co-education in elementary schools and its impact on the students' behaviours and learning environment in the UAE. The analysis was held using a thematic analysis.

The findings show that co-education does have an impact on the student's behaviour and learning environment. Based on the analysis performed, it was observed that gender equality was achieved, and the students were able to gain more confidence, more engagement, and show more attention. The learning environment was also found to have improved among the Arab classroom.

ملخص البحث

يركز هذا البحث على تحليل نظام التعليم المختلط. في دولة الامارات العربية المتحدة لطلاب المرحلة الابتدائية. يعتبر البحث ذا أهمية كبيرة بالنظر إلى اتساع نطاق التعليم العالمي. من أجل تحقيق النتائج وفقًا لأهداف البحث ، استخدم هذا البحث نهج التحليل النوعي القائم على اسلوب المقابلة شبه المنظمة. تمت مقابلة إجمالي عشرين معلمًا في المدارس الابتدائية بخصوص التعليم المختلط في المدارس الابتدائية وأثره على سلوكيات الطلاب وبيئة التعلم في الإمارات العربية المتحدة. تم إجراء التحليل باستخدام تحليل موضوعي.

تظهر النتائج أن التعليم المختلط له تأثير على سلوك الطالب وبيئة التعلم. بناءً على التحليل الذي تم إجراؤه ، لوحظ أن المساواة بين الجنسين قد تحققت ، وتمكن الطلاب من اكتساب المزيد من الثقة والمزيد من المشاركة وإظهار المزيد من الاهتمام. كما تبين أن بيئة التعلم قد تحسنت بين الفصول الدراسية العربية.

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Table of Contents

List of Figures

List of Tables

Abbreviations

UAE – United Arab Emirates

MOE - Ministry of Education

TESOL - Teaching English to speakers of other languages

UNESCO - United Nations Educational, Scientific and Cultural Organization

"Education is not a preparation for life; education is life itself."

John Dewey (1859-1952)

CHAPTER 1- INTRODUCTION

1.1 Historical Background.

There has always been a controversy about the comparative advantages of co-education and single-sex methods in the learning sector. The subject of debate was whether the benefits of the single-sex classes surpass co-education or vice versa. These discussions started in 1939 after Hogarth Press issued a book about co-education by the author L. B. Pekin who discussed the merits and demerits of co-education regarding each gender's attributes from a cognitive, social and psychological aspect (Kark 1983).

Single-gender education, also known as single-sex education, refers to segregating the students according to their gender, where male and female students attend separate classes or buildings or even separate schools. History reveals that single-gender settings were the standard practice in most cultures until the mid of the nineteenth century. Educators believed that each gender has specific characteristics and certain qualifications that should be enriched and developed separately to help them achieve their stereotyped roles in the future (Erdoğdu 2020). There are two types of single-sex education; the first is to teach the same subjects but physically separate the boys from the girls, while the second is to teach different subjects based on the students' gender preference (Hatch 2014). At the same time, Co-education or mixed-gender education is where boys and girls are integrated to learn and interact with each other in the same environment. Co-education is a modern American origin term; previously, another term was used to express sharing the same class for both sexes called "joint education", and it was first used in Berlin (Hatch 2014). Co-education has become the standard type of learning in many cultures, especially in Western countries. However, single-sex education is still prevalent in many Muslim countries that prefer to separate boys from girls due to religious or cultural beliefs (Kark 1983). Lee and Bryk (1986) mentioned that the shift in Western countries towards co-education occurred in response to the scholars who called for mixing both genders in education and stressed its educational importance until those requests reached their climax in the sixties of the

twentieth century. These calls forced most of the few remainder separate-sex schools in the West to switch to the mixed-mode, but this did not end the public debate on the issue as this file is still hot to date. Although the era of the sixties of the twentieth century witnessed the maximum ascent in the matter of co-education, it was also the beginning of scientific studies for the effects of the two types of education on pupils of both sexes. For example, the study of Coleman 1961 stated that girls suffer from a negative impact on their achievement level due to the boys' presence as they often focus more on the relationships than their lessons (Smyth 2010).

In the seventies, Greenough (1970) summarised some of the UNESCO global studies on co-education results, stating that out of 105 countries, 27 countries have announced that they have a fully blended education system. The majority of countries said that they often have mixed institutions of different levels. At the same time, utterly single-sex education was found in two countries only, and two other countries stated that they decided not to continue with the co-education policy and reintroduce single-sex classes, which meant that co-education did not prove its efficiency in those countries.

The situation of the ancient Arabic women before and at the beginning of Islam was almost the same as any other women in any of the other ancient civilisations; only a few females were educated to read and write (Al-Ahwani 1975). The Islamic religion has stressed on teaching all Muslims as a religious obligation, and accordingly, teaching Muslim women was not a novelty. Girls were learning either in the places of the wealthy families who were able to evoke the tutors or in the schools. However, the ordinary people have had a fear of the girls' corruption if they learned alongside the boys, which consequently led to the refrain from sending the girls to schools, and this strictness in social situations was the worst in all Arab countries for many centuries (James 2020).

1.2 Overview

By observing the history of education in the United Arab Emirates, it is well noted that the educational system went through multiple phases before and after the alliance that announced the emirates officially as one country in 1971 (Alhebsi, Pettaway & Waller 2015). Single-sex education was adopted in the UAE in public schools ever since early 1900, as the Emirati society has favoured it due to cultural and religious motives (Alhebsi, Pettaway & Waller 2015).

Nevertheless, the century-old debate across gender composition in education has led to a plethora of questions. Kleinau (2020) has highlighted that the debate for the single-gender and co-education classrooms has transcended cultures and entangled itself in the universal principles concerning gender equity and the concept of nature vs nurture. With the drive of the UAE to claim its position in the educational development vanguard (Fawwaz 2017), with ranking as one of the highest countries for studying abroad (Al Serkal 2017), the environment here serves adequate to centre the discussion. The education in UAE has been continually progressing by openness, diversity, as well as the thirst for success globally. In spite of that, this blooming education is found to be faced with specific challenges along the way. For instance, the Ridge et al. (2015) international assessment shows that the high gender disparities in favour of the girls in the region, with most evidence centred around gender segregation, a product of studies directed in the Western aspects (Wiseman 2008), making it integral to assess the gender segregation and its effect on individuals behaviour in the UAE.

Thus, this research aims to gain a qualitative insight into the students' attitudes in one of the American curriculum schools in the UAE. The purpose of the study is to investigate the changes that occur in the students' behaviours when they join the single-sex classes and whether any deterioration or improvement is detected in their academic interaction. In addition, the study will evaluate the opinions of the teachers who taught both models in both classes and were able to observe the same batch of students in the two environments in two years row; they will be asked about their views on the two learning models according to their perceptions, observations, final results and experiences. The result will provide a guide to understand the students' emotional and behavioural changes in both models.

The research will be conducted in an American common core curriculum school in Dubai, where the majority of the students (roughly 90%) are Emiratis, and the remaining are a mix of Arabs and very few other nationalities. The school adopts the mixed-gender method from kindergarten to grade four, then segregates the students, according to their gender, into male and female classes from grade five to grade twelve. The views will be collected through one on one zoom online interviews.

1.3. Statement of the problem

The United Arab Emirates has made a drastic decision which is considered a major shift towards gender equality and globalisation. In July 2018, the ministry of education declared that mixed-sex education would be the prevailing system in all the elementary government schools starting from grade one until the fifth grade (UAEGP 2020). The views of both educators and parents varied between acceptance and rejection.

The United Arab Emirates has been developing rapidly in all fields in the past few years, and education is one of the most significant sectors in the UAE national agenda (UAE 2016). This paper seeks to collect further facts about the students' behaviours and opinions of the educators who have experience in both systems. The need to assess the advantages and disadvantages is imperative for single-gender and co-educational classrooms (Pahlke, Hyde & Allison 2014). Besides, it is based not only on the scarcity of research on gender segregation across the Arab countries but also on long unpaid universal contextualisation of the situation where student behaviour is the focal point of the study (Yasin, Azim & Qayyum 2020). Despite the fact that many pieces of research were done to investigate this subject, none of them specified the Emirati context or investigated the situation in the UAE. Therefore, this research aims to provide the readers with a shred of evidence on both models and which class environment is more beneficial and productive for the students in an Arabic Islamic country.

1.4. Rationale of the study

The motivation to conduct this study was to explore the factors that inspired the ministry of education in the UAE to take this initiative to integrate both genders in the elementary phase. The need for this research is based on the continual investment of the UAE, since 1997, in higher education and its expansion for developing itself as a knowledge-based society (Ashour 2020). The investment that UAE has made in education cannot be easily overlooked. For instance, in 2017, the UAE allocated 20 per cent of its national budget to the education sector alone (Emirates News Agency 2016). The testament for the increasing dedication towards education is also evident from the development of the Abu Dhabi Education Council in 2005, the Knowledge and Human Development Authority in Dubai in 2006, in addition to the Abu Dhabi Department of Education and Knowledge in 2017 for youth development. The aim is to develop a first-rate education cement dedicated to the UAE's National Agenda Vision 2021 (UAE 2016), with

education as "*a fundamental element for the development of a nation and the best investment in its youth*" (Ministry of Cabinet Affairs 2018). This exemplifies the need for the study and the value that it adds to the development of a better and more robust educational setup.

The rationale is further reinforced by the increasingly diverse population in the region. This translates into a multitude of criteria offering both single-gender and co-educational schools to meet the needs of citizens and residents across the seven emirates. Consequently, it has become necessary to understand the different gender dynamics as a part of the UAE religion and culture in the diversified and ever-changing context of the UAE. Therefore, it has been highlighted by Saryeddine (2018) that the students in UAE should be offered as many options for gender grouping as per their culture, comfort level and traditions. These alternatives, although prevalent across different public as well as private schools where gender segregation was previously the standard.

Segregating the classrooms create conflicts, and gender-related problems become more condensed than the single-gender classes. Despite that, mixed-gender classrooms still face the same difficulties; yet they are mostly contained as both genders lean towards acting more responsible and kind in front of one another. Isolated classrooms hinder communication and productive interaction between both sexes during their primary developmental stage in schools; therefore, it should not be expected from those students to see each other as humans with no regard to any sexual angle and to be able to maintain healthy relationships in the universities and through work fields. Real-life does not promote separation between sexes, and one of the educators' goals, especially in the early ages, is to introduce the students to real-life applications. Consequently, if life is mixed-gender, then classes should be the same.

