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Effective curriculum implementation for optimal teaching and learning experience: a study from a private school in Dubai

Aaisha Haque[a], Solomon Arulraj David [b]*

[a,b] *The British University in Dubai, UAE*

Abstract

The study aims to identify the barriers and provide remedies for effective curriculum implementation. The identified barriers from the literature review are divided into three categories: students, teachers, and management. An online survey was executed with 150 teachers at the same school to gain their insight on the subject. Besides, 15 heads were interviewed to see the similarities and dissimilarities in their opinions of teachers. For this reason, the study has adopted the mixed-method framework to trace the convergence and divergence in the findings. The online survey has helped gather quantitative data, which was further analysed by statistical methods. In addition, Qualitative data was collected through interviews, and thematic analysis was executed to interpret their responses. Finally, the join display chart format is employed to check the similarity and dissimilarity in their opinions. The finding indicates that heads are giving substantial significance to the teachers' curriculum knowledge and need for professional development. Also, they want higher management to think in this line. In contrast, teachers have shown inconsistency in their responses for both constructs and highlighted the issue of workload. To this end, the study suggests that higher-level management develop concrete and meaningful policies to overcome the barriers.

Keywords: Effective curriculum implementation; optimal teaching and learning; Dubai

1. Introduction

Curriculum reforms are planned to elevate the standard of education to benefit learners and educators. However, if the innovations and changes are not comprehended and internalized correctly, they often remain merely written documents to be implemented with incomplete practices. This calls for effective strategies to mitigate the problems and enhance proficiency in education by exerting prudential solutions. Education sector in the United Arab Emirates (UAE) is experiencing a substantial and constant revolution in curricula. The progress of new artificial intelligence and contemporary technologies challenges our traditional practices. Hence, the school community entails skills to implement the curriculum with fidelity. The pursuit of evolving school curricula by the UAE government is based on two factors. First, the advancement of artificial intelligence

* Corresponding author: Solomon Arulraj David ORCID ID.: https://orcid.org/0000-0001-9252-4861
Email id: solomon.david@buid.ac.ae

and contemporary technologies are challenging our traditional conception of work. Secondly, the boom in globalization demands migration and therefore increasing diversity, shaping a country's economy. As a result, the scale of revolution in the world and the need of acquiring 21-century skills by youth to enable critical thinking and higher-level skills are apparent. Nevertheless, the concepts and modes offered by previous curricula were found insufficient. Consequently, the education ministry is dispassionate in creating a curriculum that yields diversities, dichotomies and contradictions in society and is determined to establish an advanced and internationally competitive curriculum.

Moreover, school curriculum in the UAE entails renewal and reform to instil critical thinking, contemporary skills, values, and principles in the new generation to deal with the known and unknown future challenges of an ever-evolving environment. Additionally, curriculum implementation needs to be evaluated to identify best practices and challenges. This can be done by determining what kind of problem teachers and students face so that school management can support them in attaining better outcomes. For this reason, the research area of this study is one of the private schools in Dubai facing the same issue of implementing the reformed curriculum. The study aims to investigate the challenges faced by departmental heads and educators regarding curriculum implementation to address the problems and derive strategies for optimum teaching and learning experience. To attain the aim of the study, the researcher has focused on the following objectives: to identify the challenges teachers face in implementing the enhanced curriculum, to determine the barriers related to students from the leaders' and teachers' perspectives, to identify the problems related to school management in curriculum implementation, to delineate the best possible measures to optimize the teaching and learning experience. The research explores the following main research question: what are the barriers to curriculum implementation that hinder optimal teaching and learning? And the following sub-questions: what are curriculum implementation problems related to students? what are curriculum implementation problems associated with teachers? what are curriculum implementation problems related to school and management?

An account on the context might offer necessary background to the study. The study was carried out in a private school in Dubai, the UAE. Although there are few closely related studies in the UAE, some of the cross-cutting ones are worth highlighting. David (2017a) indicates that educational sector has been expanding in the UAE. It has also addressed excellence relatively (David, 2017b), resulting in UAE, in particular Dubai to emerge as an educational hub for learning mobility (David, et.al, 2017). Due attention is given in the country for innovation in curriculum (David & Hill, 2020) and instruction (David & Hill, 2021). Eltanahy & David (2018) point out that curriculum is a key factor to influence predominant teaching strategies. The role of leadership is pivotal for effective curriculum implementation for optimal teaching and learning in the UAE. Al Husseini & David (2017) highlight that school leaders demonstrate instructional leadership abilities by supervising, observing classes, offering feedback, review lesson plans, helping in curriculum and assessments, and encouraging teacher's professional growth. Daraghmeh & David (2017) observed that support of technology integration is supportive

for effective curriculum and instruction. David & Abukari (2019) suggest leaders must ensure the contextualize curriculum and instruction. Albasha & David (2019) indicate supporting teachers to engage in curriculum and instruction is essential. Mansour & David (2021) point out teacher's organizational commitment a key for effective teaching and learning. Abbasi & David (2021) recommend professional development of teachers to optimize curriculum and instruction.

