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College Readiness in Saudi Arabia Based on High Schools Principals' Perceptions

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Abstract

The results of thematic analysis generated six themes with fifty-two supportive codes. Each theme was mentioned by at least six principals. Each supportive code was mentioned by at least four different principals. The themes were: high school objectives, college readiness activities, celebrating success, creativity activities, private schools' advantage, and barriers to college success. Within each of themes, at least one code indicated that the school prepared students in key cognitive strategies like critical thinking and creativity. By the same token, each theme included at least one code that indicated that schools prepare students in key academic behaviors like self-monitoring and time management. Private schools seemed to provide more frequent and quality college readiness services compared to public schools. Remote rural schools tended to exhibit lower levels of college readiness practice and suffer from more barriers compared to urban schools.

The current study noted to the potential expansion of college readiness to incorporate twenty first century skills, as well as peculiar cultural values relevant to societies of research interest. Further, implications for practice note to the opportunity of activating virtual resources to bridge gaps in college readiness preparation among schools in Saudi Arabia. Last but not the least, quantitative surveys of college readiness practices establishing baseline levels are recommended to be performed by education policymakers in the country. This research contributes to the growing research body on college readiness outside of The United States.

Dedication

I dedicate my joy and happiness in this achievement to my father, who has been my source of pride and inspiration throughout my educational journey. His guidance has led me to this moment of accomplishment, and I am grateful for his unwavering support.

I dedicate my graduation to the one whose prayers were instrumental in my success, and whose love and care were a soothing balm for me. To the soul of my late mother, who unfortunately couldn't witness the completion of my journey, I dedicate this achievement as a tribute to her beautiful spirit.

Furthermore, I dedicate my success to the individuals who stood by me, helping me overcome obstacles and sharing in the joy of my struggle. To my five children, Fahad, Fawaz, Futun, Faris, and Fajr, may God protect them, I dedicate this accomplishment with love and the hope that it inspires them to pursue their own dreams and aspirations.

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I extend my sincere appreciation to Seton Hall University and the Deanship of Graduate Studies for granting me this valuable opportunity to complete my graduate studies. The Department of Educational Leadership also deserves recognition for their assistance and support throughout the completion of my thesis.

I would like to express my special thanks to Dr. Randall Clemens, the head of my committee, for his unwavering support and guidance during this journey. Without his mentorship, patience, and understanding, I would not have been able to complete my thesis, especially during challenging times. Additionally, I am grateful to my family, friends, colleagues, and even my ex-husband for their constant support and encouragement throughout this journey.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter One

Introduction

Empirical research has demonstrated that students who engaged in college readiness programs during their high school years tend to complete college in a timely manner, and with higher grade point averages compared to their peers who did not partake in college readiness programs (Kuh, 2007). Research from different countries demonstrates that students who are more college ready graduate faster compared to their peers who struggle during their first year of college (Greene & Forster, 2003; Khoshaim, 2017; Yousef, 2021). In this study, college readiness refers to adequate training in key cognitive strategies, key academic behaviors, key content knowledge, and key college contextual life skills necessary for college success like passing first year courses without remediation (Conley, 2012). College readiness programs manifest in a variety of ways (Conley, 2012). On the one hand, they could be systematic series of lectures focused on specific skills, abilities, or content. On the other hand, they could be informal like using class-time to lecture students on the importance of a single skill such as self-monitoring or reflection (Trimpe, 2022).

College readiness could have a significant positive impact on students' academic and professional development (Alshammari, 2022; Blankenberger et al., 2017). Moreover, being college ready facilitates the timely completion of higher education degrees and equips students with patience, persistence, and perseverance to navigate their transition into college life (Edmunds et al., 2017). It improves students' academic performance across general education and major-specific coursework (Haxton et al., 2019; Khoshaim, 2017). College readiness improves individuals' outcomes across many domains in their lives including employment

attainment, graduate school endeavors, entrepreneurial opportunities recognition, cultural competence, and public health practice (Conley et al., 2014).

College readiness is believed to have positive impact on students` academic, as well as socio-economic outcomes (Barnett et al., 2012; Jackson & Kurlaender, 2014; Mutambik & Almuqrin, 2020, Onder, 2019a; Onder, 2019b). For potential academic contributions, one study showed that students whose college readiness is continuously monitored throughout high school featured better first-year college retention compared to students who did not progressively measure their college readiness levels throughout high school years (DeAngelo & Franke, 2016). Moreover, such academic benefits are found to be in effect regardless of students' racial, ethnic, or socio-economic backgrounds (Katsinas & Bush, 200; Onder, 2022).

As for social benefits, students' creativity, innovation, and entrepreneurial tendencies and practices improve as a function of acquiring skills from attending college readiness programs through various curricular and extracurricular activities (i.e., counseling and workshops) during high school (Duncheon & Muñoz, 2019). Students' self-efficacy, self-regulation and emotional intelligence have increased as a direct result from participating in early college readiness programs (Nuriddin, 2019; Wachen et al., 2018). Students who attended college readiness courses and programs tended to report less stress, anxiety, and depression while attending college (Capriola-Hall et al., 2021). Students who attended college readiness programs exhibited higher college transition levels experiencing less difficulties navigating new campuses, taking to professors and being engaged in campus events and activities (Wachen et al., 2018).

The Saudi education system features three years of high school prior to postsecondary enrollment. Students complete a set of required courses in addition to a few electives during their 10th through 12th grades study (Khoshaim, 2017). Once graduated, students attend the closest

universities or training institutes to their locality (Saudi Ministry of Education, 2022). Tabuk is a northern city in Saudi Arabia bordering Jordan with a thriving education sector. Over the years, the number of high schools and postsecondary educational institutions have significantly risen in the city and its metropolitan area. Tabuk is a northern city in Saudi Arabia bordering Jordan with a thriving education sector. Over the years, the number of high schools and postsecondary educational institutions have significantly risen in the city and its metropolitan area. In the past two decades, more than 25 high schools have been developed in the city center of Tabuk and its surrounding neighborhoods (Saudi Ministry of Education, 2022). College readiness in Saudi schools including Tabuk institutions has not been adequately studied nor investigated (Khoshaim, 2017). Little information on college readiness programs, practices, or initiatives is available to stakeholders interested in the improvement of students' learning outcomes (Rajab, 2018). This study utilizes interview data from Tabuk high schools' principals to cover the aforementioned gap in the literature.

The literature on college readiness in Saudi Arabia is limited. Much of the available writing on college readiness in Saudi Arabia concerns preparatory specialized programs for ambitious students intending to attend Ivy League American institutions (Alzubi et al., 2017). Quick readings of program's content on college readiness reveal a hyper focus on preparing students to excel in the SAT exam to improve chances of admissions at Ivy League schools (Alzubi et al., 2017). Much of the programs available are outside of public schools and housed in key employers like The Saudi Arabian Oil Company (ARAMCO). The investigation of college readiness practices at the school level from the perspectives of students, teachers, and principals is non-existent (Madani, 2020).

The college readiness literature in the United States is vast (Khoshaim, 2017). The same is untrue in Saudi Arabia. This research is grounded in Conley's (2007) understanding of college readiness. Conley (2007) argue that college readiness in comprised of four dimensions: (a) key cognitive strategies, (b) key academic behaviors, (c) key content preparation, and (d) college contextual skills. While such dimension exists in Saudi schools, they have not yet been adequality documented (Al-Qahtani, 2019). In this study, a dimension refers to a group of college readiness practices revolving around a single theme like key cognitive strategies. The overlapping area between literatures on college readiness on Saudi Arabia and the US is the content preparation or standardized exams (Khoshaim, 2017). Saudi schools' practices may resemble some of that in American schools with respect to college readiness (Alghamdi & Deraney, 2018). Nevertheless, systematic study of such practices has not been adequate (Khoshaim, 2017).

Statement of the Problem

Few researchers reported the poor content preparation in English and mathematics among freshman college students in Saudi Arabia. Authors have argued that newly admitted students at the college level fail to demonstrate adequate mathematical, statistical, and information literacies necessary for college success (Khoshaim, 2017; Rajab, 2018). According to PISA rankings from 2018, Saudi Arabia has ranked 70th on a list of 77 countries based on mathematics preparedness on an international assessment (PISA, 2018). Rajab (2018) pointed out that most freshman students graduating from Najran high schools in southern Saudi Arabia attending the local university perform poorly on mathematics, computer science, and English language courses. Similarly, Khoshaim (2017) found deficient patterns in academic performance in key core content areas including algebra, calculus, elementary statistics, and academic writing. Over 50%

of sampled students at Najran University indicated that their English language skills are poor (Khan, 2020).

Saudi students have performed poorly in their freshman year of college study. Al-Jarf (2022) found 56% and 61% of new college students at more than a single higher education institution in Saudi Arabia achieved a below B grade in General English 1 and General English 2 courses respectively. The same study concluded that English language passing rates and grades are inflated by more than 50% reflecting poor preparedness of senior high school students in all English language competencies. In other words, teachers award higher grades for students in English subjects compared to what they actually deserve (Al-Jarf, 2022). Rajab (2018) reported that 50% of students or more failed their Computer Programming 1, Information Systems Analysis, and Object-Oriented Programming courses at Najran University in 2017-2018 academic year. In a similar vein, Alghazo and Alghazo (2017) concluded that 83% of students possess the mathematical misconception that all fractions are always part of 1. The same study reported that 87% of college students in the Saudi sample believe that multiplication makes numbers bigger, and division makes them smaller when involving fractions all the time.

Empirical evidence on Saudi senior high school and newly admitted college students' cognitive strategies and academic behaviors notes to clear deficiencies in key requisite skills and abilities for college success. Yousef (2021) reported that in a study of female college students in Saudi Arabia, Al-Bjaidi documented low competency levels in independent research and critical thinking abilities among Northern Borders University freshman classes. In a similar vein, various studies at the college level in Saudi Arabia documented inadequate problem-solving skills, insufficient critical thinking abilities, and limited independent research exposure (Alowayyid. 2021; Yousef, 2021; Alshammari, 2022). Further, Saudi college students tend to exhibit low

levels of academic self-efficacy, high levels of academic procrastination, and poor self-monitoring practices (Abdel Razek, 2012; Razek & Coyner, 2014).