And finally, The author's personal will is to investigate this topic due to the wide background of working with both models and being an elementary supervisor in the same school who observes the increase of behavioural issues in the single-gender classes after segregating the students in the fifth grade. Most of the problems appear to be related to gender characteristics and the condensation of either boys or girls in the same place. Therefore, there was a personal drive to investigate and assess the situation fairly and objectively to reach some rationalisations and prove that this initiative has numerous positive impacts on the students' future when they interact and socialise effectively.

1.5. Research Purpose and Research Questions

The purpose of this study is;

- To analyse the factors that affect the students' behaviour in co-education elementary schools.
- To determine the change in the learning environment as a result of co-education classrooms in elementary schools
- To recognise the difference in student achievement within the two different gender-based contexts.
- To suggest ways to enhance the students' performance in the co-education elementary schools.

1.6. Significance of the study

The study is highly significant as it helps to bridge the literary gap concerning the limited literature on the single-sex educational setting and co-educational setting. The outcomes achieved as a result of this research would help reach the unique idea or propose a resolution to academic problems, suggesting how enriching educational benefits are attained based on the educational setting. It also provides result-based suggestions for later research and helps highlight the practice that can be subsequently adopted for reaching conclusive results. Also, addressing the classroom's gender composition influence on the student's behavioural outcomes is worthy of inquiry.

Another reason for the significance of this research is the launch of the National Strategy for Higher Education 2030 by the UAE's Ministry of Education (MOE). It has prioritised the quality of higher education, especially with respect to the research and country focus on developing as a knowledge economy (UAE 2016). The result would help supplement the initiatives under the 2030 plan, which are focused on developing students, linking academia and the labour market, while also engaging the private sector in curricular development, production of research promoting and expansion, as well as an increase in the global competitiveness of its higher education institutions by creating new and innovative academic programs. The significance is

also evident from the gender gap differentials in UAE math, science, and reading scores are highly apparent on internationally standardised assessments such as the TIMSS, PISA, and PIRLS (Ridge 2014). Lastly, the focus on the elementary school helps set the base for the development of the building blocks for success in further education.

1.7. Structure of the Dissertation

The overall research is categorised into five chapters, where each chapter has its objectives (Figure 1).

Chapter 1 - Introduction   Chapter 2 - Literature Review   Chapter 3 - Methodology   Chapter 4 - Results and analysis   Chapter 5 - Discussion and Conclusion
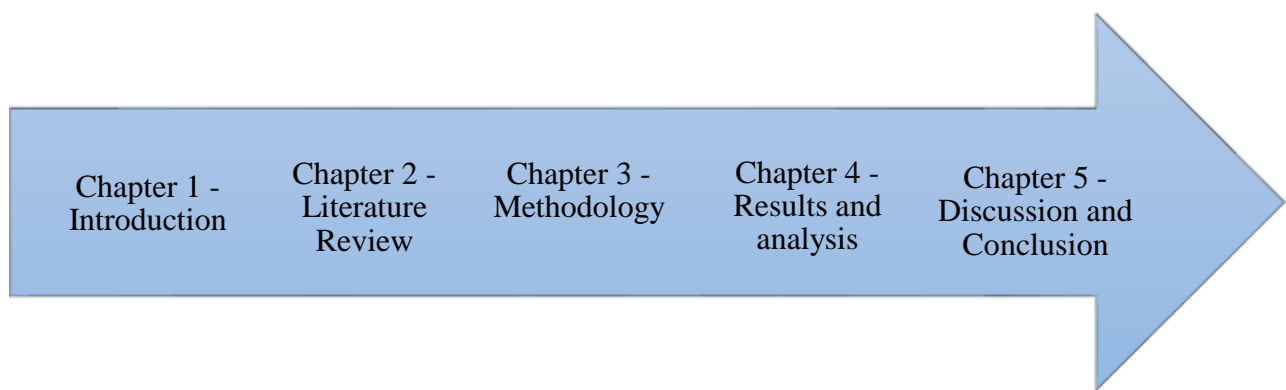
Figure 1 Division of the Dissertation

Chapter 1 – Introduction

Chapter 1 presents the relevant background for the research, the rationale for undergoing this research, along with the objectives. It outlines the overall structure of the study, which makes it easy for the reader to understand the significance of the study as well as follow the work that is being performed.

Chapter 2 – Literature Review

Chapter 2 provides a comprehensive analysis of the literature, where previous studies are reviewed. Then, the literature synthesis is provided, where the work of the various authors is compared and contrasted. The significant inclination in this chapter is to highlight the gap that the present research seeks to bridge.

Chapter 3 – Methodology

The methodology that is being performed is detailed in this section, and this includes the research approaches, philosophies, design and many more interesting things that make these relevant choices.

Chapter 4 – Results and Interpretation

Chapter four discusses the results achieved as a part of the questionnaire and the relevant instruction that follows.

Chapter 5 – Discussion and Conclusion

This chapter sums up the overall findings of the research. This includes comparing and contrasting with the previous studies and emerging aspects that have not been studied previously. The limitation and future considerations have also been highlighted.

CHAPTER 2- LITERATURE REVIEW

2.1 Introduction

The chapter provides the details concerning the synthesis of the literature. It shares deep insights into the authors' previous work on the related subject. The studies that have been consulted are derived from the recent publications based on the subject of co-education, student engagement, and learning behaviour in the context of Arab classrooms.

2.2 Theoretical Framework

The theoretical framework that this research uses is social constructionism. Some thirty-odd years ago, it arose against postmodernism's cultural and intellectual movement (Andrews 2012) to challenge the scientific positivist perspective of knowledge for being objective and could be obtained through observation (Gergen 1985; Burr 2003). Social constructionism would instead invite us to question taken-for-granted ways in which to be more involved and realise the world around us and even ourselves by being critical. It is selected because it is found to match the philosophy of where the researcher positions herself both as an educator and a researcher. Second, this framework is found to be absent from the literature in terms of what it can offer, mainly regarding a substitutional possibility of realising the perceptions, co-education and microteaching from a more critical position. Third, this position emphasises the role that the culture plays in our comprehension of the world around us and, in the same manner, provides support for what has become furthermore anecdotally obvious. Therefore, in order to be a remarkable TESOL practitioner in foreign countries, we need to deeply understand the backgrounds and the conditions in which we are teaching. The same as any other socio-cultural perspective, social constructionism can help provide an increased "*awareness and sensitivity to local contexts*" (Zeungler & Miller 2006 p. 51).

2.3 The concept of Co-education

Around the world, almost every country has adopted the co-educational system, which has been widely spread in the Western nations, and according to how the system is adopted, implemented and utilised in schools, colleges, and universities, it shows both advantages and disadvantages.

Co-education is also named mixed-sex or mixed-gender education (Erdoğdu 2020). Thus, it is referred to as the incorporation of the students, either girls or boys, in the one school setting or as the academics of girls and boys in the one organisation (Wong, Shi & Chen 2018). It has been observed by Goldin and Katz (2011) that co-educational organisations are the institutions which are having classrooms for males as well as females altogether. Several old educational organisations were formerly assigned for same-gender mainly for boys, and the idea of co-education was being started initially in the Western region of Europe after the reformation time when some individuals belonging to the protestant group showed their urge that females along with the males must be taught to read the Bible (Of & Throughout n.d.). Since World War II, Co-education has started to be followed in a lot of developing nations, yet, in some of the other countries, social conditioning is being restricted its effectiveness, such as in the majority of the Arab nation's where girls tend to leave the co-educational organisations when they reach the age of puberty.

Nowadays, co-education is found to be the dominating aspect of pre-school developments. In almost all countries, the ratio of co-education establishments declines continuously according to the students' age. In the early years and the primary phase there is usually more co-educational settings, then the number of those settings descends gradually until reaching the secondary stage (Sari 2017). On the other side, this ratio upsurges again rapidly at the stage of higher academics. In a similar manner, there are a vast number of establishments that are practising co-education in the concepts, but their female students are not shown entirely or with fair presence, whereas, in others, the females are the majority (UNESCO 1970). There is a contrary relationship between the amount of co-educational institutions and the students' ages from the primary to the secondary stage. The reduction of the co-educational settings could be referred to the fact that; at the secondary academics stage, the students are at the adolescence phase of their human development and growth that occurs post-childhood and pre-adulthood from the period of 10 to 21 years. It is stated that at this developmental level, learners are said to be distracted by the

opposite gender, which may affect their studies. According to research, it has been observed that the interaction between males and females hinders the learning process of both; therefore, in this manner, the performance becomes affected (Duncombe et al. 2020). Similarly, when a male teacher teaches in class, it has noticed that his interaction with females disturbs boys' performance.

The adolescence age shows one of the most crucial changes in the life of an individual and is classified by a high rate of change and progress (Darby, Cobb & Willingham 2021). Natural procedures drive several factors of such development & growth, and such age is highly represented as an adverse phase of life, a time of storm and anxiety to be experienced and survived (Scraton 2017). Storm, as well as the anxiety, engages three basic features; the first one is the dispute and disagreement with the parents, where there is a probability to become rebellious and resist the adult's power & authority. The second is mood swings, where they try to be much volatile in an emotional way, suffer a lot of extreme mood swings, and often periods of depressed mood. The third is the challenging attitude where there is a high ratio of reckless, breaking the stereotypes as well as the antisocial attitude, which causes the disturbance of social arrangement with the power to damage themselves and the others surrounding them (Arnett 1999). In accordance with the US Academy of child and adolescent's facts for families, the age of adolescence is featured by; physical, emotional and social-emotional growth. The social-emotional growth in the initial youth is featured by the struggle with the self ideology, feeling uncomfortable regarding someone's self along with the body (Khadhijah & Vijaykumar 2018). They are usually concerned about being ordinary, acknowledge that the parents are not entirely perfect; enhanced disagreements with the parents, enhanced impact of the peer groups, need for liberty, possibility to return to "childish" attitude, specifically when tensed, moodiness, rule-and-limit-trial, and more inclination towards the privacy (Fatima & Singh 2018). The middle phase of adolescence is featured by extreme self-engagement, the transformation between having high hopes and the worse self-concept, constant adjustment with the transforming body, and concern about being conventional. They are also more likely to make some distance with parents as a continuous desire of liberty, willingness to be social, getting fame might be a significant concern besides the emotions of love and passion (Scerri 2019). The late phase of adolescence is featured by the more robust feeling of ideology, enhanced emotional durability, and enhanced issues for others, tremendous freedom as well as self-dependency, peer connections are still significant,

growth of many vital links, and the societal, as well as cultural norms, regain some of their significance (Scerri 2019).