2. Literature Review

Education is a systematic, thoughtful, and continuous effort to develop and diffuse information, ideas, skills, and attitudes. There must be a plan to guide that process, and the term 'curriculum' refers to that plan (Saylor et al.1981). Over the past century, the challenges facing the education system and teachers continue to escalate. Society has required the school to educate learners for a complex set of social and knowledge-based economic realities where the demand for high-level skills will substantially continue to be intensified. It is undeniable that providing a conducive curriculum will yield the generation of pioneering and skilled citizens. To that end, the curriculum must be conceptualized holistically where significance is not given only to what is to be taught but also how it should be taught and assessed. Without a comprehensive approach, the curriculum will be understood solely as a written document or textbook content. Education aims to provide learners with knowledge and skills, and curriculum is a backbone of education as it acts as a road map to achieve targeted objectives; therefore, appropriate curriculum design is paramount for delivering knowledge and skills (Bounds 2009). The need to respond to the growing changes in society and the world entails a positive environment and learner-centred quality curriculum. Hence, designers should focus on curriculum designing objectives, strategies, materials, and evaluation techniques and systems. These guiding principles ascribe to the general education curriculum; however, when it is universally applicable, they must meet the need of all learners, including those with disabilities (Njogu, 2012). Madhukwini (2016) emphasizes that a curriculum complies with social, cultural, and local conditions, and prior knowledge is easier to deliver and susceptible to acceptance. The curriculum approach is a fundamental element of curriculum implementation and expected outcomes as curriculum execution is broadly based on how it is planned and designed. Therefore, four curriculum approaches majorly underpin the curriculum spectrum: behavioural approach, managerial approach, systems approach, and humanistic approach (Bilbao, Corpuz and Dayagbil, 2015).

The behavioural approach is based on scientific philosophies involving paradigms, examples, and step-by-step curriculum formulation. (Porter 2018) asserted that in the behavioural approach, the curriculum design of a course exhibits the learning objectives; planned activities to attain pre-decided outcomes and evaluation has been done based on those objectives and standards-based education. The process commences with setting goals and activities, followed by an assessment to see whether the activities are helping students attain the objectives. (Bobbit, 1924) further emphasized on differentiated nature of the curriculum. He opined that it should be attributed to academic and vocational to

suffice students' needs as per their ability, which works as a device of social regulation and helps face the challenges of modern society.

On the other hand, Hilda was the proponent of a spiral curriculum and stated in her philosophy that the renovation of curricula is not a one-time effort; instead, it is a long process where the curriculum must be organized around generalized objectives and allow important content to be reviewed throughout the year. Therefore, planners should ascribe connectionism as an integral part of curriculum development which later underpins its successful implementation. The managerial approach is reminiscent of organizational theory in which a school is considered a social community where teachers, students, curriculum planners and administrators work together for a homogeneous aim. The process includes the principal, curriculum leader, instructional leaders, or general manager in curriculum formulation. This approach constitutes electing, organizing, collaborating, and supervising people involved in curriculum development and implementation. Proponents of the managerial approach are usually obsessed with curriculum innovation and facilitating change. The school may accept or resist change, but its instructional leaders' role in bringing seamless transformation. The system approach is influenced by system theory. It emphasizes stimulating people and policies to establish a curriculum into a system. Presently, many schools adopt a system approach, widely known as "Total Quality Management" (TQM), grounded on Ed Deming's 14 points for enhancing the workplace system. Besides, people associated with curriculum development and implementation realize that the application of TQM leads them to profound knowledge that comprises four components: systematic thinking, theory of variation, theory of knowledge and knowledge of psychology. Systematic thinking aids people in comprehending their interaction with each other and the dynamics of organizational interaction with sub-processes. The variation theory indicates that a school is a community that displays a multicultural environment that is embedded with differences. Therefore, they ought to live homogenously and learn to communicate, cooperate, and respect each other's feelings and thoughts by reaching a consensus. The theory of knowledge emphasizes the people's wisdom that is needed for curricular success. Finally, the knowledge of psychology underpins TQM by augmenting the contribution and learning of learners and educators.

The humanistic approach is evident in the humanistic pedagogical framework, wherein a curriculum solely focused on academics is considered incomplete. It is the responsibility of curriculum authority to suffice the needs of holistic development of learners, including emotional and social aspects (Aloni, 2011; Hewitt, 2006; McNeil, 2009; Sönmez & Haury, 2011). The approach also contradicts the standardized framework that focuses on a uniform approach; one strategy fits all students and instead underscores the belief that every child is different and diverse in their interest and adaption of knowledge (Eisner, 2002). Therefore, the schools adapted to the approach, their curriculum leaders and supervisors tend to allow teachers to contribute to curriculum decisions and believe in philosophies of professional collegiality. Yobe (2011) and Aneke (2015) mentioned that implementation is a device of translating written curriculum into operating curriculum through collaborative efforts of teachers and the educational community. It is a meaningful interaction of the learners with the planned learning environment. The planned learning environment refers to instructional material to be used for effective

implementation at different stages (Mkpa and Izuagba, 2009). Additionally, this device is essential to inculcate societal attitude, skill, and knowledge. Furthermore, the efficacy of curriculum implementation witnesses vigilant envisage, focuses on primarily three factors: People, program, and process. Many change-makers failed in their endeavour because they only focused on the program and process and had forgotten the people factor entirely. In order to implement successfully, educators must encourage members to bring some changes in their attitudes, habits, and view of pursuing things. In education, curriculum reform refers to a materialized plan which informs the existing practices and the potential ways of improving them. Moreover, curriculum innovation or reform is considered a remedy to educational gaps; however, it is not enough for a quality education system. Leslie (1976) suggested that implementation entails reformation and replacement. It demands changing habits, responding methods, program reinforcement, flexible learning time, agendas, and existing curricula. The willingness of teachers and others to adopt a curriculum is primarily based on its planning and how developers have been carried out (Fullan and Hill, 2006).