The study of college readiness in Saudi high schools, and more specifically in Tabuk is neglected in the various disciplines of education research in Saudi Arabia (AlKhaleel, 2019). Information paucity, dearth of academic and government studies, and absence of systematic research are characteristics defining the field of college readiness in Saudi Arabia. Searching for quality information on the subject by an interested stakeholder generates few non-empirical non-peer reviewed opinion or conjectural pieces. There is a serious need to establish what college readiness looks like in Saudi high schools. Further, a systematic approach is necessary in documenting the various practices, programs, workshops, or seminars administered by Tabuk schools to benefit local administrators, national stakeholders, and future researchers/teachers interested in college readiness.

Purpose of the Study

This dissertation presents the prevalence and illustrations of college readiness activities, practices, workshops, programs, or manifestations in Tabuk high schools from principals' perspectives. For this investigation I interviewed 16 principals from Tabuk region to learn more about their schools' practices in preparing students for college. The study gathers principals' views on their schools' college readiness implementation using a number of guiding interview questions, as well as questions built on offered responses during the interviews.

Significance of the Research

Findings from this research informed local administrators at Tabuk high schools about current college readiness programs, practices, and representations (Albalaw, 2017, Albalawi & Badawi, 2008). Many principals, vice principals, and district office leaders are unaware of high schools' college readiness activities being implemented (Alkarni, 2014). Lack of information

dissemination makes many teachers, counselors, or school staff members uninformed concerning what goes on in Tabuk schools with respect to how college readiness is being delivered (Madani, 2017). Information shared by principals allows the dissemination of individual schools' practices or activities on the rest of the district's institutions to benefit from their experiences.

Results in this research exposed education policymakers in Saudi Arabia to the level of college readiness provision in Tabuk schools. Stakeholders identified areas of improvements to enhance college readiness programs across Saudi high schools. By the same token, stakeholders could identify novel practices to be universalized in all schools to strengthen college readiness implementation across schools. In line with the importance of college readiness, stakeholders may require principals and vice principals at schools to attend workshops on college readiness and encourage its implementation at all levels in their schools.

Parents are likely to benefit from the findings in this research in many ways. First, their levels of awareness on college readiness practices in Saudi high schools is likely to improve. Second, they are likely to encourage their local schools' personnel to implement shared illustrations and examples on college readiness practices by principals in this research. Third, parents become more involved in the college readiness activities of their child and exert pressure on schools to adopt college readiness practices.

Aspiring teachers who are interested in implementing college readiness in their schools would benefit from learning about other schools' experiences in Saudi Arabia. Teachers may adopt the same or similar successful strategies used in implementing college readiness. They may also become motivated to push their schools' staff to implement more college readiness practices on their campuses. Teachers also could seek self-professional development workshops on the implementation of college readiness in their classrooms.

On a theoretical level, the findings from this research informed the four-dimensional model of college readiness proposed by Conley (2007). Examples of college readiness practices may be interpreted as belonging to one of the main cornerstones of college readiness: key academic behaviors, key cognitive strategies, key content knowledge, and key college contextual skills. Schools' practices may allude to the existence of more dimensions to college readiness or confirm Conley's four-dimensional conception.

Findings from this research help in validating empirical observations made by higher education researchers about high schools' college readiness levels. Interviews' transcripts would generate an overarching reality of whether high school principals implement college readiness practices or not. Further, the details in the textual data would allow the researcher to discern whether college readiness practices are perceived to possess considerable quality or need significant improvements.

One of the most important implications of this research is the assessment of college readiness practices in Saudi high schools. On the one hand, schools' practices shared by principals would be gauged against the four-dimensional holistic model. In other words, if schools prepare their students in the four key areas, then they are deemed to possess quality college readiness practices. On the contrary, if schools fail to train students in all four key areas, then they are deemed to be lacking with respect to college readiness provisions. Stakeholders and administrators may utilize the findings to propose new changes or amend existing policies concerning college readiness.

Overview of the Conceptual Framework

Conley's College Readiness Model

College readiness is the preparation of high school students to pass credit-based courses required for a degree program, without needing remediation or additional assistance (Conley & French, 2014). This conceptualization of college readiness is multi-dimensional. It refers to the sufficient training of students in key content, learning strategies, transition skills and cognitive abilities required to succeed in their post-secondary educational pursuits (Conley, 2012). Those skills include not only rigorous academic preparation, but also social, emotional, and cultural competency, thereby making students more resilient in their novel college settings (Porter & Polikoff, 2012).

College readiness programs equip students with a variety of skills necessary for them to navigate their new college environments and academically succeed in their coursework (D'Angelo, 2019). Table 1 shows four essential dimensions covering most college readiness programs' content: (a) cognitive strategies, (b) content knowledge, (c) college contextual skills, and (d) academic behaviors (Conley, 2012). Cognitive skills and strategies featured in many college readiness programs include preparing students to exercise problem-solving, critical thinking, creativity and information identification, processing, organization, and critique (Scrivener & Logue, 2016).

Table 1

Dimensions of College Readiness Programs

Cognitive Strategies	Content Knowledge	College Contextual Skills	Academic Behaviors
• Problem-Solving • Argumentation • Sources Identification and Gathering • Evidence Evaluation • Critical Thinking • Creativity • Innovation	• Core Math Skills • Core English Skills • Core Computational Skills • Core Writing Skills • Core Reading Skills • Core Technical and Creative Skills	• Self-advocacy Skills • Information Seeking Skills • Mentorship Seeking Skills • Knowledge of College Norms and Expectations • Emotional Management Skills	• Self-regulation • Motivation • Engagement • Awareness • Self-Efficacy • Time Management • Strategic Reading • Teamwork

Note. Adapted from Redefining College Readiness, by D. Conley, 2007, Educational Policy Improvement Center. Copyright 2007 by David T. Conley.

Preparation in key content areas like English, Mathematics, Science, Arts, the Humanities, and Social Sciences constitute one of the most important dimensions of college readiness (Conley, 2007). College readiness prepares students to master the essential concepts, methods, techniques, and constructs of the core subjects like English and Mathematics to succeed in credit-bearing courses in their post-secondary educational pursuits (Arriero & Griffin, 2018). In addition, college readiness programs train students in the writing, computational, technical, and computer skills necessary to pass a variety of entry-level courses without the need

to seek additional help (Jiang et al., 2018). Students' appreciation for the importance of core subjects is also enshrined in college readiness programs to motivate students to become more engaged in their college coursework (Conley & French, 2014).

Another key dimension of college readiness is key contextual college knowledge (Conley, 2007). High school students transition into new lives once leaving their homes, or K-12 education systems facing new situations, realities, and contexts. This requires a set of skills to help them cope with their novel settings (Kallison Jr., 2017). Earlier research has indicated that not all students have equal access to transition knowledge and skills, as well as preparation (Conley & French, 2014). Students who are the first to pursue higher education in their families or come from lower socio-economic status and poor school districts, often suffer from lower levels of transition knowledge and skills (Conley, 2012). Transition skills include emotional management, self-regulation, self-efficacy, information seeking and, most importantly, self-advocacy (Kallison Jr., 2017). Also, transitional abilities include the recognition of college norms and expectations (Francis et al., 2018).

Key academic behaviors are essential for preparing students to become college ready (Conley, 2007). College readiness programs teach students the improvement of their learning strategies and skills (Kurlaender et al., 2019). This includes validated methods of increasing their self-regulation, self-efficacy, and motivation for learning. Also, it includes making them more engaged with their studies, as well as communities (Kurlaender et al., 2019). Learning strategies preparation includes time management tutorials, strategic reading demonstrations and collaborative learning simulations. College readiness is supposed to introduce students to all learning strategies and approaches they are likely to encounter during their college studies (Bonner & Thomas, 2017). Understanding these dimensions that form the content of college

readiness programs is essential before their effectiveness can be assessed and applied to the context of Saudi Arabia.

Research Questions

The motivation for focusing on two college readiness dimensions in this research rather than considering all four dimensions recommended by Conley (2007) stems from practical and theoretical considerations. The two dimensions covered in this study are (a) key cognitive strategies and (b) academic behaviors. On the practical front, a single interview session would not suffice for the collection of adequately rich descriptions of each dimension and its indicators. Relatedly, each dimension has several constructs, practices, and representations making the preparation of universal sets of interview questions logistically difficult. Third, in Saudi Arabia, the higher education system is more centralized compared to the United States. Students do not readily apply for separate colleges and must learn more information about funding or support services. Students are placed in colleges by selection committees based on preferential lists submitted by students. Students are required to attend their local colleges within the same geographic area (Saudi Ministry of Education, 2022). It is a requirement for every student to attend the closest college or university offering his or her preferred major of study in Saudi Arabia (Saudi Ministry of Education. 2022). Such a scenario downplays some of the contextual college readiness competencies important to American students like 1) financial aid applications, 2) navigating various colleges websites, or 3) checking out a variety of college options. The government pays for college for Saudi citizens, and most of graduating students already know their college choice, their closest university.

The exclusion of key content preparation is motivated by a number of country specific variables. First, many Saudi students take additional tutoring hours in key content subjects like

Arabic, English and Math. College and universities in Saudi Arabia have required students to enroll in first year English, Arabic and Mathematics courses during their first year of postsecondary education. Content preparation is covered as a college readiness practice across many supportive learning centers where many high school students register as members to take supplementary lessons. Therefore, the basic practices of key content preparation in Saudi Arabia are known whereas key cognitive strategies and key academic behaviors are under explored as college readiness practices.