It has been represented by the American Early childhood longitudinal 17 research (Initiated in 1998), whereas at the stage of kindergarten, boys and girls have the same execution to read and do some calculations, yet, by the third-grade boys show a slightly higher score of mathematics and a lower score of reading when compared to the girls, and as the learners grow and develop by schooling; the differences between the genders become more obvious (Afridi & Maqsood 2017). And this could probably be one of the additional reasons that cause the decrease of co-educational institutions with the increase of the learners' age in several establishments. Females and males learn in an entirely different way; even their perspective of the world is very different; boys observe the world in activities and re-act to the movement of the objects, whereas females watch the world by their feelings and re-act to people, colours and have much serious listening skills when compared to males (James 2020). Such variances in the gender's characteristics and the different perspectives brought this subject for debate and have led to the decrease of the Co-education establishments simultaneously with the increase of the learners' ages from the primary to the secondary stage of academics. It is being stated that such variances noticeably decrease at the higher education phase, which justifies returning back again to the co-education institutions in universities in the majority of the countries around the globe.

In every educational institution around the world, Co-education can be found in two manners; the establishment of modern co-educational organisations and the transformation of formerly single-gender organisations into co-education organisations. But, on the other side, it was also found that other co-education organisations have changed into single-gender organisations at the secondary stage mentioning a few of the drawbacks of co-education to the secondary school learners' educational performance (Vijayakumaran 2017).

2.4 Student Engagement

The profundity of the word engagement needs description and elaboration. In accordance with Newmann et al. (1992), engagement is integrated with emphasised attentiveness, direct involvement, and commitment. In the classroom's context, the students' engagement is

considered the intelligent and mental investment and the effort made by the pupils for the learning and knowledge (Newmann et al. 1992). To expand this, Finn and Rock (1997) recommend that the mental aspect linked with the feeling of the students' belonging to the school, as well as the behavioural part connected to the contribution of the students in the school activities, construct and produce the engagement elements of the learners. This viewpoint is further supported by Sinclair et al. (2003), whose perspective of 45 pieces of research lead to the all-encompassing descriptions of the engagement of the students as a brief element that consists of influential, behavioural, besides the cognitive features. Depending on such definitions and in the classroom conditions for the aim of this research, engagement of the students might be referred to as the synergy of constructive engagement of the learners, self-encouragement, and benefits of teaching and the learning procedures.

2.5 Behavioural Engagement

Behavioural engagement is among the three fundamental aspects by which the learner engagement features are being researched (Cooper 2014). As per Fredricks et al. (2004), behaviour engagement rotates around the attendance of the students, conduct, as well as their contribution to the school, and oriented actions. An essential feature of this specific aspect is linked with the dynamics of the student and the teacher. Birch and Ladd (1997) recommend that behavioural engagement is actively associated with the constructive links and the connection between the educators and the students. Indeed, and as defined by Patrick et al. (2007), the learners show a higher degree of behavioural engagement when they have the feeling that their instructors are considerate and can understand their needs.

2.6 Gender-related Learning Differences

The difference in the tendency of the males and females, along with the difference in the way they perceive things promote analysis of their learning differences (Anfara & Mertens 2008). Researches have indeed shown that mental procedures vary between both genders. It has been represented by Clements et al. (2006) that males perform better than females at the gross motor skills, as well as the mechanical assignments, whereas the females perform well at the language-oriented tasks. However, this has not been contrasted in the context of the learning environment as to whether the findings were held for the single-sex class or the co-gender classes. The same is

observed in other studies where the focus has been on the individual analysis rather than reaching out a collective decision for a better educational environment. Sometimes the misinterpreted idea about females being better in humanities and English, whereas males are good at science and math, is correct and supported by research. The variances in learning and memory suggest that learners have different learning mechanisms, and the memory recall differs from one to another and changes according to social and biological factors. Kramer, Yaffe, Lengenfelder, and Delis (2003) refer to age and gender differences in the memory performance to hormones.

To establish the existence of gender and age-related variations in memory and learning, Bleecker, Bolla-Wilson, Agnew, and Meyers (1988) chose 196 participants in a good health condition, who are between the ages 40 and 89 (87 males and 109 females). The study used RAVLT to assess memory performance across the ages of men and women. Bleeker et al. (1988) claimed that age and sex significantly impact adults' memory performance. These findings support the findings of Gale et al. (2007), which indicate that studying and memory recall differ according to the gender category. Nonetheless, the conclusions have a low external validity because women were the only participants, and they are only applicable for adults. Also, given the absence of consideration to the learning environment, promote and emphasise the need to conduct this research in the UAE classrooms.

As per Vijayakumaran (2017), language-based mind processing benefits for females have been shown in the class in the writing and reading activities where the females perform better than their male classmates. Conversely, and mindful of the link between structural capabilities and calculation, Li & Wong (2018) showed that males accomplish more in the assignments of spatial abilities than second and third-grade learners. These observations reflect the learning gaps not only in the way of how the two genders learn the subjects; but also in how their natural tendencies follow, where girls tend to be more focused, while boys are found to be more uncaring. These views go in line with the research of Anfara and Mertens (2008) that states the needs of every gender and how they both vary in their requirements about the learning environment. Salomone (2006) has advocated this kind of thought in his faith that females in the single-sex groups have more extended attention periods, better management of impulses, in addition to the complicated fine motor as well as communication abilities. While on the other side, boys being a different group, gain their benefits through their visual and structural abilities; these capabilities that supported them in math and sciences provided this structure of knowledge (Salomone 2006). The

by-product of the research observations of the Al Ain study shows that the impacts – if there are any - of the above-defined gender-oriented, natural variances might be better known within every single-sex and co-educational learning settings. The environment in which education is being provided happens to be an essential contributor to the overall outcome expected of the students (Tully & Jacob 2010). However, several other forces influence the students' performance on particular subjects and an overall aggregate that it would not be easy to single out one as the most dominant factor (Sullivan 2009).

One of the findings that may explain the performance of mathematics subjects in the co-educational schools is the revelation that boys and girls in mixed schools do not exhibit any conspicuously superior qualities in comparison to their counterparts in single-sex schools, either in curricular or co-curricular activities (Sax 2005). Thus the environment of single-sex schools seems to provide the students with better chances of doing well.

The existence of one gender in one school environment is believed to enhance heightens the levels of competition since the participants are seen as equals, and therefore each one of them tends to put more effort to become noticeable and remain competitively relevant (Barmao, Bosire & Mandoch 2008). This competition is most visible where teachers emphasise the fact that none of them has more superior characteristics than the other but is more or less equal in natural endowment.

Single-sex schools also tend to level the rules of competition; thus, there is a balanced playing field that doesn't give anyone an advantage over the other. Further, educating students in single-sex schools seems to contribute to the ultimate confidence of individual students. Girls, in particular, have been found to shy away from contributing to questions and discussions in class in the presence of their male counterparts (Sax 2005). Furthermore, single-sex schools reduce the chances of the teacher's attitude having as much impact on the students' performance. There are more chances that a teacher would more often express a non-accommodating attitude towards a single student rather than a group (Sullivan 2009). In single-sex schools, the expressions of a teacher may be easier to deal with since they will not incline any gender, and therefore the students are able to form a means of coping with a teacher's attitude more than in a mixed school situation where the existence of one gender may limit expressions.

The single-sex environment over again allows boys and girls to fully act spontaneously as their actions are not subject to criticism by the opposite gender. However, it is natural that in the presence of members of the opposite gender, humans will act in a different way from their usual self, thus limiting the chances of bringing out their real self. Therefore, a single-sex school eliminates such attributes and instead advocates for full expression of self, thus enhancing such characteristics as affirmative and assertive. There are also reduced chances of being influenced by unhealthy relationships that may occur in mixed schools. These relationships are contributors to the poor performances in mixed-gender schools, and thus the further the separation, the higher the chances of better performance (Gurian & Steven 2004).

The single school environment denies students representation of the real world where both genders have to coexist. This may instil tendencies of chauvinism or the inability to view the world as a place where creations have to live and complement one another. In essence, the application of the lessons learnt may not be convenient since the environment they were taught in and their domain of application differ in several ways (Tully & Jacobs 2010).

There are also higher chances of both genders coalescing for destructive purposes. Since they are all in the same age group, they are likely to have more understanding and bonding amongst themselves, which further raises their chances of agreeing easily to a negative plot (Paton & Moore 2010). It must be understood that students in their formative years have an explorative mind, and they may sometimes want to experiment with either well-thought objectives or, in some cases, unseen repercussions. This hampers the students' performances since there is the drive of collective behaviour or what is known as mob or crowd psychology.

Contrary to the already mentioned observations where females are getting lesser time from the instructors, it is being observed that male students are the ones getting less time from the teachers in the co-education organisations. It is due to the fact that the instructors usually assume that females are smart and can finish fast when it comes to educational tasks; therefore, they prefer to be surrounded by the girls more. Moreover, this is why teachers always have high hopes for females to accomplish high grades (Aljaad & Hamad 2017). It was also noted that instructors provide more time to the females, and they are being assisted in areas that they should have knowledge about. Males of co-education organisations instead get much scolding and feel that they are being biased due to the much negative attention they get from their instructors (Warrington and Younger 2002). When the male students inquire or ask for more explanation, instructors tend

to see it as a disturbance in class and lecture flow, and thus males are more likely to be rebuked or neglected. This type of communication between the instructors and the male students lead to the less educational execution of male students. Co-education settings have further been observed to have a favourable impact on the educational performance of both the girls as well as the boys. It has been observed by Bosire et al. (2008) that students of Kenya are being taught in the co-educational system and are ranked to be considerably higher when compared with the ones studying in the single-sex organisations in mathematics assessments. They observed that both the females and males in the ordinary co-educational institutions achieve better marks in math than the girls and boys of co-education segregation (girls and boys in co-education who have separate classrooms) and single-gender organisations. Thus it shows that co-education institutions offer much better learning settings for better educational performance in math to girls as well as boys. Lee and Lockheed (1990) have observed that co-education organisations are more inclined towards the educational execution where the abilities of the individuals are enhanced. For instance, observation of the boys showed that boys of co-education organisations performed better than the boys of single-gender organisations in math. This indicates that the co-educational setting encourages the males to perform better in math than females, which reassures male students to have more faith in themselves to perform better than female students in this subject in accordance with the social hopes. Society believes that males are better than females in math, and thus in co-education settings, it is acknowledged by the males to work hard in order to make sure that females are not performing better than them, and in such conditions, boys in co-educational settings work better than boys studying in the single-gender settings. Thus co-education is much advantageous for male students in comparison with the females in the field of math. It is being stated that, when the females are present, it is where the male students stand out in educational performance, they are encouraged to work hard due to the girls surrounding, and it makes them perform much better than the boys in single-gender organisations (Lepore and Warren 1997). The female presence makes male students perform better and work harder, find themselves as better than girls in the aspects of educational performance and will not enable the females to perform better than them. Girls find themselves less strong, which empowers the boys to take the lead in most of the conversations and the activities in the classroom; consequently, girls easily give up in the situations that require any sort of competition. Boys take the lead in the majority of the hands-on activities in the courses such as math and sciences due to their extrovert nature that helps them gain the focus