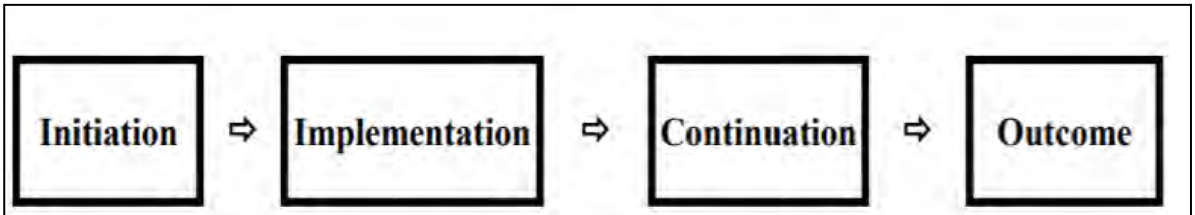

Figure 1: A simplified overview of the change process (Fullan and Steigelbauer,1991)

Fullan and Stiegelbauer (1991) developed a simplified overview of the three phases of the change process that validates the outcomes (Fig 1). The idea that finally reaches the decision stage comes under the initiation phase. In the second phase, participants bring change in their beliefs and understanding to facilitate change, called the implementation phase. In this phase, extra support for translating the idea into practice is offered. While the initiation phase is considered a minimal use of curriculum, the implementation phase focuses on the actual change. Subsequently, in the continuation phase, the reform is embedded in the organization's practice, and extra support (that had been provided during implementation) is withdrawn. While implementation is considered the early stage of piloting, the continuation phase is regarded as an established stage under standard conditions.

Students' role in curriculum designing is comparatively a contemporary idea in the curriculum domain. However, the concept has strengthened its root in the recent decade, and students' opinions started getting attention in school planning (Rudduck & Fielding, 2006). Researchers have started interested in this area and linked student engagement and academic improvement. They realized that student engagement increases when their thoughts are addressed, and their voices are heard. Levin (2000) emphasized that the ultimate goal of education is student learning and, therefore, to improve the outcome of schooling, the formulation of the curriculum must include students from the planning

stage. However, different educationist and philosophers have presented their views on students' contribution to curriculum planning. Few thought that students have the right to say in the process because they are the recipient of the information, whereas others have downplayed students' roles with the feeling that they may take an interest in specific topics to please their teachers and disregard other essential subjects. For example, Kilpatrick and Rugg, who are widely known for their child and activity centred work for curriculum outlining, asserted that it is prudent to engage learners in planning themes, lessons, and school projects as they are the ones who get the benefit.

However, (Dewey 1934) thought that teachers' responsibility is to design and execute curriculum and be more aware than learners of what they need and are interested in learning. Teachers play a vital role in transferring written curriculum into the practical curriculum (Locher,2015). Their role is significant in curriculum implementation besides their other functions, for example, learner supervision, discipline, respecting cultural diversity (Mc Donnell,1999), building mutual bonds with parents (Lundin, 2000), establishing a conducive atmosphere for learners, and facilitating to augment development and learning in the classroom (NAYEC,1997). Curriculum innovation is not enough to provide high-quality education; there is a need for good implementers to bring it to life. And teachers are the primary agent who converts all theoretical information into real classroom settings. Furthermore, it is learned that teachers' traits impact curriculum accomplishment. For example, several studies indicate that stimulated teachers who are open to change and keen to adopt new strategies are likely to be better curriculum implementors than non-motivated or unflexible individuals (Butera, Czaja, Daniels, Goodman, Hanson, Lieberal and Plamer, 2009). In order to equip teachers with the knowledge and skills to implement the reformed curriculum, the role of teachers' professional development is vital (Desimone, 2002). Countries like Finland, Australia, Canada, and Singapore have well-rounded policies supporting teachers' professionalism. These countries invest in teachers' development from the initial stage and extend to lifelong development. Kennedy (2005) developed a continuous professional development model for teachers. It benefits educational organizations in two ways. Firstly, it prepares teachers to face the challenges of curriculum reform, and secondly, it equips teachers to participate in designing policies and practices (Little 1993).