Concentrating on cognitive strategies and academic behaviors rather than key content preparation or key college contextual skills is theoretically supported. Conley (2010) argued that college success relies on students' ability to activate key cognitive strategies and academic behaviors. Jimenez and Sargrad (2018) argued that many qualified students fail in college because they do not exhibit robust academic behaviors. For instance, a student who scored high on the SAT may not have the discipline nor persistence to survive in uncertain classroom environments. By the same token, some students who excel in their high school math and English courses do not possess intellectual openness or problem-solving skills when working with groups resulting in failing grades on many assignments. Therefore, key cognitive strategies and academic behaviors prepare students to bridge content knowledge gaps. Also, they help students learn more about college contextual skills (Tierney and Sablan, 2014).

Creativity, critical thinking and problem-solving are three of the most effective strategies that enhance students' performance at college (Rojas, 2015; Higbee, 2003). The three strategies have been linked to greater enhancements in learning output compared to other cognitive strategies part of college readiness (Hacisalihoglu et al., 2020). Similarly, time management, teamwork and self-monitoring are linked to better gains in grade point average, graduation rates

and engagement in postsecondary institutions compared to other behaviors contributing to college readiness (; Bercher, 2012; Hensley et al., 2018; Marosi & Bencsik, 2009).

1) In what ways does Tabuk High School prepare their students for college in a) creativity, b) critical thinking, and c) problem solving?
2) How does Tabuk High School prepare their students for college in a) time management, b) teamwork, and c) self-monitoring?

Definitions of Terms

This study defined the terms by using common wisdom in literature. Thus, these definitions are consistent with the literature. The terms, detailed definitions, and sources for the definitions are provided in Table 2 below.

Table 2

Definitions of Terms

Term	Definition	Source
College Readiness	College readiness is referred to as students' preparedness for passing entry level college courses without remediation.	(Conley, 2007).
Preparedness	Students' demonstration of four basic competencies: key academic behaviors, key cognitive skills, key content areas, and key contextual knowledge for navigating college life to ensure college success.	(Conley, 2010).

College Success	College success is defined by passing college courses without remediation.	(Conley, 2010).
Key Academic Behaviors	The collection of actions within the areas of self-awareness, self-monitoring, and self-control required for academic work to achieve college success. Academic behaviors may include desirable study skills, behavioral controls, and meta-cognitive practices.	(Conley, 2007).
Key Cognitive Strategies	Key cognitive strategies are intentional behaviors that become habits or ways of working that develop overtime with practice to help learners succeed in their academic/work endeavors. They include, but are not limited to: Intellectual Openness, Inquisitive Tendencies, Critical Reasoning, Empirical Analysis, Systematic Interpretation, Precision, and Problem-Solving.	(Conley, 2007).
Key Content Knowledge and Skills	Adequate preparation in core academic subjects like English, mathematics, science, humanities, languages, and the arts. Additionally, key academic skills include writing, research, statistical analysis, and computer use literacy.	(Conley, 2007).
Key College Contextual Skills	Sufficient knowledge of college life, processes, paperwork, and documentation needed to prepare students for graduation. Additionally, adequate preparedness to	(Conley, 2007).

	survive college pressure and be resilient during crises while attending college.	
Creativity	The skill of identifying and implementing innovative solutions to confronted situations or problems	(Torrance, and Aliotti, 1969)
Problem Solving	The ability to dissect a prompt, question or situation into manageable pieces and identify solutions to resolve each step comprising holistic resolutions	(D'zurilla and Goldfried, 1971)
Critical Thinking	The evaluation of information judiciously to formulate empirically logical coherent arguments explaining a particular point, idea, or thought	(Tama, 1989)
Teamwork	Collaboration and cooperation with peers to accomplish specified tasks	(Schmutz, Meier, and Manser, 2019)
Time Management	The active monitoring and reconfiguration of time to better achieve priority tasks in effective fashion.	(Claessens et al., 2007)
Self-Monitoring	Observing the perceptions and behaviors one performs in intentional ways.	(Schunk, 1991)

The Context of the Study

Education in Saudi Arabia

Education in Saudi Arabia has gradually evolved with the development of the Kingdom's economy, society, and culture to become a thriving modernized sophisticated system as observed by Western experts today (Hamdan, 2005; Ziyadda, 2021). Since the establishment of the Kingdom in 1932, the government of Saudi Arabia has primarily funded the establishment of schools at all levels (Alamri, 2011). In the early days of the new state, education was limited. Students attended elementary school sessions at rudimentary institutions like local Masjids, mosques. Middle and high school education was limited by the low number of institutions throughout the country in the 1930s and 40s (Al-Otaibi, 2019). With the discovery of oil and the beginning of concessions with foreign extraction companies, the government intensified its investment in establishing formal schools and basic higher education institutions in the early 1950s (Salameh, 2022). The country transitioned from the heavily Islamic informed education curriculum to modern instruction with the help of experienced staff from neighboring Egypt in the late 1950s and early 60s (Baki, 2004; Smith & Abouammoh, 2013). Formal elementary, middle, and high school systems were established to imitate modern education systems of the era. With the explosion of oil prices and exports booms, the government has funded the establishment of new colleges, universities, and schools (Onder 2021a; Onder 2021b). In the early decades of the country's foundation, education was the realm of males. Despite the heavy modernization efforts, the curriculum has still been informed by Islamic values (Alsuwaida, 2016; Qafilah, 2020).

In formal terms, the Saudi education system is characterized with varying learning stages (AlHazmi, 2022). Learners begin with a pre-school period spanning from the three and six years

of age. Pre-school is not a mandatory period of learning, and parents have a choice in enrolling their child in public or private institutions. Once learner's complete pre-school, they transition into elementary school where they finish six grades. During elementary school, students are introduced to basic life, physical, and social sciences, as well as Islamic studies. After completing sixth grade, students move on to middle school where they spend three years in their classrooms. During this period, all students receive the same education curriculum and instruction mandated by the Ministry of Education. After completing grade nine, students begin high school where they complete three grades: 10^{th}, 11^{th}, and 12^{th} (Aljabreen & Lash, 2016; Pavan, 2016; Rabaah et al., 2016).

The Saudi high school system has undergone significant changes in the past few years. Since the 1960s until the early 2000s, Saudi high school students choose a specific track in their final years of primary education (Al-Liheibi, 2008). Based on academic interests and leanings, the learner selected to pursue a science, humanities, or an applied skills track. While over the years such tracks have differed in content or nomenclature, students have been given differential instruction based on their track (Alharbi, 2014). Science students' complete courses in physics, chemistry, biology, and geology whereas humanities students' complete courses on history, geography, civics, and social sciences (Bojulaia & Pleasants, 2021). Management students' complete courses on life skills, financial literacy, basic accounting, and leadership. All students must enroll in several Islamic studies subjects like Quranic jurisprudence or exegeses (Almulla, 2017). Since the early years of the twenty-first century, the Saudi high school system changed to eliminate the separate tracks system (Mutambik et al., 2020). Students are expected to complete a structured set of courses in addition to a few electives from a prespecified list of subjects. All students are required to complete courses in Arabic, and English languages (Alharbi, 2014).

Students are also expected to complete several mathematics, science, and humanities courses (Moe.gov.sa, 2022a; Sabti & Chaichan, 2014).

Post-secondary education in Saudi Arabia is a highly structured system (my.gov.sa, 2022). Based on students' performance, the Ministry of Education places learners into different majors and courses of study (Saha, 2015). To be admitted into a college or university, students must have a balanced average score. The score is comprised of three components: a) General Aptitude Test, b) Standard Achievement Admission Test, and c) high school grade point average. (GAT) account for 30% of the balanced score and (SAAT) account for 40% whereas the high school GPA accounts for 30%. Students prepare the list after completing all assessments. Each major or course of study is assigned a specific balanced score (Mihael, 2015). Based on the students' performance on the balanced score, their major was determined. The students are afforded a list of preferred selected majors once they graduate from high school (Manaraa, 2022). Matching between their preferred majors and their performance on the balanced score occurs, and the Ministry of Education assigns the closest match (Onsman, 2010). Note that the student cannot pursue public education without having a balanced score. In addition, the student may not study at a university outside of their geographic area except in rare circumstances. One condition stipulates that the major desired to be studied is not offered at the local higher education institution (Le Ha & Barnawi, 2015).

After schools' closures because of the Coronavirus global pandemic in early 2020, the Ministry of Education in Saudi Arabia determined a need to change the education system in the country (Lbaqa 2022; Mahyoob, 2020). The new changes have gone into effect starting from the fall of 2022 (Al-Ghurbani et al., 2022). The academic year is divided into three semesters each with 13 weeks. Students are awarded 12 holidays throughout the full year. Each holiday ranges

between one and many days (Alahdal et al., 2020). The change has also brought new subjects to the curriculum like advanced English language, critical thinking skills, and self-defense. English language has become a primary subject taught at all k-12 education stages (Hassounah et al., 2020). Changes in Saudi education occur when the Ministry of Education leadership transfer from one administration to the other.

Education in Tabuk

Tabuk is a city in northern Saudi Arabia bordering the Kingdom of Jordan. Historically, Tabuk was home to many Arabic speaking tribes who settled in the region for centuries. Citizens of Tabuk like their ancestors belong to the Muslim religion and lead conservative lives in Western standards. Islam informs many social, cultural, and economic interactions among various elements of society. With the development of the modern state of Saudi Arabia, education in Tabuk has witnessed a tremendous upheaval (Alhowaish et al., 2015).

The beginnings of Tabuk education dates back to 1947 when King Abdul-Aziz Al-Saud ordered the establishment of the Saudi school with a total of forty students and four rooms mainly built with clay. Students learned the Quran, Islamic Jurisprudence, Arabic language, and basic mathematics. Four years later, two schools were added into the Tabuk surrounding communities of Taima'a and Haql. In 1966, the Ministry of Education founded the supervision office to manage all public schools, as well as educational institutions in the Tabuk region. In the late 1960s, there were about 41 elementary schools serving approximately 7,525 students, seven middle schools serving 725 students, and one high school with 230 students. In 1978, the Tabuk education authority was established to be the supervisory government body overseeing all schools and education activities in the region. Over the next two decades, independent education authorities affiliated with the central Tabuk education authority were founded in the five

governorates (Umluj, Alwajh, Dheba'a, Haql, and Taima'a) administered by the Tabuk's provincial government (SPA, 2022).