of their instructors. Usually, boys are favourably impacted in co-education organisations by working harder than those boys studying in the same gender organisations, whereas girls are adversely affected in the aspects of educational performance. The supporters of same-gender institutions state that same-gender secondary schools have a higher academic performance of girls and boys all together in comparison to the co-education secondary schools. It has been found by Riordan (1990) that males, as well as females in single-gender schools, get more marks on standard cognitive assessments than the students of co-education. Same-gender classes are observed to develop a setting that enables the girls as well as the boys to express themselves with freedom without having a thought to be intimidated by the different gender. They might communicate openly in class with their classmates as well as the teachers, without having preferences of teachers or favour towards some particular gender. The learners can ask for help in the domains where they do not understand well without shyness or experiencing any fear of the opposite gender. Thus, single-gender schools constructively impact male and female students' educational performance in every course without biases of any kind regarding gender. Girls are able to participate in classroom interaction without any fear of being shouted at, called negative names, receiving annoying verbal or written notes, or being bullied by boys whenever they give wrong answers or ask for teachers' assistance. On the other side, boys also feel more comfortable interacting with each other and with their teachers without the feeling that girls are favoured, and they are less preferable. Chishiro et al. (2018) conclude that by instituting single-sex education, students will be free of concerns about appearance, fear of making a mistake, and the desire for impressing students of the opposite sex; more energy and time would be devoted to grasping concepts and expanding knowledge; this results in less stress and destruction, as well as continued academic improvement.

It has been observed by Mael (1998) that the outcomes advocating this concept by finding that single-gender secondary schools' learning settings around the world have many overall advantages for girls as well as boys to perform better than the students of the co-education secondary organisations. Such a model of learning setting in same-gender secondary schools constructively impacts the students, either girls or boys in their educational performance. This could be due to the fact that none is being neglected in learning, allowing both the genders to work much better in about every course than the students of the co-education secondary schools. Other than same-gender secondary organisations, being advantageous to the boys as well as girls, it has been stated

that same-gender secondary organisations have many advantages for female students compared to male students. Females in the same gender organisations have the ability to represent their confident nature without having a fear of adverse criticism from the males in the co-education organisations. They practice freedom for themselves and can challenge and compete with themselves in any provided condition as distracting factors which are present in the co-education environments are not present there, and they have the ability to find themselves as same. Same-gender secondary organisations offer convenient places where females might be able to learn and discover the world more. They have the chance to focus on the concerns of gender ideology and the diverse female roles that might be focused on in society today as well as tomorrow. It has been properly indicated by Booth and Nolen (2009) that females who are being in the same gender setting act more like males in competitive conditions.

2.7 The Effects of Student Engagement on Student Achievement

The constructive link between student engagement and achievement shows a connection to which many analysts can certify. Contrary to old and conventional concepts which recommend learner disengagement is a result of low achievement, the latest research has highlighted the presence of an opposite connection (Willms 2003). In accordance with Dotterer and Lowe (2011), and in the classroom conditions particularly, aspects of student engagement either in a direct or an indirect way have a constructive effect on the learner's achievement. The remarkable level of such impact on the learner's achievement has been acknowledged and advocated by the observations of the academic studies (Fredricks et al. 2004; Chen 2008). Indeed, engagement of the learner is being observed to be among the most powerful indicators of achievement (Klem & Connell 2004). A study has reflected that engaged learners invest in learning, and their pride in working, knowledge expansion, and the capability to integrate abilities in their lives are all highly linked with educational effectiveness (Newmann 1992). This research has provided the significance of direct contribution with the students' engagement (Newmann et al. 1992), and the direct link between student achievement and participation is moreover solidified (Finn 1993). However, there are arguments that single-sex schools are better than co-educational schools. For example, the Proponents of single-sex schools highlight that every student will perform better in academics in a single-sex school than a co-educational one. This claim is mainly raised with respect to girls (Boarding 2008). However, many counterfeit arguments are found. The claim that boys and girls

19

learn in different ways suggest and reinforce the need for segregation (Lind & Brzuzy 2008). In addition, reported cases of sexual harassment by boys over girls in co-educational setups also trigger arguments against co-education (Chrisler & McCreary 2010).

Research results and expertise arguments have favoured co-education. Many opinions at the same time have been raised in support of the argument that co-education is the best for children when compared to single-sex education.

Proponents of co-education argue that it develops a level of confidence among the children, especially with respect to expressions in the presence of peers of the opposite sex. According to a study that was conducted in some schools in Canada, it was revealed that children who attended institutions of co-education could comfortably express themselves in the presence of the opposite sexes (Gallagher 2016). This establishes a foundation for the development of children of both sexes as their needs in life that will require inter-sex relations, whether academic or in workplaces in the future, are being met. Developed confidence and relations with people of the opposite sex is, for instance, a tool to interpersonal relationships that help to eliminate discrimination among individuals.

There is also a recognised level of respect among the sexes in co-education. This also lays the foundations for respect for both genders as the children grow up. Again, this respect will contribute to cohesion between the sexes leading to increased understanding and subsequently reducing the conflicts.

The availed opportunity for social interactions between the two sexes in their educational setups also promotes developments of the ability of individuals to easily integrate and make relations with individuals of the opposite sex. This encourages constructive relations such as friendships among individuals of the opposite sex. Eventually, these individuals will develop an environment in which girls and boys, men and women, can freely solicit help and support from one another (Ridley n.d.).

There are also mutual benefits that both sexes derive from each other as they interact in a co-educational setting. For example, although girls are identified as standard setters, their nature to have the best has been identified as a source of inspiration or motivation that encourages boys to exert more effort and work harder to attain these standards.

With this respect, co-education will be seen as a tool for shaping the boy child into a focused individual. Girls similarly learn from boys. Their careful nature often limits their explorations into

new ventures, whereas this is like a hobby to the boys. As a result of the interactions in co-education setups, the girls learn the boys' moves of explorations into problem-solving. The tendency to specialisation in some subjects by gender also makes co-educational setups beneficial to both sexes.

It is also known that girls are identified to be efficient in organisation for time management. On the other hand, though boys are adventurous in problem-solving, they are poor in organisational skills and may not solve their problems on time. Interactions between the two groups can thus be a learning avenue for both parties to succeed (Pomerantz et al. 2002).

Bernal (2006) argued that the co-education system had an impact on increasing the number of registrations in a particular institution. In addition, the diversification attracts both sexes, thus improving diversity in social learning. Therefore, respect and appreciation for one another are developed for better social interactions in society (Bernal 2006).

Apart from the mutual motivational aspects beneficial to both sexes, females' provocative motivation is induced into males. For example, the female achievement in a mixed-sex setup is identified to force males into extra effort to attain that particular achievement (Bank 2011).

2.8 School Influence

The influence of schools on the students' social skills cannot be denied. Schools work as agents to help students understand themselves and accept their differences. For example, the physiological anatomy of boys and girls are different, and their psychology drives their attitude in the class. Educators could easily realise these differences from a very young age, not only in behaviours but also in their social interactions and academic motivations.

The book "Co Education: in its Historical and Theoretical Setting" by L. B. Pekin started the comparison and the debate of which of the two learning methods is more beneficial, the single-sex or co-education (Kark 1983). In the West, Most of the researches on co-education and single-sex education focused explicitly on the pedagogical perception and the students' academic achievements or the academic performance in a particular area or subject. The findings varied from one subject to another and from one country to another (Smyth 2010).

Gender inequality was not always the reason for gender segregation as mentioned by many authors. However, segregation was a sign of gender differences in characteristics, capabilities and brain development.

Larid (1995) questioned the purpose and the real meaning of co-education in her book "Rethinking Co-education" and argued that great philosophers such as John Dewey supported and defended the co-education method against the conservative parties despite that his thoughts were not well articulated or suitable for the current days as he was more polemically in his writings.

In the Great Britain context, many studies were done between 1970 and 1980, where it was proved that girls achieve better academic results in single-sex education. However, those researches were done on small scales and did not compare the results with the girls' previous achievements or with other girls attending co-education classes. On the other side, one of the major studies in Britain was conducted on a large scale by Dale (1974). Dale favoured co-education and stated that it is the correct way to prepare the children for the future and adult life; at the same time, he saw that co-education did not hinder the girls' achievement; although his research findings indicated that there was a low achievement for the girls in some subjects such as Mathematics and Science (Smyth 2010).

In the United States of America, co-education was the standard type of education in all public schools in the 19th and 20th centuries (Hughes 2006). However, the recent reports between the years 2011 and 2012 showed an incensement in the forms of single-sex education in approximately 500 schools in the USA (Resource & Xiong 2012). In 1972, The United States department of education issued Title IX regulations to put an end to the stereotyped differences between boys and girls (Hughes 2006). Title IX and the 19th amendments in the US constitution prohibit the separation by gender in educational institutions unless under very limited circumstances (Education 2006; Resource & Xiong 2012). This act was the result of some findings. For instance, it was proved that the cognitive abilities vary among a group of the same gender as well, not only between boys and girls, besides there were no proven improvements witnessed when separating the genders. Separations also hinder the students from being introduced to all the skills that they might need in life (Education 2006).

The No Child Left Behind act NCLB gave a chance to public co-education schools to open single-sex classes which lie under certain conditions and are committed to having a periodic pedagogical review every two years to find out whether these classes are practical or not. The rationale behind this initiative is built on the belief that each gender needs a different type of

teaching and instructions. In addition, some schools around the USA offer single-sex classes as a response to the parents' requests and choice options under the NCLB legalisation (Tichenor and Tichenor 2019).