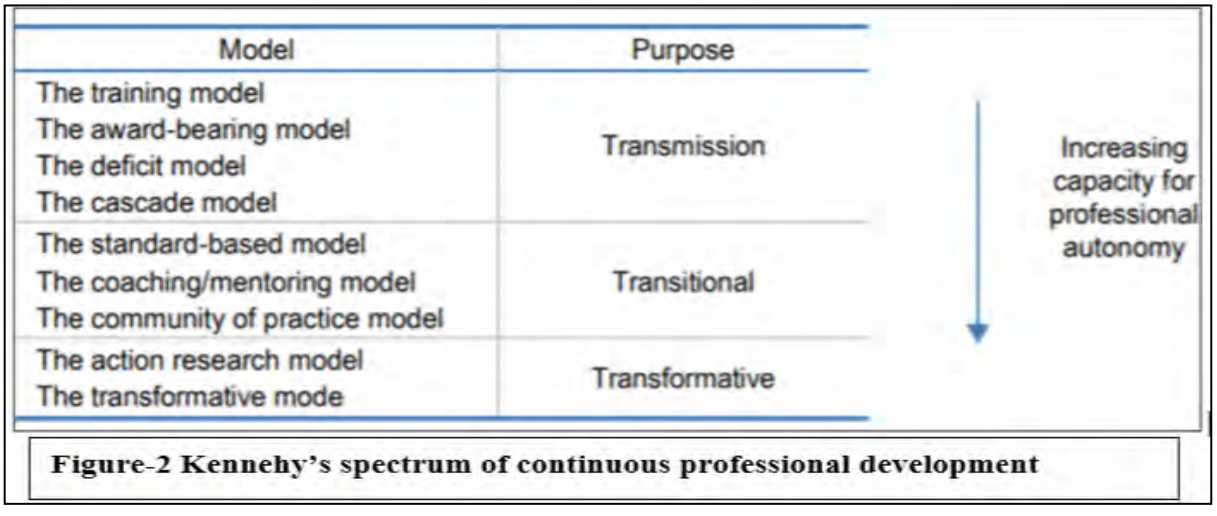

Figure-2 Kennehy's spectrum of continuous professional development

In Kennedy's spectrum of continuous professional development, transmission models underpin the first purpose that prepares teachers for the implementing challenges of a reformed curriculum. In contrast, transformative models support the second purpose, enabling teachers to become rational and well-informed critics of reforms and in between the Transitional models that can serve either purpose. Curriculum management constitutes several bureaucratic processes in keeping account of the updated, accurate content of the curriculum in implementation. Valero and Skovsmose (2002) opined that curriculum is not merely following a set of instructions or superseding old by new practices, but it is a way of modifying the curriculum that complements teaching and learning. It is understood that without the consent and acceptance of all stakeholders, it is impossible to bring any systematic or long-term change. Due to this reason, it is pivotal for all stakeholders to be acquainted with all curriculum dimensions, instructional strategies, and tactics to facilitate instructional and curriculum leadership. Besides, the role of the management is to provide a conducive environment that espouses open-door policy and a straightforward approach to the administration to address curriculum problems. This practice will open doors for teachers and learners to raise their issues and resolve them healthily. Furthermore, positive implementation entails curriculum leaders or principals discussing with the implementors, which later can be used as a yardstick to design a paradigm to facilitate school success.

3. Method

According to Polit and Beck (2004), the methodology involves acquiring, systematizing, and analyzing data. Specifically, the research execution is impossible without methods as it provides a complete structure of the study, sampling, and techniques employed to collect and process data analysis (Bowling,2012). The MM research design collects, analyses, and mixes quantitative and qualitative methods in a single study or a series of studies to understand a research problem, converging information obtained from two distinct instruments and employing a design that may include philosophical assumptions and theoretical framework (Creswell & Plano Clark,2018). The converging design is arguably the most well-known and widely applied variation of MM research. The convergent mixed design allows researchers to simultaneously collect qualitative and quantitative data to compare the results, contract them, and triangulate them (Morse, 1991). Besides, the coverage of the method is comprehensive as it allows to combine the advantages of each form of data; quantitative data offers generalizability, whereas qualitative data critically extends information about individual opinions (Tashakkori & Teddlie, 1998, 2010). Cohen et al. (2005, p.12) called MM methodological triangulation and termed it a technique often used in social science to learn the complexity of human behaviour from more than one perspective. Also, Zohrabi (2013) agreed that the triangulation technique augments data validity by gathering it from different methods, such as close-ended and open-ended questionnaires and observations. In this research process, two databases have been obtained independently (qualitative and quantitative), analyzed the components separately, and then interpreted and compared results collectively.

The research is carried out in a private school in Dubai, UAE and the population is randomly selected. The sample size is substantially large enough to suffice the yield of desired precision. The total sample size is not fixed; it is usually impossible to know the exact population (Salant and Dillman, 1994); however, the estimated sample size of the study is nearly 165, out of which almost 150 are teachers and the remaining 15 are heads of the department. Teddlie and Tashakkori (2009) provided an insight into convergent mixed method sampling where both probability and non-probability samples are selected, happening parallelly but unaware of each other (data collected from one sample do not influence another). Therefore, the researcher shared the survey questionnaire with the teachers, who agreed to participate. The semi-structured interview is conducted with phase leaders on a critical case basis, i.e., with key decision-makers and knowledgeable people in the curriculum department of the school.

As it is mentioned above, the study has embraced the MM approach. Therefore, surveys and interviews were employed to address research questions and obtain a deep understanding. A survey is a data collection tool used for collecting research data. Survey design is a stage in quantitative research. The researcher administers a questionnaire to a small group of people (sample) to identify numeric descriptions of a large population's trends in thoughts, opinions, and actions (Creswell, 2012). The survey forms require minimal time to create and execute and are relatively easy for generalizing (Bell, 1999). Moreover, they don't need researchers' presence and are convenient for analyzing the obtained data (Cohen et al., 2004). Further, a survey questionnaire may comprise open-ended/unstructured or close-ended/structured questions based on the sample size. However, in this study, the sample size is ranged around 150 participants. Thus, it seemed reasonable to opt for close-ended/structured questions as (Cohen et al. 2004) suggested that for the larger size of the sample, a more structured, closed and numerical questionnaire is well suited because they produce a frequency of amenable responses that are complaint to statistical treatment and analysis. Figure 3.1 presents the construct breakout of teachers. The teachers' questionnaire has 22 questions divided into four sections. The figure shows the construct division into different categories (students, teachers, management, and others).