Recent statistics from the Tabuk education authority report that the region is home to 1,459 public and private schools (Saudi Ministry of Education, 2022). About 173 of those schools are either privately owned or operate under the international education standards, non-Ministry of Education curriculum. The authority suggests that there are 15,893 teachers where males comprise 7,001 from that total. The estimates also indicate that there are about 211,681 students at all education stages in the region. The majority of students, 182,887 receive public education (Moe.gov.sa, 2022b).

While Tabuk schools follow the same regiment of rules and policies implemented in Saudi Arabia, they possess specific traits making them different in several respects. First, Tabuk high school students are afforded the opportunity to enroll at Tabuk University and its satellite campuses. Given the small population in comparison to other metropolitan areas in the country like Riyadh, Tabuk high school students have higher probabilities of pursuing their preferred majors more than students in highly dense areas. Such an observation is caused by the fact that students must pursue their degrees at their local institutions. Tabuk university seats are held for Tabuk high school students who are lower in number compared to major urban areas. Further, Tabuk schools in the surrounding governorates are characterized with a small student to teacher ratio allowing for better learning conditions. Further, given the geographic distance from urban centers like Riyadh or Jeddah, Tabuk schools tend to implement programs or practices that have been proven to be useful by leading school districts like those in Riyadh, Jeddah, or Dammam (SPA, 2022).

College Readiness in Saudi Arabia

College readiness programs in Saudi Arabia have been largely outside of the k-12 education institutions and within the realm of pioneering social and economic organizations. The giant oil producer, The Saudi Arabian Oil Company (ARAMCO), offers two different college readiness programs for exceptionally performing students at the high school level. The Ambition Program (i.e., Tumuh) and the Summer Training Program both attempt to prepare students from all over the country to attending domestic and foreign colleges and universities. The students' interests, as well as their academic skillset determine which of both programs is the most appropriate choice for them. Tumu offers participants the opportunity to partake in a wide variety of activities like SAT test preparation targeting admissions in Ivy League universities with full funding from the company. The Summer Training Program introduces participants to different workshops developing their self-awareness, self-monitoring, and self-efficacy. Both programs offer specialized modules on how to pass English proficiency examinations for attaining admissions in prestigious institutions in the United States (Aramco, 2022). Similarly, The Prestigious Institutions Preparation Program helping participants secure admissions in highly ranked colleges and universities on the global level. Participants must exhibit excellent academic records. The program administers intensive summer camps and workshops on standardized tests like English proficiency assessments, SAT, and other popular admissions' exams (Misk, 2022). Note that college readiness programs in Saudi Arabia target students who have a higher tendency or background to attend Ivy League schools for their public equivalent in the United States.

Saudi colleges and universities have offered college readiness programs with varying characteristics. Note that such programs are largely optional. King Abduallah University for

Sciences and Technology offers a six-week summer program on applied research. Participants complete several activities introducing them to laboratory experimentation, scientific writing, and equipment administration training (Kaust, 2022). Some colleges and universities offer summer training workshops in mathematics, as well as English to support their community's high school students' learning (Vision2030, 2022).

High school students in Saudi Arabia are not adequately exposed to college transition training or workshops. This causes significant gaps between what students experience in their first year of college and the expectations from higher education administration, in addition to those the faculty maintain for new learners (Alabdulaziz, 2019). Saudi high schools do not prepare their students to become independent learners, problem-solvers, self-regulated students, and critical thinkers, which presents students with numerous problems once they enter college (Khoshaim, 2017). Such outcomes are associated with inadequate resources to support college readiness at the school level. Studies indicated that first-year college students across the Saudi Arabia suffer from heightened levels of anxiety, and stress stemming from demanding academic work, and autonomous unsupervised tasks and assignments (Dakhiel & Ahmed, 2019).

Another major hinderance for high school students in completing their post-secondary degrees in a timely manner is the English language barrier. Increasingly, higher education institutions in Saudi Arabia teach Science, Technology, Engineering and Mathematics along with other medical and natural sciences in English, even though students are not fluent in the language (Al Hazmi, 2017). Saudi colleges and universities require students to complete a number of courses in English. Additionally, some programs mandate students pass English proficiency examinations. Note that many programs in Saudi universities require adequate English proficiency. Saudi students are not prepared to complete an English curriculum since their

schools do not provide them with sufficient instruction in the language (Alabdulaziz, 2019). Therefore, many students struggle to read, write, or even understand instruction provided by Saudis who graduated from English-speaking institutions or faculty from other countries hired by Saudi universities (Alqurashi et al., 2017).

Despite the partial improvement in students' college readiness skills due to the Preparatory Year Program, one full year of college preparation administered prior to the degree program, Saudi students are found to have low levels of core content knowledge (Alabdulaziz, 2019). For the past decade, Saudi colleges and universities desired to resolve the low English, Arabic, and mathematics competencies among high school graduates with having them complete a full year referred to as the Preparatory Year Program, which is a required foundation year all students take once they reach college in Saudi Arabia. The new Ministry of Education leadership has terminated the preparatory year from Saudi colleges and universities. Now, higher education institutions in Saudi Arabia have a great deal of discretion in determining how to remedy the college readiness problem. All students are required to take a set of courses to enhance their college readiness preparation for their programs of study. All students are expected to complete English, mathematics, and science/humanities/social science courses contingent upon their tracks. Students are distributed to college majors depending on their performance during this foundation year (El Harbi, 2014).

Most Saudi universities have a preparatory year program enrolling many students who take English, Math, Arabic, and other general education requirement courses. Thousands of students complete this program and have reported improvements across all college readiness skills (Khoshaim, 2017). Students at the individual level have increased on core content assessments. Faculty perceptions about their students' Mathematics, English, and Computer

Science preparation prior to advanced coursework indicate the poor performance of students on standardized course specific assessments. In addition, students oftentimes reported seeking help from their peers, private tutoring agencies and writing services to complete their assignments in their respected major coursework (Bonner & Thomas, 2017). Statistical, numerical, and English literacies are relatively low among Saudi students throughout their college pursuits.

Ineffective instruction, inappropriate use of technology, and less interaction among students and faculty are all problems facing preparatory year programs across the country, which lead to less effective college readiness. Instructors fail to align higher education needs with students' preparation to become autonomous independent learners (Khoshaim, 2017). Case studies of preparatory programs show the low utilization rates of collaborative learning, problem-based inquiry and creative works production. In addition, students are not challenged to develop sufficient computational, technical and communications' skills required to excel in advanced coursework involving the use of technology, equipment, and materials (AlHazmi, 2017). Studies also showed that the curriculum, instruction, pedagogy and assessment used throughout the preparatory year do not instigate students' creativity nor innovation (Alabdulaziz, 2019).

Overview of Methodology

Research Design

This investigation utilizes case study design. Case studies are in-depth analyses of a single event, figure, institution, process, or practice (Babbie, 2020). Additionally, case studies could cover a few cases to illustrate a given behavior, attitude, or phenomenon (Metwally, 2012). Typically, case studies utilize qualitative data collection methods like interviews, focus groups, or archival records (Babbie, 2016). Nevertheless, case studies could incorporate quantitative data

collection and analysis methods in them. Unlike experiments or surveys, case studies provide rich descriptions of the units of analysis under investigation.

This dissertation follows qualitative research strategy. Semi-structured interviews are used to collect information from a selected group of Tabuk high school principals on college readiness practices and activities in their institutions. The general interview guide methodology is chosen to drive the interview. Note that the general interview guide is a method of interviewing that incorporates few preset questions as well as spontaneous probing questions based on the answers provided during the interview session (Turner III & Hagstrom-Schmidt, 2022). Such a technique allows the researcher to collect information on the main areas of interest, and simultaneously ask follow-up questions based on the answers provided by participants. The general interview guide method is situated between a complete informal conversational technique where the researcher has no prespecified areas of interest to inquire about and a close-ended standardized interview featuring the same questions to all respondents regardless of their answers throughout the interviewing session. The main areas of interest to the researcher in this research guiding the general interview are cognitive strategies, academic behaviors, key content knowledge, and key college contextual skills. Each area is represented with a few questions in the semi-structured interview.

Participants

Sixteen high school principals in the Tabuk school's district were interviewed to learn more about their schools' college readiness activities and practices. Principals selected for this research come from different backgrounds and histories. For instance, a few of the participants lead large urban schools within the city while another set of participants administer small rural high schools outside of the city limits of Tabuk. Further, some principals manage large schools

with students' enrollment exceeding 500 while others work at smaller schools with less than 200 students. Principals differ with respect to their level of leadership, education, and training experiences where some of them possess graduate degrees from domestic and abroad colleges and universities. The criterion-based selection strategy of participants is used to identify potentially knowledgeable principals on college readiness in Tabuk. All participants possess five years of leadership experience or more. Participants have worked in Tabuk high schools for at least 10 years. Principals are the most knowledgeable officers on college readiness practices in their schools.

Data Collection

Semi-structured interviews are used to collect information about college readiness activities and practices from participants. All interviews were held online via Teams in Arabic language. Interviews last anywhere from 45 to 60 minutes. Interviews feature common questions, as well as follow-up inquiries based on provided answers by the participants. Common questions ask about practices and activities related to creativity, critical thinking, problem solving, time management, teamwork, and self-monitoring. Interviews serve the interest of this research better than any other qualitative data collection method for several considerations detailed in chapter three.