A report was issued by Mael et al. (2005), documenting all the previous studies done on the public single-sex schools in the USA, investigating their effect on the students and whether it is more beneficial to either gender of them. One of the critical investigated areas was the school environment that affects the students' achievement regarding social-emotional development. Mael et al. (2005) admitted that there were very few studies in this concern and stated that the opinions varied in this matter and splatted between those researches that indicate positive impacts; and others that show no difference at all. Single-sex method supporters argue that this school system provides a better culture for learning, with more opportunities for the students for growth and pro academic behaviours. School culture is the prevailing atmosphere around the school environment, which creates the overall climate, establishes the informal rules that influence the students' behaviours, and sets the norms that guide socialisation. Single-sex schools supporters believe that the environment has the most prominent role in altering the students' perspectives, whereas, in single-sex schools, the environment fosters the students to focus on academics more than socialisation (Mael et al. 2005). Extended research was done in the 60s and the 70s in the USA to explore the students and their parents' satisfaction in both systems; the results showed that they both prefer the co-education schools as it seems more friendly and facilitates more opportunities for social interactions for males and females all together (Smith 1990). Regarding the claim that parents are more satisfied with single-sex schools, no empirical researches were found showing studies or pieces of evidence to support this statement (Mael et al. 2005).

In Islamic countries, the situation and the political and religious datum are different. The conservative parties believe that boys and girls should be separated as it is unaccepted to allow them to socialise and practice activities together, while the progressivists believe that co-education applies the rules of justice and diversity and see boys and girls as equal human beings (Sari & Fatimah 2017).

One of the downsides of single-sex education, according to Sari (2017), he saw that single-sex schools support and feed the stereotyped role of both sexes. As society has shaped traditional

roles and attributes for each gender, for example, girls are known to be more feminine, delicate and described as weak and require protection, while boys are more masculine, strong and dominant. Sari (2017) focused on his study, which was conducted in Adana, Turkey, on the teachers who have an objective point of view towards the co-education learning method as they are most involved in the students' social life in school and can monitor their cognitive and psychological development. Two hundred forty teachers from eight schools volunteered to participate in his study; he focused on three subscales: the student's choice of the field of profession, the level of academic achievement, and the personal, social development. The results pointed out that teachers do not only highly support co-education; they also do not prefer the single-sex model.

Another study was done to explore the opinions of 131 students in an elementary school in the USA towards single-gender education; the results showed that the students see that the single-sex class has a positive impact on their self-esteem, behaviours and grades (Tichenor et al. 2015).

Though there are arguments on either side of co-education, the critics do not have a solid basis for rejecting co-education. Sexual harassment is claimed to occur in co-educational setups but can still be experienced outside the schools' premises. Besides, there is considerable evidence that both boys and girls develop friendly interactions in co-educational settings. Co-education is thus better because it also helps develop students psychologically into social interactions.

2.9 Research Gap

The research focuses on developing an understanding related to the co-education learning model in the UAE. The analysis of previous studies has shown that the research in this area has been relatively scarce, especially in the context of the UAE and elementary education classes. Additionally, the bridging of this literary gap is necessary given the national focus of the UAE on the education sector. Previous scholars have also shown the increase in co-education settings in the UAE to bring it at par with the international education system. This research aims to gather relevant facts about the students' behaviours and opinions of the educators who have remarkable experience in both models. Earlier research has emphasised the need to assess the advantages and disadvantages is imperative for single-gender and co-educational classrooms (Pahlke, Hyde &

Allison 2014; Yasin, Azim & Qayyum 2020). This research provides the readers with information about both models and a shred of evidence on which class environment is more beneficial and productive for the students in an Arabic, Islamic country. This study aims to respond to the scarcity of literature on the role of gender composition within classrooms in the Arab world; the mixed research approach focuses particularly on the elementary classrooms in the UAE context.

CHAPTER 3 - RESEARCH METHODOLOGY

3.1 Introduction

The chapter shares information related to the methodology adopted for reaching the set research objectives. In addition, it provides details related to the applied research design, philosophy, technique, sampling strategy, data collection and more.

3.2 Research Design

Chettay (2019) states that the research design is a logically connected technique that makes it easier to effectively analyse elements and methodologies to eradicate the current research problem. Generally, there are two types of designs in this situation: descriptive, explanatory, and exploratory. For example, local businesses are believed to be more indulgent and immersed in the culture's requirements due to their constant work meetings, involvement, and socialising. Therefore, this study's explanatory design was chosen to examine a topic thoroughly (Kumar 2018). Bradley (2017), for example, utilised the same methodology to investigate how enterprises in the UAE, specifically in the food and beverage industries, are formed. Kumar (2018) also used a similar research design to analyse education-related aspects for better learning outcomes. According to the studies, this approach aids in a thorough understanding of the study issue by eliciting attitudes, viewpoints, perspectives, and behaviours related to the research issue from a particular demographic such as UAE.

3.3 Research Philosophy

The research philosophy encapsulates the main principles and ideas of the study. Ryan (2018) states that there are two types of research models: interpretivism and positivism. Interpretivism's purpose is to observe an individual and see how he behaves (Saunders, Lewis, and Thornhill 2019). Positive psychology was interested in recognising common features and societal realities, whereas positivism was more concerned with a person's actions (Ryan 2018). The interpretivism approach paradigm was employed in this study to help collect data from teachers. Weber (2004) has also recommended this technique to interpret materialism's objective in the actual setting.

3.4 Research Approach

The research strategy is defined as the techniques and concepts used in work, ranging from broad assumptions to specific methods such as data collection, analysis, and evaluation, all of which contribute to the data interpretation, rather than finding common qualities and societal realities. In contrast, positivism was focused on a person's behaviour (Ryan 2018). According to McCusker and Gunaydin (2015), a study proposal must be related to aspects of the experience of a person and also its cognition in order to clear the original concept. The third and final strategy combines qualitative and quantitative approaches, incorporating both subject-related and explanations related to research and extensive graphical data visualisation. The strategy used in this study is the qualitative approach; used to analyse co-education in elementary schools and its impact on the students' behaviours and learning environment. The use of qualitative research helps to address sample reactions according to the qualitative method, which gathers data from various perspectives. However, Malik and Lenka (2019) questioned whether it effectively emphasises the influence of policies and practices.

3.4 Research Sample

Contributors are included in the research sample, and they provide crucial knowledge for analysing the study's findings. Typically, the study's sample size consists of 10 to 20 teachers in a school located in the UAE that partially practices the co-educational model. The key rationale for selecting them as a sample is that the topic under examination directly exposes them. The chosen sample helps to answer the determined research questions related to co-education and explains how it has affected their performance as well as the learning environment.

3.5 Sampling Technique

The sampling strategy is two; probability and non-probability. The second type of sampling strategy, named non-probability sampling, is selected based on the sample members' and researcher's judgments while doing research (Chih-Pei & Chang 2017). The researchers' point of view is based on identifying specific participant needs such as gender, demography, attitude, and age (Kumar 2018). In this study, data was collected using a non-probability sampling approach. Taherdoost (2016) did research and concluded that using the non-probability sampling procedure; the researcher might readily discover the methods and strategies that could be applied. Moreover,

this study used a purposive sampling approach which is preferred above others as it gathers data based on the research's unique qualities. For this, the teachers selected are all working in the elementary classes in the UAE context.

3.6 Data Collection and Analysis

The data is collected using a semi-structured interview approach, where interviews are held online via the Zoom application with the teachers. The duration of the interview is kept from 30 minutes to 40 minutes based on the feasibility of the participants. The questions that are asked are;

- What are your thoughts on co-education in UAE?
- Have you observed the difference in the learning behaviour of the single class student and the co-gender classes?
- Do you believe classroom interactions influence the performance of both genders?
- To what extent do girls in co-educational schools have equal chances as boys to develop their potentials?
- Do you believe there are substantial differences in the learning behaviour between students in single and co-gender classes?
- Do you prefer co-education among most pupils in elementary schools or not?
- Do you believe the intellectual achievement of the students is affected in the co-education environment?
- What are the strategies that you have tried to change the behaviour? What has worked?
- Does the student's behaviour affect the teacher's ability to teach?

The analysis of the data is held using thematic analysis, which is argued to be the most important and widespread technique to collect the data. For the qualitative research, the thematic analysis is chosen as it helps categorise the themes that are evident from the interviewee's responses. Moreover, the thematic analysis demonstrates the entire process of how the data was recorded, organised, structured and revealed, and highlights the credibility of the results achieved; therefore, it provides a more transparent approach. However, the downside of the thematic analysis is that it is mainly a phrased based method, which at times might become difficult to interpret (Kumar 2018). In case this happens for this research, the researcher will contact the interviewee to ensure that the correct and accurate meaning is derived. Initially, the collected data encoding and decoding

are held. Then, the verbatim for all the recordings will be prepared and transcribed. Finally, each of the recordings is labelled as per the initials of the respondents, which conceal the identity while enabling only the researcher to learn and recognise the particular participant.

3.7 Validity and Reliability

The research validity and reliability will be ascertained to establish and sustain the research quality. The validity of the research is defined as the conclusion that is extracted from the study, whereas the reliability of the study is defined as the ability of the results to be replicated across different settings (Mohajan 2017). The validity of the research will be ensured through appropriate planning to attain the set research objectives. This will also ascertain that throughout the study, logic and transparency is ascertained. The use of the open-ended questions further helps to maintain the reliability as well as the validity of the research restricting the interviewer to remain focused on the set research objectives (Dikko 2016).

3.8 Research Ethics

However, the researcher might experience challenges while elucidating the discrepancies concerning the collection of the data (Greener 2018). The researcher also needs to ensure the careful planning of the research, which serves to be an extremely time-consuming activity. In addition to it, the transcription of the interview and accessing the interviewer, along with the zoom meeting, are all extremely time-consuming. This procedure is done to ensure that accurate and optimised results are achieved.

3.9 Summary

The table below sums up the research methodology used in this research.

Table 1 Methodology

Research Questions	What are the factors that affect the student's behaviour in co-education elementary schools?
	What is the change in the learning environment resulting from co-education classrooms in elementary schools?

	What is the difference in student achievement within the two different gender-based contexts? What are the ways to enhance the students' performance in co-education elementary schools?
Research Approach	Qualitative Research Approach
Research Sample	20 Teachers that teach elementary classes in UAE
Research Instrument	Semi-structured interviews
Data Analysis	Thematic Analysis

CHAPTER 4 – RESULTS

4.1 Introduction

The primary focus of this chapter is on the provision of explanation and interpretation of the achieved findings. It provides the transcripts of the interview as well as the findings derived from it, aiding in generating a better input where implications are made, and conclusions are drawn. In addition, it allows the researcher to demonstrate an understanding of the study and its context.

4.2 The influence of classroom interaction on student performance

Since the focus of this research was on analysing the student's behaviour in a co-educational environment of an elementary school, different factors were identified. Primarily, the evidence found showed that the educational benefit is attained as a result of classroom interaction.