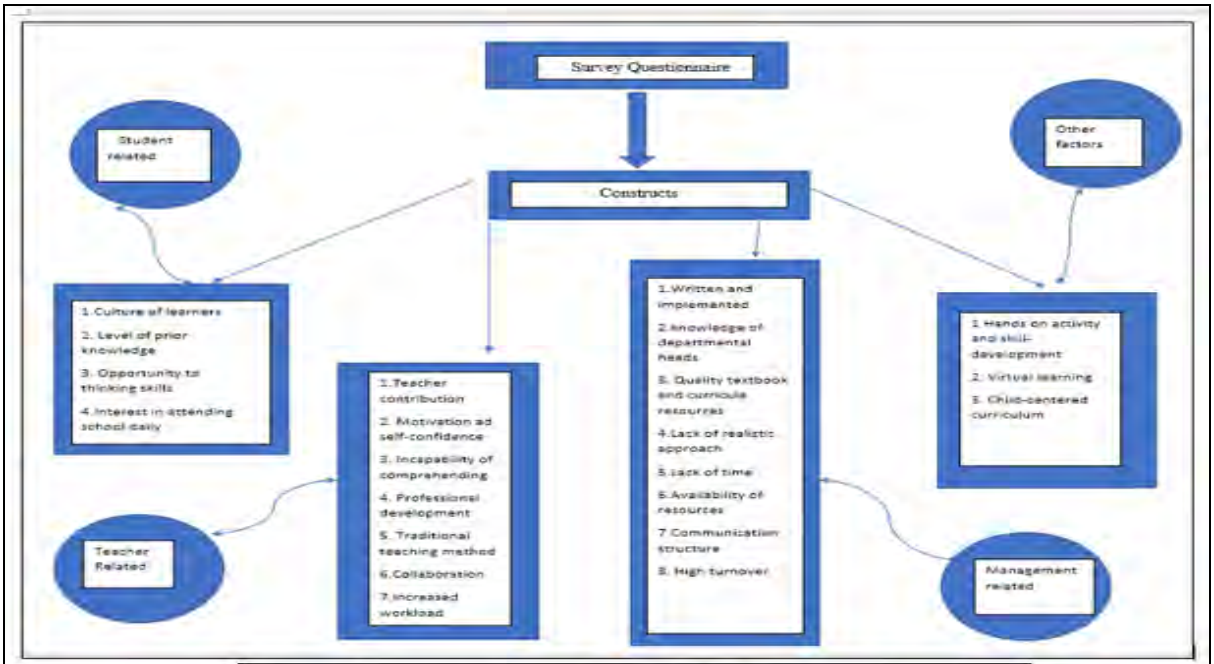

Figure-3 Construct breakdown for teachers' questionnaire

The interview is a widely known method employed in qualitative research where discourse occurs between interviewer and interviewee. The discussion aims to enable interviewers and interviewees to discuss their interpretation of the worldview and manifest how they perceive the situation from their perspective (Cohen, 2011). Therefore, the primary focus of the interview in this study is to derive a profound understanding of participants about the implementation process prevailing in the school environment. The researcher opted for the semi-structured interview as she works with participants for a substantial tenure and is aware of their knowledge and, therefore, capable of drafting questions that yield the information required (Lincoln and Guba, 1985). Figure 3.2 presents the construct breakout of the interview Questionnaire. The interview questionnaire for departmental heads is comprised of 10 questions. The figure shows the division of questions as per three categories (Student, teacher, and management).

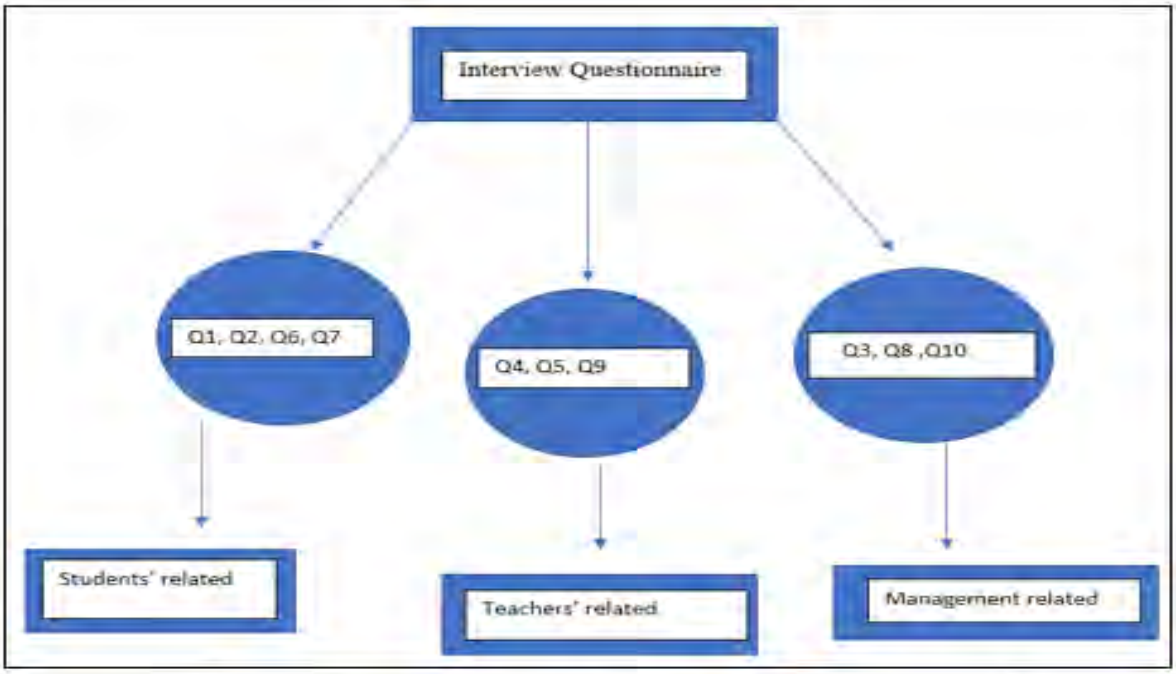

Figure-4 Breakdown of interview question

Data was collected through google survey forms and analyzed on MS Excel on Linkert scale-4, i.e., strongly agree, agree, disagree, and strongly disagree. In addition, the study has also used the frequencies and percentages generated by google form to interpret the data. The qualitative data collected from departmental and subject heads through interviews was analyzed by a widely known qualitative research method called thematic analysis. Thematic analysis is the process of categorizing themes present in qualitative data. Below is the six-phase thematic analysis framework presented by Barun and Clark.

Step 1: Become familiar with the data	Step 4: Review themes
Step 2: Generate initial codes	Step 5: Define themes
Step 3: Search for themes	Step 6: Write-up

Figure-5 Six-phase thematic analysis framework presented by Barun and Clark

Figure 5 shows how responses of Q1, Q2, Q6, and Q7 were broken into codes and then refined into themes and sub-themes. As mentioned in the below figure, the study is mixed-method research and applied the convergent parallel mixed method framework. As

per the procedures, the quantitative and qualitative data are parallelly collected, and a connection is established between both data, and subsequently, with the help of visual join analysis, data is inferred. (Creswell,2014).