Data Analysis

Thematic analysis is used to mine the textual transcribed data from all interviews. Manual coding of all interviews is followed to ensure that observed and unobserved patterns in the answers are accounted for. Thematic analysis generates a list of common themes or patterns summarizing the various interview responses (Braun & Clarke, 2012). At the end of the analysis, researchers produce a list of themes, and their corresponding representations throughout the

various texts informing the reader about the common observations within the text corpus used for data analysis (Javadi & Zarea, 2016).

Thematic analysis begins with a close reading of the text several times to familiarize the researcher with the information at hand. Then, the researcher starts building a coding scheme based on the information provided by participants. The coding scheme is built inductively and revised dynamically as the researcher reads the information. A code represents the basic element of information within a text. Once all codes are extracted from the text, the researcher looks for common conceptual associations between all codes to sort them into groups. Each group of codes is assigned a name describing it, which is known as the theme. Then, the researcher reads the text again to verify the correctness, accuracy, and precision of codes and themes extracted from the text. Once a final codes' list, and themes' nomenclature is generated, a conceptual map connecting all themes is generated outlining the relationships between themes extracted from the text (Fereday & Muir-Cochrane, 2006).

Assumptions

On a fundamental level, this dissertation addresses the variation in college readiness practices and activities among Tabuk high schools. One assumption is that college readiness exists to some degree at all Tabuk high schools, whether on a formal or informal level. Relatedly, Tabuk high schools are assumed to exhibit varying levels of college readiness practices. College readiness is not assumed to be prevalent or non-existent in Tabuk high schools, however, it is assumed to be manifested in different ways across schools with varying degrees.

Another major assumption underlying the current dissertation is that semi-structured interviews are powerful techniques capable of generating rich information about college

readiness. Interviews are assumed to be appropriate for producing different details, manifestations, and representations concerning college readiness in Tabuk high schools. It is assumed that principals would cooperate and provide in-depth descriptions about their schools' activities and practices concerning key cognitive strategies, key academic behaviors, key content knowledge, and key college contextual skills preparation and development. Follow-up and probing questions were used to mitigate the inaccuracy or false information potentially provided by participants; however, the researcher cannot control the type of information and descriptions of college readiness provided by principals.

Summary

This chapter outlined the conceptual parameters of college readiness. The term refers to the requisite skills and abilities enabling students to pass entry-level introductory courses during their first year of enrolment without remediation. Discussions in the chapter suggested a dearth of research on college readiness in Saudi Arabia, and more specifically in Tabuk high schools. Conley's four-dimensional model of college readiness as key content preparation, key cognitive skills training, key academic behaviors adoption, and key college contextual skills application guided the development of this research.

An overview of the context of the research was presented by introducing readers to the basic features of the Saudi education system, as well as the characteristics of Tabuk high schools. The historical development of educational institutions in Saudi Arabia and Tabuk were described to offer readers a richer picture of college readiness in the country. Additionally, statistics on the number of schools and teachers were provided to give readers a sense of familiarity with the need for college readiness in Tabuk schools.

The chapter offered the building blocks of the methodology to be used in this investigation. First, the qualitative research strategy was introduced with a thorough justification for the need to interview principals to obtain useful information on college readiness. Second, the data analysis technique of thematic analysis was presented with its various steps to generate the final list of themes or categories describing participants' responses to the semi-structured interview questions.

Chapter Two

Literature Review

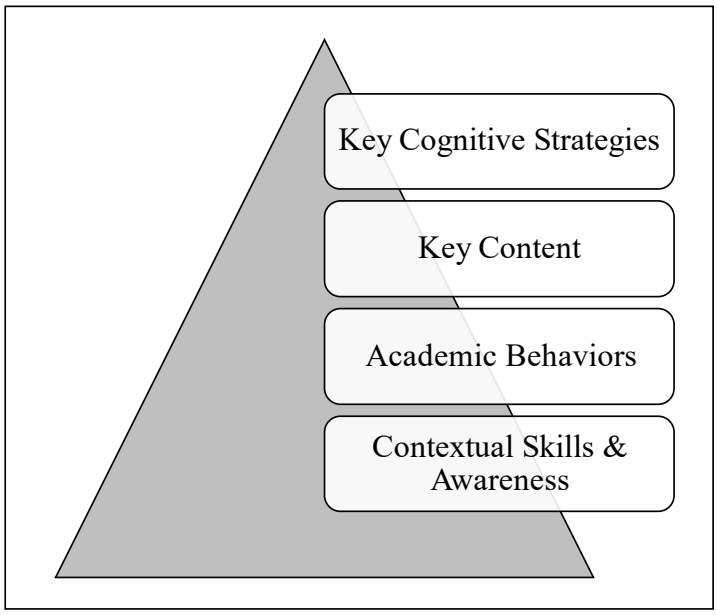
This review presents readers with an overview of the research on college readiness. The first section provides a detailed discussion on the conceptualization of college readiness. The main idea of this part is that scholars and practitioners have traditionally perceived college readiness as the level of students' preparation for college courses without the need for resorting to remedial education (Allensworth et al., 2014; Arnold & Armstrong, 2012; Atay & Sumuer, 2021; Carroll, 2018; Conley, 2017; Klein-Collins & Baylor, 2013). Further, the conventional view of college readiness concerns students' preparedness in key content area like mathematics, English, and science (Abraham et al., 2014; An, 2013; Barnes, Slate & Rojas-LeBouef, 2010; Contreras & Fujimoto, 2019; McCormick & Lucas, 2011; Means et al., 2016).

More recently, however, researchers have extended the concept of college readiness to incorporate cognitive and academic skills distinct from their academic preparation in key content (Bausmith & Barry, 2011; Camara, 2013; Darling-Hammond, Wilhoit & Pittenger, 2014; Jackson & Kurlaender, 2014; Nagaoka et al., 2013). The theoretical framework followed to define, conceptualize, and operationalize college readiness in the analysis is Conley's four components model depicted in Figure 1. Those skills include critical thinking, problem solving, creativity, self-monitoring, time management, and coping with stress (Duncheon, 2015; Komarraju, Ramsey & Rinella, 2013; Maruyama, 2012). In addition, others have included contextual college knowledge as another key component of college readiness. This set of skills includes knowing how to apply for colleges, financial aid, search for programs, policies, and procedures (Mattern et al., 2014; Porter & Polikoff, 2012). In sum, the section concludes that college readiness is best conceptualized as students' demonstration of four key components: key

content areas, academic skills, cognitive strategies, and contextual knowledge (Spence, 2009; Wiley, Wyatt & Camara, 2011; Yamamura, Martinez & Saenz, 2010; Zelkowski, 2010; Zinth, 2012).

Figure 1

Four Key Components of College Readiness



Note. Adapted from Redefining College Readiness, by D. Conley, 2007, Educational Policy Improvement Center. Copyright 2007 by David T. Conley.

The second section of the review focuses on college readiness in Saudi Arabia. First, the section provides readers with an overview of the problems facing Saudi high schools. Those include the use of outdated pedagogical strategies like memorization-based teaching methods (Ahmad, 2011; Alghamdi & Deraney, 2018; Al-Jadidi, 2012; Al-Qahtani, 2019; Daif-Allah & Alsamani, 2014). They also encompass the lack of critical thinking or problem solving in the curriculum and instruction within Saudi high schools. Further, teachers rarely teach students how to perform independent research. Students barely practice English academic writing in their courses. All these problems contribute to the crisis facing high school graduates who are placed

in remedial education programs like the preparatory year when arriving to college (Alebaikan, 2010; Alhawsawi, 2014; Almulla, 2018; Alzubi, Singh & Pandian, 2017). The second portion of the section presents readers with a brief overview of the preparatory year program instated by Saudi colleges and universities to prepare students for their respective academic study. The section presents current research findings on the effectiveness of the preparatory year programs in equipping students with the necessary skills for college success (Hamouda, 2013; Khoshaim, 2017; Le Ha & Barnawi, 2015; Nezami, 2012).

The section concludes with the statement that preparatory year programs suffer from a plethora of curricular, instructional, and pedagogical problems. Those include the low number of research-based projects, critical thinking inducing assignments, and reliance on excessive standardized assessments failing to instill key academic and cognitive skills in students to achieve better chances of college success. The literature on college readiness in the United States relates to the problems faced by Saudi post-secondary educational institutions. Much of the college readiness work concentrates on the American College Tests (ACT) or the Scholastic Achievement Test (SAT) preparation. Little preparation in college readiness in the United States focuses on the development of students' academic behaviors or cognitive abilities like the skill of performing independent research (Barnawi & Al-Hawsawi, 2017; Grami, 2010; Kaliyadan et al., 2015; Madani, 2020; Sawalmeh, 2013; Conley, 2007).

Conceptualizing College Readiness

College readiness is a widely celebrated concept and practice that has been defined in a variety of ways by educators and practitioners (Arnold & Armstrong, 2012; Bausmith & Bary, 2011; Nagaoka et al., 2013). While many have studied college readiness, its dimensions, operationalizations, and metrics, there have been few attempts to integrate the idiosyncratic

literature that attempts to provide a holistic overview of the construct or phenomenon (Maruyama, 2012; Porter & Polikoff, 2012; Contreras & Fujimoto, 2019). Many definitions in the extant scholarship on college readiness revolve around the degree to which high school students competed a set of courses deemed appropriate for college success (Belfield & Crosta, 2012; Conley, 2010; Kuh et al., 2006). Such conceptualizations emphasize the importance of basic mathematics, English, and science literacies in making students ready for college coursework (Zelkowski, 2010; McCormick & Lucas, 2011; National Research Council, 2011). Another view of definitions relied more on students' performance on high stakes standardized exams like the Scholastic Aptitude Test (SAT) or the American College Testing (ACT) (Barnes, Slate & Rojas-LeBouef, 2010; Duncan, Stevens & Beaumont, 2011; Huddleston & Rockwell, 2015). For the advocates of such perspective, the extent to which students demonstrate competency in the areas being assessed by the evaluations is college readiness. Few authors have criticized both views preferring a more comprehensive understanding of college readiness moving beyond courses and test scores (An, 2013; Darling-Hammond, Wilhoit & Pittenger, 2014).