As it is true that children need some time to enjoy and chat, in the co-education system, the interaction level becomes higher due to the talks between girls and boys. However, this might hinder the performance level of students (Fatima and Singh 2018), as classroom interactions sometimes break discipline and distract the flow of the learning process. For example, when the students chat with each other during the lesson, this causes a lack of knowledge among them; when they do not listen or pay attention to their teacher's instructions, the desired learning does not occur, and their performance will be badly affected. Furthermore, side interactions also impact the students and teachers' communication, which directly disturb their performance (Kellogg 2020). For example, if a teacher is providing a further explanation to any student while other students are involved in any other sort of side communication, the academic performance will undoubtedly be affected. Luckily, due to cultural norms that prevail in the Arab countries, its tendency is low.

It is necessary to have healthy competition between peers in education. Competition is an integral part of life. Besides, it allows students to cope with failure if they cannot win and feel passionate about subjects. A co-education school environment encourages healthy competition with students of the opposite gender, allowing students to maintain dignity in the face of failure.

For instance, one of the teachers stated,

"*competitions stimulate the feeling of equality between the students in the setting… The students learn from and through each other… They can share their ideas and challenge their thoughts*". Another teacher added to it, stating that,

"*I have seen my students learn from each other… no dominance of one gender is observed; in fact, I was pleasantly surprised that the class was able to discuss and share their ideas and opinions effectively and objectively*".

It is equally imperative that this collaborative environment allows some children to overcome their fear of the opposite gender, whether they work as a united team or against each other. Boys and girls tend to be apprehensive and reluctant to start a conversation with people from the opposite gender due to differences in their behaviour. Co-education fosters a healthy environment where students are forced to interact with one another, thus building a solid foundation for future successful partnerships. It is essential that children get the chance to work with seniors and colleagues of all genders, whether they are female or male. This comfort zone created by co-education will shape their behaviour in the future.

4.3 Girls and boys in co-educational schools and their potential

It depends on the student to which extent he or she can invest time and skills in learning which shows their potential. Boys and girls can learn in different environments based on their learning ability, which is why the co-educational environment is beneficial for both of them and develops gender equality between them.

Reflecting on the real-world scenario, one of the teachers stated,

"*as far as my learning is considered, I believe that the co-education classroom has helped the students to experience the challenges in a professional manner, where both genders are to exist collaboratively...*"

Reddy (n.d) expressed the same opinion in her online journal by stating, "*co-education systems nurture challenges among the opposite genders in a healthy way, that helps you to maintain your dignity. It also educates you to face your failures and learn from them rather than turn them into the revengeful act*".

Another teacher has also reflected on it and stated,

"*I am happy to see my students communicate with each other without hesitation… this is indeed a big achievement since the world we are moving in is based on gender partnership*".

Gender equality is considered in terms of equal access to education, classroom participation, topic choice, and academic performance competence, among other things. Another point of contention is the efficacy of different forms of education (co-educational or single-sex) at confronting and rejecting established gender norms (Ashraf 2019). Co-education is also found to help the students learn about how to function in mixed-gender situations. As part of co-education, students learn how to behave and develop mutual respect for one another, which is necessary for their development to occur both socially and culturally. This goes in line with the responses provided by the participants, stating that,

"The learning and mingling in one classroom in the school, I have observed that my students have developed mutual understanding towards each other… And I see no hesitation or partiality among the genders when it comes to performing activities like questioning academics or sports".

The exposure in the learning environment with other gender was also observed to be effective in terms of identifying one's own character. This is effective as it helps learn about one's mindset, the capability to work together, and the competition one experiences.

Another participant stated,

"According to me, Co-education is very important as it helps in understanding about the character, mindset and performance of the opposite gender".

4.4 The difference in the learning behaviour of the single-class student and the co-gender classes

Gender roles refer to the patterns of attitudes, behaviour, and expectations that are connected with specific gender with being female or male. For being straightforward, psychologists sometimes separate differences of gender according to social roles from sex differences based solely on physiology and anatomy (Fang 2020). Learning behaviour of a co-education is the behaviour in which girls and boys learn to respect each other (Nishimura et al. 2020).

Gender matters more than sex in education. In line with this definition; There are several differences between the learning behaviour of the single class student and the co-gender classes, as it has been observed that students in co-gender classes do not see each other from a sexual

angle but communicate as partners and learn in a better and effective way compared to single class students.

"Although initially, I observed that they used to associate certain aspects with gender, for instance, this is a boy's game, or this is a girl's game.... However, we have consciously made an attempt to exclude any affirming stereotypes which they have about another gender".

Accordingly, another participant stated;

"I have found this co-education setting effective, despite it being somewhat against the norms that we are used to… however, the students were observed to have overcome the kind of shyness, hesitation or fear as a result of co-education system where they are provided the opportunity to talk and create a friendly environment without any fear".

Another participant highlighted an important aspect of the co-education stated;

"It is also a common observance that the boys behave decently in the presence of the girls… They do not use rough or foul language in the classroom compared to when they are a part of the single-sex educational classes".

Children tend to act and behave in a decent manner in the presence of the other gender. In line with a recent study, this is true; once the children have been exposed to the opposite gender for a significant amount of time, they adjust their behaviour accordingly. Therefore, co-education serves as an imperative component in building the character of both boys and girls, demonstrating that it is important to respect and listen to people of the opposite sex in the same way they would respect and listen to someone of their own.

Whether at home, in the workplace, or the classroom, misunderstandings can cause contention between peers. As a result of a co-educational system, a better understanding between the two genders is fostered, leading to less chance of discrimination and more respect for both.

4.5 Co-education among most students in elementary schools

The classroom environment refers to the culture of respect and caring that the students have towards each other that is intentionally produced by the teacher; this manner initiates the relationship-building progression. The classroom climate in co-education elementary schools is found to be more positive. This is based on the fact that the mixed-gender classroom enables the

students to be respectful and care towards the other gender. Teachers have reported that this practice aids in relationship development, where students form productive relationships with the opposite gender, which enables them for better social acceptance and academic cooperation.

A kind of community climate is observed in mixed-gender classrooms, which is found to be in line with the changing Arab culture, where girls and boys are given equal opportunities, such as that of women driving or reaching the high leading roles and positions.

A better behaviour among the pupils is reported; for instance, one of the teachers said,

"in my co-gender classroom, we have helped our students understand that we are building a small community that everyone is part of… They also earn treats and rewards all the time. It's all positive reinforcements that help to foster independence".

One of the most notable advantages of co-education is that children learn from an early age to collaborate with both sexes (Santamaría Graff 2021). The women and men collaborate at home and in the office, and kids who attend the co-gender schools are exposed to cooperation even before they reach the workforce. Students learn to appreciate each other because of the mutual understanding created by co-education in schools, colleges, and universities (Sari 2017). Pupils become aware of each other's talents and faults and understand the capacity to accept one another for who they are. Boys and girls become more able to cultivate mutual respect, understanding, and support when they study together. Upon gaining an appreciation for their own and each other's individual values, they become aware of their own. Collaboration and cooperation are the keys to celebrating differences, as well as similarities, among girls and boys working together. Co-education provides students with diverse perspectives through lively debate, critical questioning and exploration that lead to the development of skills. Both boys and girls are encouraged to assume leadership roles in all areas of learning, providing strong role models for all students.

4.6 Impact of co-education environment on intellectual achievement of the students

There is a huge impact for the co-education environment on future planning as students are able to plan their careers better when they study in a co-education environment. Co-education, as expected, has widened each school's activity base (Aragonés-González et al. 2020). The findings showed that the students were able to engage in more activities, show better involvement in class,

as well as question each other's responses. The findings of the interviews also demonstrated that they were able to develop their intellectual ability due to the competitive environment formed in the classroom. The co-education classrooms were found to show that the students had better intellectual ability given the competition and response to the mechanism that it follows. The students' communication skills were also found to be better, where they were more mindful of what to speak and what is not supposed to be said in front of the other gender. This also reduced the discrimination that the students observed. These findings are derived from the responses of the teachers, which were as,

"umm… it definitely enhances their intellectual ability… For instance, as a part of the co-education classes, I have observed my students give their best in terms of involvement, while boys sure have displayed better and composed attitude".

Another teacher has also endorsed this statement and has highlighted that

"The students act positively in the co-education learning environment, where I have seen them exposed to more good ethical practices, proper dressing, disciplined language and more".

To overcome present hurdles to inclusive physical education, it is crucial to investigate how gender is disrupted in physical education and analyse whether these disruptions serve as the foundation for change or are co-opted by prevalent physical education discourses (Duncombe et al. 2020).

"I have applied several strategies for changing the behaviour, and it has worked so far".

One teacher highlighted that and added,

"Moreover, I have observed that as compared to the single-gender classes, these co-education classes are able to overcome or disentangle the link that prevails between gender-specific behaviours as well as attitudes and other prevalent practices".

Another teacher advocating on behalf of others stated,

"We are also in favour of co-education system because, in co-education classrooms, students of both sexes try to get high position to each other so in that situation competition environment is created automatically that is a really good thing".

All of the teachers recognise that each student has unique learning needs, abilities, and interests, and they understand how to develop students with a variety of interests and skills. As a result, every girl and boy is welcomed into a safe and supportive environment, where they feel they can

express themselves freely and are encouraged to participate in diverse aspects of school life actively.

4.7 Impact of student's behaviour on teacher's ability to teach

The findings of this question helped the research and learning that co-education settings have impacted students' behaviour in the Arab culture. For example, one of the teachers responded,
"To be honest, I was surprised at the response. I did not assume that changing the setting would have such an influence on the students' interaction".
"Apart from that direction, student behaviour was also found to be influenced in terms of their academic process… the questioning that takes place in the single classroom does not get the same response as the questioning in the mixed-gender classroom; better discussions and wider learning outcomes".
The Students' behaviour was found to be better in co-education. For instance, one of the respondents stated,
"Yes, *co-education supports a good decent environment with more value-based education emphasising respect and love for each other"*.

Teachers think that co-education affects students' intellectual development. Student behaviour has a significant effect on both students' academic progress and the teacher's capacity to instruct, which is why it is important for the teachers to focus on maintaining students' behaviour and then they would be able to teach them efficiently.

Behaviour refers to how people conduct themselves or behave in different situations, particularly in reaction to external stimuli; everything that an organism does that incorporates action and response to the trigger. Behaviour is a quantifiable, observable phenomenon (Fatima and Singh 2018). Behaviour also refers to the detectable effect of teacher and student performance in various institutional activities (Khadhijah and Vijaykumar 2018).

Building enduring social and professional relationships is more manageable when girls and boys learn and develop together in a co-educational environment. Students who learn in mixed-gender settings become powerful, independent, rounded, balanced individuals by the end of their education. As well as understanding one's background and reacting in a socially acceptable manner

pertains to the individual's ability to understand their background. Thus, social intelligence is an extremely valuable tool that children need to develop. Social intelligence helps children gain an understanding of what it is to be part of society. By developing healthy relationships with both family and friends, helps children succeed. By improving their emotional management, they are also more likely to succeed.