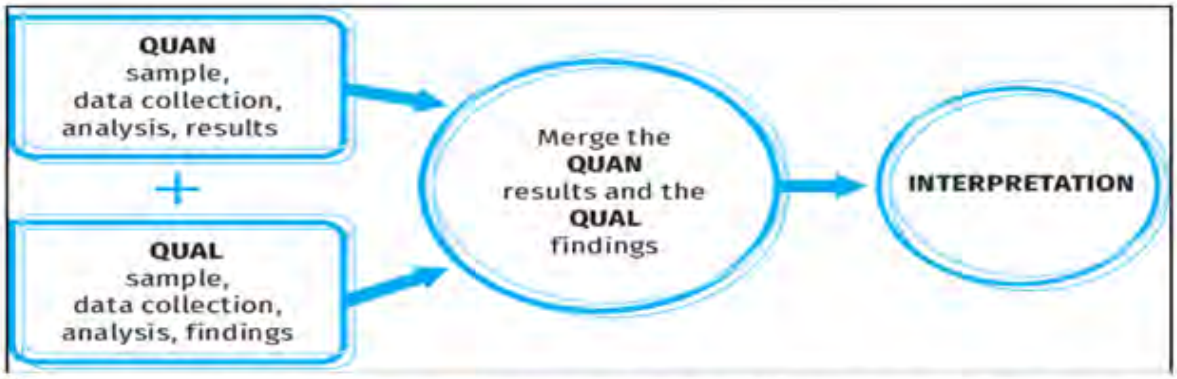

Figure-6 Diagram of the applied convergent parallel design Creswell & Plano Clark, 2015

The researcher engaged the most relevant and reliable teachers and heads in order to collect factual data. Kneett (2006) and Flower (2009) suggested that the survey rate increases if the participants are interested and directly related to the subject. Additionally, the survey is enveloped with the researcher's name, aim and policy of participants' anonymity and confidentiality of responses (Fogleman,2002).

4. Results

The survey sample size was 150 filled by the same school teachers. The questionnaire has six sections, including a general introduction, demographic information, and concerns related to students, teachers, management, and others. The findings from the questionnaire are presented in tabular format with mean and standard deviation as well as bar and pie chart to facilitate visual understanding. The participants' demographic information helps to derive the interpretation that out of 150 respondents, 68% were female, whereas the remaining 32% were male. The proportion shows that the opinion of female teachers influences the survey largely. The following is the finding on question one: What are the curriculum implementation problems related to students? Mean (M) and Standard Deviation (SD) values are calculated for the responses from this section. The 4-Likert scale (strongly agree, agree, disagree, and strongly agree) shows the number of responses in the tabular format followed by M and SD values. The purpose of section 3 from Q1 to Q4 was to analyze teachers' views on the curriculum implementation barriers related to learners' behaviours where Q1 and Q2 talk about learners' culture and prior knowledge, and Q3 and Q4 explore the results of insufficient opportunity and disinterest in attending school daily.

Section 3	Sample	Response Rate	Mean	Standard Deviation
Q1	150	100%	1.67	0.93
Q2	150	100%	1.69	0.98
Q3	150	100%	1.72	0.96
Q4	150	100%	1.69	0.96

Figure-7 Quantitative response related to student

This section's M and SD values indicate that teachers have substantiated the opportunity to develop thinking skills more than other factors. The pedagogical design that initiates thinking skills and connects to students' culture, interests, and experience is an example of culturally responsive teaching. For instance, project-based learning, problem-based learning and design for challenges are the few methodologies that stimulate students to post queries, investigate and resolve the challenges that matter to them, and contribute to meaningful engagement, boosting daily attendance and holistic development. Teachers' consensus made the traditional teaching and learning the most crucial barrier of the cluster, with M at 1.79 and SD at 0.98. Mandukwini (2016) connoted that teachers' insufficient information about the innovation and implementation, heedlessness to learn new skills, and complex document structure lead to adherence towards old practices. Consequently, it is vital to make them understand the aim of the innovation and how it can facilitate the possession of contemporary skills. Teachers' collaboration received the second-highest preference with low SD in the cluster. This shows that teachers would love to collaborate with peers to share their experiences and efforts in solving their problems. In addition, the working opportunity for new teachers with experienced teachers would boost their confidence and prevent gaps in curriculum implementation. Section 4 leads to the teachers' opinions on implementation barriers. After the collaboration, they signify their contribution to the curriculum development process. Teachers must be engaged from the primary stage of curriculum development till execution. Having first-hand experience, teachers can foresee what can go wrong in classrooms and make accommodations to revise implementation. Subsequently, teachers have highlighted the increased workload, which hampers their efficacy in effective curriculum implementation. Sometimes a reform challenges the existing policies and practices and perhaps appears as a barrier to curriculum implementation. Therefore, school administration should facilitate teachers to focus on implementation by solving other issues.

Section 4	Sample	Response Rate	Mean	Standard Deviation
Q1	150	100%	1.67	0.99
Q2	150	100%	1.61	0.95
Q3	150	100%	1.69	1.0
Q4	150	100%	1.70	1.01
Q5	150	100%	1.79	0.98
Q6	150	100%	1.69	0.97
Q7	150	100%	1.60	0.97

Figure-8 Quantitative response related to teachers

On the other hand, the professional development indicator has scored the second-highest M but the first highest SD in this cluster. This shows the inconsistency of responses for the construct. Teachers' continuous professional development programs imbibe them with the skills and knowledge to enact a reformed curriculum. As a result, while implementing the curriculum, teachers identify potential challenges, consider the school's social and political framework, access the curriculum's adaptability, execute pedagogical knowledge, and develop professionally to support learners and facilitate learning (McLachlan, 2018). Also, the construct incapability of comprehending the curriculum stood at the second-highest SD of the cluster. This shows the inconsistency of responses for the construct. A teacher must have a substantial understanding of the curriculum to interpret and translate it for their students. In the absence of their appropriate knowledge and skill, reform can not be surfaced. Furthermore, their resistance to adopting a modified curriculum would hamper swift implementation.