A recent understanding of college readiness emphasizes the importance of key content knowledge areas to college success. This view desires high students to be well prepared in several subjects like mathematics, English, science, language, and arts. More importantly, this view recognizes academic writing as the single most important content area defining college readiness. For them, students who are well versed in academic writing, and its related skills, are more likely to attain the wide range of positive outcomes associated with college success (Camara, 2013; Conley & French, 2014; Flores & Park, 2013).

Equally in importance is the literature highlighting the significance of key cognitive strategies in determining college success. Studies of successful students highlighted the importance of critical thinking, problem solving, creativity, and quantitative reasoning in improving college success outcomes (Fong et al., 2017; Habley, Bloom & Robbins, 2012; Kyllonen, 2012). College readiness researchers have confirmed the value of teaching high school students how to explain complex issues in simple accessible plain language while making coherent arguments in preparing them for college. Further, the ability to dissect problems into manageable elements and identify various courses of action constitutes an important quality that determines part of college success. Students' skills in expressing their ideas in writing or graphically through actual or digital art helps them achieve better outcomes throughout their college journey (Prebble et al., 2004; Bensimon, 2007; Romeo, 2010).

Another perspective on college readiness has prioritized key academic skills and behaviors as definitional parameters to college readiness. This literature has studied successful college students and concluded that they possess a set of attitudes and actions that facilitate their college success journeys. Students who master different study skills are more likely to perform better compared to their peers who struggle when studying. Students who utilize time management tools or have an inherent ability to prioritize are more likely to achieve better learning outcomes compared to their peers (Conley, 2017; Duncheon, 2015; Duncheon & Muñoz, 2019). Students who monitor their progress are more likely to insert appropriate interventions helping them attain better performance compared to their peers who do not. Students who excel in utilizing groups to their benefit are more likely to gain more meaningful collaborative experiences and better grades. In sum, the set of perceptions and behaviors

comprising key academic conceptions and actions formulates an important dimension to college readiness (Pianta et al., 2017; Stone III, 2011; Their et al., 2016).

An increasingly popular body of research in college readiness points to the importance of contextual college knowledge necessary for students to achieve desirable outcomes. Students' knowledge of how to adjust to college life constitutes the most important element in this category of skills. Students who exhibit good stress management strategies are more likely to persist in college (Hooker & Brand, 2010; Mattern et al., 2014; Venezia & Jaeger, 2013). Further, students' ability to search for appropriate colleges, programs, and degrees serves as an important element guaranteeing a better college experience. Further, the knowledge of communicating with faculty, staff, and other students in a professional setting helps students experience more rewarding college life. Knowledge of policies, procedures, and processes also make students better acquainted with how college works, and more likely better at navigating the different options available to guarantee higher college success (Wang, 2013; Wiley, Wyatt & Camara, 2011; Wohn et al., 2013).

Operationalizing College Readiness

College readiness is the student's preparation to enter, complete, and graduate from credit-based courses or degree programs at postsecondary institutions without requiring any type of remedial education (An & Taylor, 2015). Students are able to finish their courses with basic knowledge, skills, and abilities allowing them entering the next course on the sequence. Any student who does not enroll in Calculus One after graduating school is considered by many departments, faculty, and experts in American education as unready for college (Woods et al., 2018; Yeager et al., 2016; Zinth, 2012). Note that such a standard is similar in the Kingdom of Saudi Arabia.

This definition casts many characteristics on the college ready student. College ready students are able to read, understand, and act upon college expectations. They are comfortable with studying the content being exposed to them without needing external assistance. They are able to demonstrate competencies in the knowledge, skills, and abilities covered by the course delivered to them (Donham, 2014; Mechur Karp, 2012; Yamamura et al., 2010). They are aware of their academic progress and personal positions within college allowing them to gain a better college experience compared to the unready college students. They are likely to foster positive relationships with their peers, faculty, and community stakeholders within their college communities (An & Taylor, 2015; Klein-Collins & Baylor, 2013; Pretlow & Wathington, 2014).

This understanding facilitates the assessment of college readiness programs, systems, and initiatives. The definition could be used to develop a general tool that helps high schools evaluate their college readiness efforts. Currently, there has been no systematic development of an instrument that measures all four key components of college readiness: key content knowledge, key cognitive strategies, key academic attitudes and skills, and key contextual knowledge. Nevertheless, there are many available measures of each component that could be integrated together in a systematic evaluation of college readiness (Abraham et al., 2014; Roderick, Nagaoka & Coca, 2009; Spence, 2009).

Key content knowledge could be assessed by the type of courses completed or students' grades on standardized tests evaluating their competencies in the specified content areas. Critical thinking and problem solving could be measured using developed assessments like critical thinking appraisals. The California Critical Thinking assessment tool or the Watson-Glaser Appraisal could be used to help measure students' cognitive skills. Self-reported questionnaires like the Southern Utah University measuring students' study skills competency could be used to

assess students' key academic behaviors. Tests or performance-based tasks could be used to measure students' key contextual college knowledge (Carter, Creedy & Sidebotham, 2015; Kong et al., 2014; Ku, 2009).

The Need for College Readiness

Students transition from high school to college facing many new challenges. First, students are no longer under the auspices of their school or principal. They are treated as independent learners who are in full control of their learning experience. Students are expected to understand college expectations, policies, rules, and procedures. Students are exposed to new lifestyles and worldviews (Khoshaim, 2017; Maruyama, 2012; Mechur Karp, 2012). Faculty expect students to work independently and exhibit less levels of empathy for their conditions compared to their high school teachers whom they have known for many years. Students experience more stress in coping with their new realities and roles. They face academic difficulties adjusting to the expectations of their new faculty who oftentimes set the bar high especially at prestigious or tier one schools (Bowman, 2010; Shernoff et al., 2014; Shin & Harman, 2009).

Given the variegated differences characterizing college compared to high school, college readiness is more than just sufficient academic preparation. Despite the similar nomenclature of course labels between college and high school, faculty emphasize different learning goals, cover more material, and spend less time helping students overcome deficiencies compared to high school teachers (Contreras & Fujimoto, 2019; Maruyama, 2012; Porter & Polikoff, 2012; Romeo, 2010). Many high school graduates make the mistake of perceiving college courses similar to their high school courses. Higher education instructors attempt to foster students' critical thinking abilities, something many have not gained throughout their high school

education. College faculty oftentimes require students to collect, analyze, interpret, present, and communicate data or arguments in coherent ways. This process is linked with high standards of independent research skills, a different set of expectations from high school courses. In college, faculty ask students to find solutions to classic or new problems facing the subject area being taught. This invokes higher-order reasoning skills, which are seldom activated during high school education (Martinez & Deil-Amen, 2015; Kirk & Day, 2011; Yeager et al., 2016).

College courses require extensive reading and writing. Students are expected to read more than a single textbook in a course. They are expected to read peer-reviewed scientific papers requiring a high level of critical thinking. College courses require students to write more papers compared to high school. In many courses, students are expected to write several papers with lengths ranging from 5-15 pages. In writing intensive courses, students are expected to write more than 20 pages in a single semester, something unfamiliar to them from their high school experience (Conley, 2017; Duncheon, 2015; Prebble et al., 2004). More importantly, the grading criteria used to assess writing skills are different. Faculty emphasize good reasoning, argumentation, evidence presentation, and interpretation. Such high standards of grading are not used in most students' high school courses. In many college courses, faculty are less cooperative offering no to little extra credit supporting students' performance (Belfield & Crosta, 2012; Conley, 2010; Kuh et al., 2006).

The many differences college possesses compared to high school make college readiness an essential educational competency helping students succeed in their college journey. Students need to be prepared in extensive writing. They need to develop critical thinking and problem-solving skills. They need to be more resilient and effectively manage stress. They need to know

how to communicate with their peers, faculty, and operate within study groups. All in all, college readiness is a significant predictor of college success (Barnes, Slate & Rojas-LeBouef, 2010).

The Problem of Remedial Education

One of the main problems college readiness attempts to resolve is the high proportion of students enrolled in remedial education. In the US, about 50% of all high school graduates are enrolled in remedial education in the nations' four-years colleges. The number is higher when community college education is involved (Huddleston & Rockwell, 2015; Mattern et al., 2014; Wiley, Wyatt & Camara, 2011). In Saudi Arabia, an entire college known as the Preparatory College was created in every university to provide students with foundational education prior to the completion of their respective academic programs. All matriculated Saudi students are expected to complete one year of basic education to be deemed prepared for college study. The preparatory year is an additional foundation year to the original program of study per students. Once students complete their preparatory year, they are expected to complete four years of study to obtain their bachelor's degrees. Medical, dental, and other professional programs may require students to spend more than four years after completing the preparatory year. Remedial education prolongs graduation timelines, decreases degrees completion rates, and is associated with more debt, stress, and lower academic aspirations (Alebaikan, 2010; Al-Jadidi, 2012; Grami, 2010; Nezami, 2012).

Failure Rates in General Education

Statistics note the high failure rates of students in general education or foundational courses during their first year of college (Brock, 2010; Shea & Bidjerano, 2014). In the US, about 50% of students receive low-performing grades impacting their college experience (Chen, 2013). In Saudi Arabia, similar rates exist when mathematics and English foundational courses

are considered. Such high failure rates lead to longer graduation times and lower chances of degree completion (Grami, 2010). Interviews with students enrolled in entry-level or remedial courses point to the difficulties in adjusting to the high academic expectations set by faculty (Nezami, 2012). Students self-report low academic writing ability, and insufficient preparation for critical thinking-oriented tasks. The development of comprehensive college readiness standards helps in preparing students prior to their college experience reducing such failure rates (Alebaikan, 2010; Al-Jadidi, 2012).