4.8 Lesson Observation Results

Overall, this research focuses on the analysis of co-education in the UAE for elementary school students. This research has used a qualitative analysis approach based on a semi-structured interview approach to achieve the findings as per the research objectives. The analysis was held using a thematic analysis.

The findings show that co-education does have a remarkable impact on the students' behaviour and learning environment. Based on the analysis performed, it was observed by the teachers that the students were more confident, more engaged, and more attentive in the mixed-gender classrooms. The learning environment was also found to be more productive among the Arab classrooms.

The findings also showed that both the genders were able to develop mutual respect for each other; they could interact and engage without reluctance, which is significant progress, given the cultural and religious norms practised in the region. The decision to introduce co-education in the Arab elementary school is found to benefit the students' learning outcomes and the observed behavioural changes, which are generally positive. Some examples that are shared concerning the behavioural aspects of the students include their ability to be competitive, show mutual respect, behave appropriately, and overcome the hesitation observed for the other gender. The student's engagement level is also found to have enhanced as observed by the teachers. Thus, it shows that applying the co-education classroom is effective not only for academic development but also for the social development of the students, where they are able to value each other's contribution while being competitive.

CHAPTER 5 – DISCUSSION AND CONCLUSION

5.1 Introduction

The findings of the research are presented where the interview findings are argued, compared and contrasted. The limitation, and future concerns, are also discussed in this chapter.

5.2 Discussion

Co-education is the model of education in which girls and boys learn together in the same classroom. On the contrary, the single-sex model is a single-gender setting where only girls or boys learn together. The learning behaviour of co-education is the behaviour in which girls and boys learn to communicate respectfully with each other (Nishimura et al. 2020).

The focus of this research is on the analysis of co-education in the UAE context for elementary school students. The research is of high significance given the expanding scope of the education global. The primary reason behind conducting this study was to explore some of the the objectives that inspired the ministry of education in the UAE to take this initiative to integrate both genders in the elementary phase. Besides, out of the author's background as a practitioner and a current elementary supervisor who has been observing plenty of behavioural issues in single-gender classrooms, there was a motivation to examine the causes for this phenomenon. Most of the detected single-sex class problems are related to gender characteristics and the condensation of either boys or girls in the same place. Therefore, there was a drive to prove that even if co-education has some demerits, it still has numerous positive impacts on the students' learning environment and future life.

In order to achieve the findings as per the research objectives, this research has used a qualitative analysis approach based on a semi-structured interview method. A total of twenty elementary school teachers in UAE were interviewed about co-education in elementary schools and its impact on the students' behaviours and learning environment. The analysis was held using a thematic analysis. The findings show that co-education has a notable effect on the students' behaviour and learning environment. Based on the analysis performed, it was observed by the instructors that the

students feel more confident, more engaged, and more attentive, and the learning environment was also found to be more productive in the co-educational classrooms.

According to the participants' responses, teachers have an advantage in co-education, which includes the enforcement of discipline in the classrooms; in this learning behaviour, both genders experience positive changes in their personalities. In the same manner, girls and boys learn and acknowledge how to live and interact with the opposite gender in the future. It means there is a big difference between co-education and a single education system in terms of the class environment that shapes the students' characters.

From the research, it has been determined that classroom interaction of male and female influence their performance. The engagement level similar to other studies has also been associated with the present study. It is endorsed by the earlier studies such as that of Birch and Ladd (1997), which recommend that behavioural engagement is actively associated with the constructive links and the connection between the educators and the students. Likewise, in the work of Patrick et al. (2007), the learners show a higher degree of behavioural engagement if they have a real idea that their instructors are considerate regarding them. On the other side, single class students' behaviour includes; if there are only girls studying in a class, they are comfortable learning with a female teacher. Same as, if only boys learn in a classroom, they are comfortable learning with a male teacher. In this learning behaviour, both genders' mindset is safe to attract each other. There is no chance students can be involved in any non-academic activities in this learning behaviour. It has also been observed that in the co-education system, the interaction among boys is much more than the single classroom education.

Furthermore, the study shows that the sense of competition is highly evident in co-education settings; males and females feel more challenged when they are educated together. Boys often strive to excel over girls, and girls go out of their way to show boys that they are just as smart as them. Usually, the competition among students is friendly and gives them a greater sense of motivation to achieve their goals. Likewise, The observations that Bosire et al. (2008) have conducted in Kenya on the mathematics results for students who were taught in co-educational classes and compared them to those students who learn in single-sex classes proved that boys and girls who learn together in the same settings had achieved higher grades than those educated in

single-sex environments. Thus it shows that co-education organisations offer much better learning settings for better educational performance in math to girls as well as boys.

Participants encouraged the co-gender classes for their influence on gender equality. Numerous studies have revealed inconsistent findings of school types and their relationship to equality of gender and the creation of the identity of genders among pupils. In the instance of girls' single-sex schools, Sari (2017) found that they were marketed as safe environments for personal growth free of male intimidation. Numerous African case studies have shown the beneficial effect of single-sex (girls) schools on girls' academic attainment. Apart from academic accomplishment, several investigations have shown that single-sex schools benefit students' speaking ability, self-esteem, physical activity involvement, and topic choices. However, co-educational settings have historically been seen as dangerous environments for females, where they are ignored and denigrated (Scerri 2019). Moreover, despite the difficulties associated with entry to all-girl schools, the UNESCO report notes that all-girl schools have generally been the target of male predators who refer to them as Candy Shops in Africa. In a review article. Santamaría Graff (2021) emphasizes the necessity of co-educational environments for students' social development, citing the isolation of boys and girls in single-sex schools as the barrier to acquiring good interpersonal skills as adults. This opinion aligns with the participants' views who see that upon instructing both genders to learn and socialise in the same environment from an early age, they grow up with appreciation and respect for each other.

When considering the distinctions, bear in mind that they represent average tendencies and that several unique exceptions exist. Each instructor is aware of particular lads that are not athletic or of specific ladies that are very fidgety in the class (Afridi and Maqsood 2017). The individual variations make it tough for justifying giving males diverse degrees of resources or assistance for sports, physical education, or athletics. Though, the outcomes define that children who defy norms of genders related to physical talents can benefit from affirmation or emotional support from instructors, simply due to they are low probable for getting it elsewhere.

Studies have applied several strategies for changing the behaviour, and it has worked so far. However, to overcome present hurdles to inclusive physical education, it is crucial to investigate how gender is disrupted in physical education and analyze whether these disruptions serve as the

foundation for change or are co-opted by prevalent physical education discourses (Duncombe et al. 2020). Additionally, eliminating gender means disentangling the linkages between gender-specific behaviours and attitudes and other prevalent practices and discourses in physical education.

Teachers must be considerate in their responses to students' criticisms. Teachers often reply to pupils with praise, acceptance, remediation, or criticism. Teaching is the creation and management of a scenario that has gaps or impediments and in which a person attempts to overcome the obstacles they confront (Kellogg 2020). Behaviour refers to the action that a person exhibits in response to his surroundings at various times; thus, understanding this helps the teacher draw effective teaching strategies leading to the development of a more conducive learning environment. Teachers and administrators at all levels and categories should be aware of their duties in today's educational environment; they should realize that their responsibilities and attitude are fluid and alter in response to changes in society and the educational system.

To conclude, Co-education at young ages plays a significant role in preparing both genders for their future workforce. When it is chosen to send a child to a mixed-gender school, whether a boy or a girl, they will benefit from greater social skills and self-esteem and be better prepared for a varied society in which men and women play significant roles. This sort of inclusive atmosphere encourages the children to respect their opposite-sex colleagues, exposes them to other perspectives, and, according to some, may even help break down stereotypes of gender. Furthermore, in the early stages of school, team-building activities teach both genders the value of coexistence in the manner that only a co-educational system may deliver. Finally, co-education prepare the students for the future where globalization and open horizons.

5.3 Limitations

The findings of this research are limited in terms of the research focus and research scope. For instance, this study has focused on the analysis of the co-education system in the elementary school teachers only. This limits the applicability of the findings, given that they have limited exposure to different settings. It also shows that the findings cannot be deployed to another educational

setting since the dynamics, age group, and student maturity level differ with every stage. Another limitation is that of the region, where the achieved findings, although significant, cannot be generalized across different regions. It is because the Arab region and especially the Arabian Gulf differs from other regions due to the difference in the socio-economic dynamics. In addition to this, the additional limitation that prevails includes the use of the qualitative methodology, where although comprehensive results are obtained, the findings remain limited to a particular area as the sample is small. The use of the quantitative research method would have helped to achieve the data from a more extensive set of teachers, which helps enhance the generalizability of the research.

5.4 Future Scope

For future analysis and development in this research area, it is important that new aspects and variables must be explored. For instance, the research only collected input from the teachers; however, for expanding the research area further, future studies can include a diverse sample, where not only teachers but also parents and principals could be included. The input from the parents can appear to be highly effective, where researchers can focus on deriving insights such as changes in the behaviour of the student, his learning tendency as well as socialization practices. This also helps learn the development that has undergone as a result of co-education among the students, leading to more effective outcomes. Likewise, different methodological approaches can be adopted. Since this research has only used the qualitative method of data collection, future researchers can seek the use of the quantitative method of data collection or mixed for deriving more insightful results.

References

Afridi, S., & Maqsood, S. (2017). Perceived Stress, Life Satisfaction and Self-Esteem among Women Studying in Co-Education and Uni-Gender Institutions. Peshawar Journal of Psychology and Behavioral Sciences (PJPBS), 3(1), 45-61.

Al Serkal M. M. (2017), Ranked: UAE in top 25 best countries in the world. Gulf News &[online]. Available at: https://gulfnews.com/guides/life/ranked-uae-in-top-25- best-countries-in-the-world-1.1990112

Aljaad, M., & Hamad, N. (2017). Whatsapp for educational purposes for female students at College of Education–King Saud University. Education, 137(3), 344-366.

Anfara Jr, V. A., & Mertens, S. B. (2008). Do single-sex classes and schools make a difference?. Middle School Journal, 40(2), 52-59.

Aragonés-González, M., Rosser-Limiñana, A. and Gil-González, D., 2020. Coeducation and gender equality in education systems: A scoping review. *Children and Youth Services Review*, *111*, p.104837.

Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. American psychologist, 54(5), 317.