Section 5 questions aimed to determine the intensity of suggested factors related to management in curriculum implementation.

Section 5	Sample	Response Rate	Mean	Standard Deviation
Q1	150	100%	1.77	0.98
Q2	150	100%	1.60	0.88
Q3	150	100%	1.73	0.97
Q4	150	100%	1.63	0.91
Q5	150	100%	1.64	0.92
Q6	150	100%	1.65	0.93
Q7	150	100%	1.73	0.93
Q8	150	100%	1.76	0.94

Figure-9 Quantitative response related to management

Teachers responses show that the difference in the written and implemented curriculum is the most significant factor in curriculum implementation of this cluster. When a curriculum is designed, the specialist writes about the different concepts and delivery approaches but has no control over its interpretation by the implementer. Therefore the written document can be implemented discretely by various teachers and implementers. As a result, curriculum goals are not fully achieved, or only certain concepts of the planned curricula would be delivered to the learners.

High teacher turnover is the second-highest indicator teachers prefer, with the M at 1.76 and a low SD of 0.94. Also, many other pieces of research prove that high teacher turnover rates in schools negatively impact best practices and delay student achievement goals (Kisa and Correnti, 2015). Hence, schools can reduce teacher turnover rates by maintaining good mentor relationships and providing professional development opportunities and coaching support. Teachers have gauged the indicator' communication structure' as a critical issue, with the third-highest M at 1.73 and low SD at 0.93. Bordia (2003) suggested that giving authentic information on time would lead to transparency and adaptable behaviour to the change process.

Therefore, effective communication is paramount to underpin the reform and achieve its goals and objectives. With the cluster's fourth-highest M and low SD, the result proves that the availability of resources is the most vital impediment to curriculum implementation associated with the barriers of other factors. Explicitly, the availability of resources informs teachers about the sustainability and significance of innovation (Viennet and Pont, 2017). Time limitations and unrealistic are other barriers rated nearly close by teachers. They find it challenging to teach a range of concepts in a limited period. Therefore, curriculum designers should develop a realistic approach instead of an overly optimistic perspective.

Finally, 'the knowledge of high-level management' received the lowest SD, which shows the highest consistency in teachers' responses. Well-developed documents result from the designer's awareness and prudence, offer clear insight into the reformed curriculum, make evolution easier and allow educators to concentrate on learners' progress instead of focusing on the uncertainty that perhaps appears due to the reform (Oates, 2014). The results of section 6 determine the other factors that may contribute to the implementation barriers in teachers' lens.

Section 6	Sample	Response Rate	Mean	Standard Deviation
Q1	150	100%	1.78	1.01
Q2	150	100%	1.62	0.9
Q3	150	100%	1.66	0.9

Figure-10 Quantitative response related to other factors

The results present a mixed view on the construct of virtual learning. The clusters' highest Mean at 1.78 shows that teachers favour the use of technology; however, at the same time, the highest SD shows the inconsistency in the responses. The same concern is raised by (Trucano,2016), who stated that the significance of technology surfaced on majorly two factors; 1) ICT structure that supports equal access among students and 2) teachers' prudence to use ICT resources. Teachers have shown high consent with consistent responses for a child-centred curriculum, surfaced on the ideology of skill development and hands-on activities. This might be because a child-centred curriculum promotes independent imagining and articulating instead of spoon-feeding methodologies.

For qualitative data collection, interviews were conducted with departmental and subject heads. The data obtained was transcripted and categorized into themes and sub-themes. The data obtained from the qualitative interview was carefully read and analyzed, and the findings are presented in the following section. In addition, the interview questions were divided into themes to answer the research questions. As reflected in table:4.11 4.12, and 4.13, the identified themes are discussed below. Each is supported by direct quotes gathered from interviews and the relevant literature. Besides, the responses featured in the section are selected on a random basis. The researcher has tried to cover all the views expressed by the participant, and other common view responses. All participants agreed to the idea of student involvement in planning. They think that students will take responsibility for their learning if they choose what and how to learn. As discussed in (LR.2.3), Madhukwini (2016) supports the idea. He suggested that the curriculum complying with social, cultural, local conditions and prior knowledge is more likely to be accepted. This might be because learners can relate things to their surroundings and daily events. Moreover, when student choice and voices are heard, they feel motivated and encouraged to come to school daily. Therefore, involving them in planning activities could be a remedy to improve their behaviour.

The school is going through significant reform. During the interview, participants said that the school is trying to integrate skill-based learning into the system but still following the evaluation principles of exam-based learning. As it is elicited from the responses below, exam-based learning is creating pressure on students and teachers, due to which they are not able to execute all the activities planned as a result of reform, and students are under pressure to perform better despite the change. Most participants have emphasized skill-based learning as it fosters learners' critical thinking, problem-solving, and high-order thinking skills. Spriner (2017) also supported the thought and stated that research-based education promotes analyzing, synthesizing, evaluating, and fostering students' knowledge application.

During the interview, all participants favoured having a learners' friendly assessment strategy. They think that if students are demoralized and not interested in learning, it adversely affects the curriculum implementation. Bennie and Newstead, 1999 advocated that the standard of the curriculum must be aligned with the expectations of society. Therefore, a skill-based curriculum that includes the need of all types of learners and a well-designed assessment strategy will make reform implementation more susceptible.