Limitations of College Readiness Literature

A common misleading approach of assessing college readiness is the use of course titles, their perceived difficulty levels, and the grades students attain in those courses. It is believed that if high school students complete a set of specific courses, complete a set of prescribed units, and pass them, they become college ready (Belfield & Crosta, 2012; Kuh et al., 2006; Zelkowski, 2010). Oftentimes, the list of courses to be completed is required by college admissions' committees. This helps high schools and colleges standardize the names of those courses and assist students in identifying needed units to be college admission eligible. While this approach seems plausible, it is ineffective. The content covered in the courses are not rigorously examined, and there is an unrealistic expectation that such courses provide students skills necessary for college success. Nevertheless, completion of such courses makes students admissions ready, however not college success ready (Bausmith & Barry, 2011; Conley & French, 2014; Darling-Hammond, Wilhoit & Pittenger, 2014).

A common erroneous approach employed in college readiness measurement is the use of transcripts' analysis. Few authors have concluded that the completion of a set of common course titles presented the best predictor of college success. This has made schools, especially low

performing institutions, to simply change the titles of their courses, and mandate their students to complete them, perceiving a higher degree of college readiness (Harvill et al., 2012; Hooker & Brand, 2010; Khoshaim, 2017; Conley, 2007). This approach, however, ignores the content and quality of the courses being offered. This neglects what students are actually learning within their courses. Up-to-date, schools or states have not developed robust criteria that assess the quality of courses. A performance-based set of criteria measuring students' learning throughout such courses could help high schools build better college readiness metrics (Camara, 2013; Kyllonen, 2012; Stone III, 2011).

Another strategy used to improve college readiness is to increase the course units or requirements to be completed at the high school (Their et al., 2016; Venezia & Jaeger, 2013). For instance, many American states have mandated their students to complete more mathematics and science courses to facilitate better transitions into college success. Despite such reforms, students' scores on the ACT have not dramatically improved, pointing to the persistence of the problem. The continuation of poor college readiness rates in the US constituted a proof to the inefficiency of the increasing requirements approach by states or schools as a mean to improve college readiness (An & Taylor, 2015; Donham, 2014; Klein-Collins & Baylor, 2013).

A popular approach to estimating college readiness is the reliance on grade point average as a general indicator. Evidence from the United States appear to support the conclusion that GPAs suffer from inflation. Across many countries, high school grade inflation seems to persist across public and private schools (An, 2013; Maruyama, 2012; Komarraju, Ramsey & Rinella, 2013). In a few studies, researchers found that receiving a B grade on a 4.0 grade scale today is equivalent to a C twenty about years ago (Faurer & Lopez, 2009). One of the ways colleges and universities are compensating for GPAs inflation is by assigning varying weights to courses.

Advanced placement or honors classes are valued more compared to others. This approach, however, fails to assess the exact college readiness skills and abilities captured in such courses. Many schools also do not have the means to offer such advanced courses creating ethical problems for colleges and universities (Allensworth et al., 2014; Feldman & Kubota, 2015; Sanchez & Buddin, 2015).

One of the most widely used approaches to assess college readiness is to use test scores presumably measuring a set of content and knowledge areas expected to be mastered by to be college students (Avery et al., 2018; Bowen, Chingos & McPherson, 2018; Zinth, 2012). College admission offices set cut-off scores on standardized assessments measuring students' reading, comprehension, reasoning, and writing abilities. Test scores have been widely used as predictors of college success, and admissions decisions are largely derived from them. Many researchers have criticized such tests claiming their invalid alignment with skills necessary for college success. Such assessments do not provide key indicators of students' study skills, time management, or college contextual knowledge. Many students who scored high on standardized tests reported experiencing serious academic and transitional problems in college (Hooker & Brand, 2010; Mattern et al., 2014; Venezia & Jaeger, 2013).

A high proportion of students moving from high schools to college lack the necessary cognitive abilities requisite for college success (Conley, 2010; Porter & Polikoff, 2012; Stone III, 2011). Faculty surveys across countries exhibit dissatisfaction with the preparation of students for college education (Conley, 2010; Porter & Polikoff, 2012; Stone III, 2011). Students reach college with significant deficiencies in their critical thinking and problem-solving skills. Cognitive strategies refer to students' ways of thinking. They are intelligent methods of information organization. They help learners sort through the corpus of facts and material

retrieving only the necessary information to be understood and presented in coherent manner. Cognitive strategies are habits-bovertime through practice. Cognitive strategies are specific disciplinary methods of receiving, processing, and interpreting information. They are different from idiosyncratic or spontaneous thinking skills (Allensworth et al., 2014; An, 2013; Bowen, Chingos & McPherson, 2018).

There are many key cognitive strategies requisite for college success. Intellectual openness constitutes an important thinking habit. College ready students are characterized with tolerance towards other worldviews and oppositional peers' views (Spence, 2009; Ku, 2009; Martinez & Deil-Amen, 2015). They are willing to trade their opinions for factual evidence-based facts. They are open to criticism, and do not internalize non-constructive critiques. They engage in the habit of constructing and deconstructing arguments. The development of healthy inquisitive behavior is another healthy cognitive strategy. The desire to ask more questions, search the literature for answers, and defending arguments are all desirable cognitive exercises for college success. The quest for evidence and facts to support arguments defines the intellectual endeavors of students (Abraham et al., 2014; Barnett et al., 2012; Roderick, Nagaoka & Coca, 2009).

Another key cognitive strategy for college success is the ability to critically analyze information. Students are able to sort through information, organize them in coherent manner, and appraise their logic and empirical support (Benjamin, Brown & Shapiro, 2013; Freeman et al., 2014; Thier et al., 2016). Students engage in evaluating the worth of arguments and evidence before them. They compare and contrast arguments and references determining their quality, and authority. The ability to make coherent arguments is a critical key cognitive strategy employed throughout college work. Students' ability to reason, construct arguments, and backing them

with factual proof is significant in determining their college success. Problem solving constitutes one of the most important cognitive abilities students require throughout their college life (Duckworth & Yeager, 2015; Kautz et al., 2014; Mitin et al., 2018). The ability to dissect the scenario or issue at hand into tractable pieces and rearranging them to find a solution to the problem at hand are important skills students used throughout their courses in college. Critical thinking, including the ability to interpret information in plain language and present backed conclusions in consistent ways is essential for college success. College readiness programs need to provide students with training to help them master all such cognitive strategies (Avery et al., 2018; Bowen, Chingos & McPherson, 2018; Zinth, 2012).

Past research has rarely assessed college readiness outside of the United States in systematic fasting using validated instruments (Tierney & Sablan, 2014; Barnes & Slate, 2013). The critical analysis of the various faces of college readiness including critical thinking skills, academic study habits, content preparation and contextual college knowledge in international education systems are largely missing from the literature. While international assessments programs like PISA attempts to establish universal metrics for mathematics or English proficiencies across countries, authors have neglected the refined assessments of a single or more dimension of college readiness (Barnes & Slate, 2013).

The measurement of college readiness using thorough assessments in non-Western or advanced educational systems is marginalized within the education literature. Systematic investigations aiming to examine deficiencies among students concerning college readiness skills are rare at best (Barnes, Slate & Rojas-LeBouef, 2010). Individual level studies analyzing the perceptions of administrators or teachers on students' college readiness are seldom in the college readiness literature (Lombardi, Conley, Seburn & Downs, 2013).

Key Academic Attitudes and Behaviors

This set of skills consists of the extent to which students master self-monitoring, self-management, self-control, and goals setting. Self-monitoring refers to the students' self-awareness of his or her thinking process (Kautz et al., 2014; Mattern et al., 2014; Wohn et al., 2013). For instance, a student is aware of his or her weaknesses and strengths concerning a set of subjects. Reflection and reflexivity are two skills subsumed under self-monitoring. In addition, this set of academic skills extend to persistence in college. The ability to manage stress and novel situations constitutes a significant academic skill required for college success (Bowman, 2010; Carter, Creedy & Sidebotham, 2015).

Additionally, students' demonstration of good study skills is an important element of the college success formula. Study skills include desirable time management and prioritization practices. Further, study skills represent the preparation and conducting assessments without excessive stress or anxiety. They also include note taking, organization, effective use, and retrieval. Most importantly, they involve effective groups management and building positive constructive relationships with instructors. One of the key study skills is managing engagement and self-control in group settings (Al Seyabi & Tuzlukova, 2014; Madani, 2020; Sawalmeh, 2013).

Previous research has shown that students are more likely to enroll in colleges when their teachers, school staff, and principals recognize the value of college education, and most importantly shatter the myth of the unworthiness of postsecondary degrees for any reason (Allensworth et al., 2014; Barnett, 2016; Bowen et al., 2018). Classroom discussions do not feature conversations about whether college is relevant, worth it, or useful. They revolve around how to have the best experience when in college. Setting high expectations for students at the

high school level helps improve college attendance rates and make students more serious about preparing for college (Conley et al., 2010; Duncheon & Muñoz, 2019; Khoshaim, 2017).

Schools demonstrate their commitment to the value of college education and high academic aspirations in a variety of ways. Some principals ask their staff to post acceptance letters for previous classes in the hallways. Others ask teachers to share students' college plans with other students with the approval of all stakeholders. Some schools regularly hold college fairs inviting admissions representatives to present school's programs and explain all relevant information students may ask about (Kirk & Day, 2011; Long, Conger & Iatarola, 2012; Martinez & Deil-Amen, 2015). Many schools dedicate personnel to managing college admissions process for school students. This staff meet regularly with students to review their plans and provide them with updated information. Most importantly, the staff helps students navigate college sites, and teaches them how to look for relevant information and apply for college. Many schools take their students to college early on to excite them and help them build encouraging relationships with their teachers and school's staff for building a college-going attitude. Few schools dedicate scheduled class times or mandate courses that discuss the value of college education (Shernoff et al., 2014; Venezia & Jaeger, 2013).