Ashour, S. (2020). Quality higher education is the foundation of a knowledge society: where does the UAE stand?. Quality in Higher Education, 26(2), 209-223.

Ashraf, E. (2019). *A STATISTICAL STUDY OF PARENTS VIEWS ABOUT CO-EDUCATION* (Doctoral dissertation).

Brown, J. D., & Rodgers, T. S. (2002). Doing second language research: An introduction to the theory and practice of second language research for graduate/master's students in TESOL and applied linguistics, and others. Oxford university press.

Burr, V. (1995). Social constructionism. London: Routledge.

Burr, V. (2003). Social constructionism (2nd ed.). London: Routledge.

Chettay, P. (2016). Importance of research approach in a research. [Online] Available at: https://www.projectguru.in/selecting-research-approach-business-studies/#:~:text=The%20research%20approach%20is%20a,the%20research%20problem%20being%20addressed.

Chih-Pei, H. U., and Chang, Y. Y. (2017). John W. Creswell, research design: Qualitative, quantitative, and mixed methods approaches. Journal of Social and Administrative Sciences, 4(2), 205-207.

Chishiro, H., Chubachi, Y. and Nakamura, M., 2018, January. Co-education of master course students and business people. In *Proceedings of the 6th International Conference on Information and Education Technology* (pp. 89-96).

Coleman, J. S., Jonassohn, K., & Johnstone, J. W. C. (1961). Social climates in high schools (No. 4). US Department of Health, Education, and Welfare, Office of Education.

Dale, R. (1974). Attainment, Attitudes and Overview. Vol. 3 of Mixed or Single-sex Schooling.

Darby, A. N., Cobb, T., & Willingham, L. (2021). Faculty Perspectives on Co-Education and Reciprocity. Journal of Higher Education Outreach and Engagement, 25(2).

Dikko, M. (2016). Establishing Construct Validity and Reliability: Pilot Testing of a Qualitative Interview for Research in Takaful (Islamic Insurance). Qualitative Report, 21(3).

Duncombe, R., Short, M., Gersbach, K. and Whitaker, L., 2020, November. Anti-othering co-education. In *2020 ANZSWWER Symposium and NFEN Workshop*.

Emirates News Agency (2016). UAE Cabinet approves Dh248b federal budget for 2017-2021. Gulf News. Available at: http://gulfnews.com/news/uae/government/uae-cabinet-approvesdh248b-federalbudget-for-2017-2021-1.1921185

Erdoğdu, M. Y. (2020). The roles of attitudes towards learning and opposite sex as a predictor of school engagement: mixed or single gender education?. Palgrave Communications, 6(1), 1-9.

Fang, X.I.E., 2020. Exploration on the Application of Mind Mapping in University and Enterprise Co-education. *The Theory and Practice of Innovation and Enntrepreneurship*, *3*(3), p.182.

Fatima, T., & Singh, V. (2018). Social maturity of adolescents in relation to their education system: Co-education and single sex education system. International Journal of Home Science, 4(3), 160-161.

Fawwaz, L. (2017). Moral education and the march towards a better life. The National [online]. [Accessed 27 September 2021] Available at:

https://www.thenational.ae/opinion/moral-education-andthe-march-towards-a-better-life-1.37144

Gallagher, K. (2016). Drama education in the lives of girls. University of Toronto Press.

Gergen, K. (2009). An invitation to social constructionism (2nd ed.). London: SAGE Publications Ltd.

Goldin, C., & Katz, L. F. (2011). Putting the "co" in education: timing, reasons, and consequences of college coeducation from 1835 to the present. Journal of Human Capital, 5(4), 377-417.

Greenough, R. (1970). UNESCO and Education in Asia.

Hatch, M. (2014). The maker movement manifesto: Rules for innovation in the new world of crafters, hackers, and tinkerers. New York: McGraw-Hill Education.

Hughes, A. F., & Adera, B. (2006). Education and day treatment opportunities in schools: Strategies that work. Preventing School Failure: Alternative Education for Children and Youth, 51(1), 26-30.

James, A. (2020). Exploring the differences in social interaction with the opposite sex amongst individuals from co-education and single-sex schools: a quantitative study on female university students using questionnaires. The IIE.

Kark, M. (1983). The influence of co-education and single-sex education on adolescent development (Doctoral dissertation).

Khadhijah, Z., & Vijaykumar, S. D. (2018). Difference in Social Anxiety among Students of Single-sex and Co-Education Schools. The International Journal of Indian Psychology, 6(4), 118-126.

Kleinau, E. (2020). Gender Constructions in Progressive Education and their Impact on Co-Education. In New Studies in Deweyan Education (pp. 37-48). Routledge.

Kumar, R. (2018). Research methodology: A step-by-step guide for beginners. Sage Publications Limited.

Laird, S. (1995). Spiritual education in public schools?. Religious Education, 90(1), 118-132.

Lee, V. E., & Bryk, A. S. (1986). Effects of single-sex secondary schools on student achievement and attitudes. Journal of educational Psychology, 78(5), 381.

Lee, V. E., & Lockheed, M. E. (1990). The effects of single-sex schooling on achievement and attitudes in Nigeria. Comparative Education Review, 34(2), 209-231.

Li, G., & Wong, W. I. (2018). Single-sex schooling: Friendships, dating, and sexual orientation. Archives of Sexual Behavior, 47(4), 1025-1039.

Mael, F., Alonso, A., Gibson, D., Rogers, K., & Smith, M. (2005). Single-Sex Versus Coeducational Schooling: A Systematic Review. Doc# 2005-01. US Department of Education.

Malik, P., and Lenka, U. (2019). Identifying HRM practices for disabling destructive deviance among public sector employees using content analysis. International Journal of Organizational Analysis.

McCusker, K. and Gunaydin, S. (2015). Research using qualitative, quantitative or mixed methods and choice based on the research', Perfusion, 30(7), pp. 537 - 542.

Ministry of Cabinet Affairs (2018) National Agenda. [online]. [Accessed 10 November 2021]. Available at: http://uaecabinet.ae/en/national-agenda

Nishimura, T., Yoshida, Y., Oshiyama, C., Ijuin, K., Murata, C., Iino, N., Tawaki, Y., Hayashi, Y. and Kobayakawa, M., 2020, December. Interweaving Data and Knowledge for Co-education Augmentation. In *2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)* (pp. 961-964). IEEE.

Pahlke, E., Hyde, J. S., & Allison, C. M. (2014). The effects of single-sex compared with coeducational schooling on students' performance and attitudes: A meta-analysis. Psychological bulletin, 140(4), 1042.

Reddy C. (n.d). Advantages and disadvantages of co-education [online]. [Accessed 1November 2021]. Available at: https://content.wisestep.com/advantages-disadvantages-co-education-system/

Ridge N. (2014). Education and the Reverse Gender Divide in the Gulf States: Embracing the Global, Ignoring the Local. New York: Teachers College Press.

Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. Nurse researcher, 25(4), pp.41-49.

Santamaría Graff, C., (2021). Co-investigation and co-education in 'family as faculty'approaches: A repositioning of power. *Theory Into Practice*, *60*(1), pp.39-50.

Sari, M. (2017). Teachers' Views on Co-Education: Co-Education or Single-Sex Education?. Acta Didactica Napocensia, 10(3), 35-44.

Sari, R. C., & Fatimah, P. R. (2017). Bringing voluntary financial education in emerging economy: Role of financial socialization during elementary years. The Asia-Pacific Education Researcher, 26(3), 183-192.

Saryeddine, B. N. (2018). Single-gender vs. Coeducational Classrooms in the Primary School: A Comparative and Relational Case Study of Student Engagement and Achievement (Doctoral dissertation, The British University in Dubai (BUID).

Saunders, M., Lewis, P. and Thornhill, A. (2019). Research Methods for Business Students. Pearson.

Scerri, S. (2019). Living, learning together: exploring children's attitude towards co-education in the Secondary (Bachelor's thesis, University of Malta).

Scraton, S. (2017). Equality, coeducation and physical education in secondary schooling. In Equality, Equity and Physical Education (pp. 139-153). Routledge.

Smyth, E. (2010). Single-sex education: What does research tell us?. Revue française de pédagogie. Recherches en éducation, (171), 47-58.

Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. How to Choose a Sampling Technique for Research (April 10, 2016).

Taylor, P.C. and Medina, M. (2011). Educational research paradigms: From positivism to pluralism. College Research Journal, 1(1), pp.1-16.

Tichenor, M., & Tichenor, J. (2019). Collaboration in the Elementary School: What Do Teachers Think?. Journal of Curriculum and Teaching, 8(2), 54-61.

UAE. (2016). UAE Vision 2021. UAE Vision 2021, p. 26 [online].Available at: http://www.vision2021.ae/en/our-vision.

Vijayakumaran, R. (2017). Minimizing Gender Stereotype Threat for Female Students in the Math Classroom.

Weber, R. (2004). Editor's comments: the rhetoric of positivism versus interpretivism: a personal view. MIS quarterly, pp.iii-xii.

Wiseman, A. W. (2008). A culture of (in) equality?: A cross-national study of gender parity and gender segregation in national school systems. Research in Comparative and International Education, 3(2), 179-201.

Woiceshyn, J. and Daellenbach, U. (2018). Evaluating inductive vs deductive research in management studies: Implications for authors, editors, and reviewers. Qualitative Research in Organizations and Management: An International Journal.

Wong, W. I., Shi, S. Y., & Chen, Z. (2018). Students from single-sex schools are more gender-salient and more anxious in mixed-gender situations: Results from high school and college samples. PloS one, 13(12), e0208707.

Yasin, B., Azim, M., & Qayyum, A. (2020). Co-Education Versus Single-Gender Education: Influence Of Different Educational System On The Student Self-Esteem, Confidence Level, And Academic Achievement In Pakistan. Gomal University Journal of Research, 36(2), 94-106.

Zeungler, J., & Miller, E. (2006). Cognitive and sociocultural perspectives: Two parallel SLA worlds? TESOL Quarterly, 40(1), 35–58.

APPENDIX

Interview Questions

1. What are your thoughts on co-education in UAE?
2. Have you observed the difference in the learning behaviour of the single class student and the co-gender classes?
3. Do you believe classroom interactions influence male and female students' performance?
4. To what extent do girls in co-educational schools have equal chances as boys to develop their potentials?
5. Do you believe there is a significant difference in the learning behaviour of the single class student and the co-gender classes?
6. Do you prefer co-education among most pupils in elementary schools or not?
7. Do you believe the intellectual achievement of the students is affected in the co-education environment?
8. What strategies have you tried to change the behaviour? What has worked?
9. Does the student's behaviour affect the teacher's ability to teach?