All participants have echoed the significance of teacher involvement in curriculum development. As per (Karner and Krull, 2016), the feeling of ownership shapes their attitude towards the change. It provides a sense of satisfaction and stimulates teachers to spend time and effort fulfilling the cause of the innovation. All the participants have underlined the need for professional development for their teachers (LR 2.4.2). During the interview, they indicated that the teaching knowledge is inappropriate to transfer the reform into classrooms. Therefore schools must redesign their policies to enable teachers with sufficient skills to implement curricula for improved outcomes. During the interview, participants indicated that the school management is going through a tough time as they find it difficult to retain teachers due to the changes in imparting pedagogies. The above responses show that teachers are resigning due to the lack of training and motivation to implement the reform curriculum. In this context, Stoll (2006) suggested that leaders are critical agents in communicating and encouraging teachers to connect to their job and enact a reformed curriculum. Therefore, management must identify the origin of the problem and develop a culture that stimulates teachers' well-being.

All the participants have listed the significance of technology integration in their teaching and learning practices. Most of them think that the use of technology mitigates the problem of acquiring the cognitive and non-cognitive skills of learners. However, few have also shown concern about teachers' knowledge of using technology in classrooms. The participant has linked the problem of teacher turnover with improper work allotment. The above responses show that improper work allotment may be one of the reasons for high teacher turnover in the school. Teachers need motivation and appraisal for their work. It will facilitate teachers' well-being and result in long term retention. Stoll (2006) opined that leaders are critical agents in communicating and encouraging teachers to connect to their job and enact a reformed curriculum. During the interview, various constructs were discussed, out of which participants gave extra weightage to the communication structure of the school. Aligned with the same thought, (Karner and Krull, 2016) suggested that system reform usually aims to change the decisions; hence, implementers must be informed about all the phases of reform to achieve new goals.

5. Conclusions

Findings from this study offer quantifiable evidence and a broader perspective on eliminating barriers and incorporating best practices for effective implementation. It suggests that all three factors, students, teachers, and management, are equally crucial for the success of the execution. Firstly, to have a high student achievement ratio, management should work on their policy to engage learners effectively. Secondly, teachers and management must involve in meaningful training to overcome barriers. Finally, management must work on equal work distribution of teachers to regulate the high teacher turnover ratio and provide information to other stakeholders and involve them in the decision-making process. The research findings help identify the problems and integrate improved strategies to enhance curriculum implementation. The results were derived from the discussion with departmental heads and the insight obtained from the teachers' survey questionnaire. Both think that students are the centre point of the education system, and implementation will be effective when they are contented. The

thought is supported by Konings (2010) (discussed in 2.4.3.1), who stated that implementation would suffer if learners were not provided with the opportunity to convey their perception and inform instructional strategy. Therefore, if the goal is to improve curriculum implementation, the student should be engaged in daily lesson production.

Teachers and departmental heads have considered teachers' collaboration and teamwork as the prime element of their professionalism. Several studies confronted that teachers are unlikely to perform better if they are not confident and would leave the task they perceived beyond their ability (Conner,1993). The study also found that teachers' early involvement in the curriculum building process is essential because they develop their understanding of the curriculum based on their existing beliefs and practices. However, few have raised concerns about their knowledge of distinct dimensions of curriculum and underscore the need for training. The finding also reveals the need for professional development not only for teachers but also for lead members. Most of the problems identified by the study can be resolved if the professional development policy falls in place, as interviewees had linked several concerns related to curriculum implementation to the lack of professional training. Therefore, in order to overcome the problems and maintain consistency, teachers should collaborate and cooperate among themselves, and school management should generate opportunities for their professional development.
The findings indicate that curriculum reform would be more productive if teachers knew their work area. Delineating the core responsibilities of involved educators facilitates curriculum implementation (Viennet and Pont, 2017). The study also underscored that the communication strategy is a significant component of effective curriculum implementation. Teachers and departmental heads both think that this is something that their management has to work on collectively. The transparency and timely information prevent pressure on implementors and motivate them to progress toward new goals, whereas insufficient and ambiguous information yields confusion, inconsistency and untargeted results(Allen, 2007). In recent years teachers' roles have evolved entirely, and they need intrinsic motivation to elevate their professional knowledge, competence, self-confidence and interest in their profession. Furthermore, if teacher motivation is high, they apply the curriculum more effectively. Therefore leaders should create an encouraging environment and constantly focus on their appraisal to prevent high teacher turnover. The involvement of stakeholder agencies is highly suggestible in this context. Therefore, schools must include stakeholders in the vision of a reformed curriculum and develop goals linear to their interests. Researchers suggest that schools should review their policy of hiring teaching professionals. They emphasize teachers' initial qualifications and a well-balanced combination of cognitive and non-cognitive skilled teachers who could be more likely to adapt to the challenges of the new curriculum and implement it successfully. Transparency and open-door policy in communication are crucial to success in all disciplines. Therefore, providing quality and timely information policy must be in place to stimulate a positive attitude towards implementing a reformed curriculum.

The study has included teachers and departmental heads; however, students' and higher management sensitivities would have added value to the results. Finally, the involvement of more than one school would have produced profound insight into the

subject; however, due to corona protocols, other schools were not approached. The study suggests that future studies must include students and management contributions to understand the subject from different perspectives. In addition, future researchers are advised to involve more schools that are either already involved or at the planning stage of reform. The UAE education system has acknowledged curriculum reform as crucial for schools to acquire 21st-century skills and compete in a rapidly evolving world. But unfortunately, not many studies have been carried out to identify the problems and provide solutions to curriculum implementation. Therefore, this study intended to identify barriers to curriculum implementation in one of the schools of Dubai and provide implications for other schools for optimal teaching and learning experience. The following research questions guided the study.

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