Schools that deliberately teach students self-management and have them perform tasks to demonstrate competency in the practice generate more prepared students for college (Tsoi-A & Bryant, 2015; Venezia & Jaeger, 2013). Self-management is a crucial skill for achieving college success. Students who are personally responsible, as well as take initiative when necessary, organizing their daily chores and priorities are more likely to succeed in postsecondary schooling (Wagner, 2010). Schools, however, generally do not mandate their students to complete a

specific set of tasks helping them develop self-management, and most importantly practice it (Tsoi-A & Bryant, 2015; Venezia & Jaeger, 2013; Wagner, 2010).

The practice of self-management instruction in high schools is myriad. Some schools prefer a traditional way of handing out planners to their students and monitoring their progress on the time management instruments. Others ask students to participate in special courses or workshops designed to train students on how to use specific tools like Google Calendar, and other prioritization scheduling tools. Few schools have teachers and staff who demonstrate exemplary self-management practices through providing students with pre-prepared schedules, and notes helping them interpret the plan outlined. Academic related self-management is also provided in the form of notes taking lessons and programs. Students who are better in note taking coach their peers, and ensure they learn how to organize their study material (Pretlow & Wathington, 2014; Roderick, Nagaoka & Coca, 2009; Sawalmeh, 2013).

Key Content

Academic writing is one of the most assessed skills throughout college. Students who exhibit strong writing abilities are likely going to receive better performance scores along their academic journeys (Al Seyabi & Tuzlukova, 2014; Grami, 2010). Writing varying types of essays like descriptive or persuasive narratives is important given the different tasks students complete in their distinct courses. The ability to prepare proposals, bibliographies, edit, and format essays are essential for guaranteeing high college success rates. Similar to academic writing, research skills are important academic preparation skills to possess in college. The ability to navigate reliable, credible, and authoritative sources to be used in papers or projects is essential. The skill in identifying and utilizing various methodologies and techniques to address

research problems is a highly utilized academic skill (An & Taylor, 2015; Fong et al., 2017; Nezami, 2012).

Knowledge of key subjects like English is fundamental for college success. Understanding of language makes reading and writing much easier throughout college. It allows students to engage better with their readings, peers, and instructors (Kautz et al., 2014; Nezami, 2012; Alghamdi & Deraney, 2018). By the same token, a solid knowledge in mathematics makes entry courses in Calculus, Physics and Computer Science easier for students. Basic quantitative reasoning helps students throughout their statistics and data driven courses. By the same token, sufficient preparation in chemistry, physics, and biology allow students to persist in challenging science college courses. Proficiency in the arts allows students to establish the seeds of creativity required in many courses throughout their college courses (Greene & Crespi, 2012; He et al., 2016; Wagner, 2010). Exposure to world languages in high school makes students more appreciative of diversity and global issues. They are less likely to experience foreign language anxiety throughout their language and area studies requirements. All in all, a solid foundation of key content at the high school level across the curriculum makes students prepared for postsecondary education success (Barnett, 2016; Long, Conger & Iatarola, 2012; Strayhorn, 2018).

High schools that require their students to complete rigorous mathematics, English, and science courses generate more college ready students (Al-Shahrani, 2019; Moore et al., 2010; Tsoi-A & Bryant, 2015). Within such courses, high schools that mandate students to complete tasks, activities, and projects requiring them to utilize their critical reasoning, thinking, problem solving, and research skills are more likely to produce prepared students for postsecondary education. Successful schools in college readiness align their courses according to freshman

college level standards. They attempt to teach students material required by entry level college courses. They attempt to have students' complete assignments similar to the entry level college requirements preparing their students for facing all potential challenges experienced throughout the first year (Means et al., 2016; Bailey & Cho, 2010; Erdogan & Stuessy, 2015).

In many schools, setting a rigorous curriculum is not a straightforward endeavor. One of the practiced methods helping schools achieve this objective is the creation of learning communities. Teachers meet regularly to update their course standards, material, and activities. They monitor each other offering feedback on how to make students more engaged and achieve better learning outcomes. They review performance metrics regularly and insert interventions whenever appropriate to remedy deficiencies (Edmunds et al., 2010; Jackson & Kurlaender, 2014; Woods et al., 2018). Another method utilized by other schools is to mandate the preparation of capstone or portfolio-based projects. Throughout such endeavors, students have to exhibit several competencies all necessary for college success. Teachers meet regularly with students, and whenever a deficiency is identified within a subject area, teachers either tutor students or guide them to assistive resources. They monitor students' development throughout the project's timeline. Schools also utilize summative assessments regularly and introduce useful interventions to raise the academic performance of struggling students. There is a common commitment for raising academic standards for everyone in this type of school generating more college ready students (Atay & Sumuer, 2021; Hooker & Brand, 2010; Pianta et al., 2017).

Evidence points to the benefits of making the senior high school academic year challenging. Students who complete rigorous courses are more likely to attain better grades in the first year at the college level (Daif-Allah & Alsamani, 2014). Students who are challenged in their mathematics, English, and science courses are more likely to persist through their survey

courses during their freshman year (Nuriddin, 2019). Schools with insufficient resources to offer challenging courses generate less prepared students for postsecondary institutions (Jackson & Kurlaender, 2014). Students from these scare resourceful schools are more likely to enroll in remedial courses or take more courses than the required curriculum for program completion (Daif-Allah & Alsamani, 2014; Jackson & Kurlaender, 2014; Nuriddin, 2019).

A common method employed by high schools is to mandate their students to complete rigorous courses in mathematics, English, science, the humanities, and the arts during their final year. This comes regardless of the number of credits students attained in previous years. Across many countries around the world, high school students are expected to complete standardized exams from their respective ministries of education. These assessments are typically challenging requiring lengthy studying (Ahmad, 2011; Alzubi, Singh & Pandian, 2017; Sawalmeh, 2013). Another technique used by many schools is holding intensive content-oriented summer programs. Those workshops cover advanced mathematics, English writing, and specialized computer skills courses preparing students to college. Some schools require their students to complete lengthy research projects requiring intensive English writing and research-based skills. Teachers monitor the progress of students throughout the year, and coach their students to become better writers (Bowman, 2010; Kaliyadan et al., 2015).

Key Contextual Knowledge

This set of college readiness skills includes the ability to identify relevant colleges, the application completion process, and information lookup techniques. Students need to learn the types of colleges, their levels of prestige, and perceived rigor. They need to understand the requirements of the admissions process (Barnett et al., 2012; Jackson & Kurlaender, 2014). They are expected to master the college application process. This includes the ability to write personal

statements, supportive essays, and filling out additional documentation like financial aid applications. Further, this set of skills includes searching relevant information on potential programs of study, their expected careers, curriculum, and overall expectations (Boyles, 2012; Stellefson et al., 2011). The application process for Saudi students is similar in several respects to their American peers. Students need to complete a formal application with supporting materials within strict deadlines. Students in Saudi Arabia are required to stay in their provinces if the college major, they are seeking is offered at a local university. Many students still could seek studying in other institutions away from their home provinces if they furnish compelling evidence for their request.

The college contextual knowledge also pertains to the ability to manage transitions from high school to college life. This includes learning how to search for students' services information. This also includes knowing the varying processes and procedures followed by higher education institutions. Understanding policies is crucial for guaranteeing a smooth college success journey for high school students (Donham, 2014; Hamouda, 2013; Kaliyadan et al., 2015).

Schools that provide coaching for their students on how to identify colleges of choice, apply to them, and navigate all relevant information generate more resilient prepared students for postsecondary study (Roderick et al., 2009; Sawalmeh, 2013). Many students lack the skills to identify relevant colleges or programs in their area or beyond (Venezia & Jaeger, 2013). They lack the knowledge of how to complete the college application preparing the necessary documentation. They are ill informed about how college is paid for, and the selectivity of colleges (Nezami, 2012). Counselors provide supportive services in exposing students to such contextual knowledge. In many schools, students are the first-college generation recipients

requiring schools to work harder to demolish barriers associated with admissions and aid (Kuh et al., 2006; Nezami, 2012; Pianta et al., 2017).

Schools engage students through having them apply for colleges themselves. Counselors, staff, and teachers provide relevant information to their students on colleges and monitor them. They provide supportive resources to resolve any issues arising from the process clarifying to students what happened, and most importantly should occur (He et al., 2016; Jackson & Kurlaender, 2014; Kaliyadan et al., 2015). Many colleges and universities require students to complete a few applications. This includes the preparation of statements, essays, and any material requested by the school. Also, supportive applications like financial aid, if applicable, were completed throughout this exercise. Schools also actively engage students' parents in the college application process. Parents are consulted and offered support in completing their students' college applications process (Erdogan & Stuessy, 2015; Fong et al., 2017; Grami, 2010).

High schools that imitate the assessment procedures at the college level generate more resilient and persistent students for postsecondary education. Schools that require students to self-regulate their learning and demand autonomous thinking through project-based assignments better equip their students with necessary attitudes and behaviors for college success (Maruyama, 2012). Teachers employ progressive learning in their courses (Alghamdi, 2017). They begin with basic activities moving along to more complex tasks and assessments requiring students to actively rely on constant critical thinking, problem solving, and research skills activation (Duckworth & Yeager, 2015; Huddleston & Rockwell, 2015; Ku, 2009).

Some high schools require their students to prepare a number of research papers every year resembling the experience of a college student. The length, depth, and rigor of papers vary

across schools; however, students are held to high expectations. Schools also assign students projects like those experienced in arts, architecture, engineering design, and graphic design courses at the college level. Other schools offer their students the ability to attend a college through dual enrolment programs. This gives students the opportunity to experience college life and academic rigor at an early stage. Students are expected to conduct in-class and digital presentations disseminating information about their school's projects in professional settings similar to those observed at the college level (Alghamdi, 2017; Contreras & Fujimoto, 2019; Maruyama, 2012).

Schools that partner with postsecondary institutions to prepare their students for college generate higher college enrollment rates compared to others. Bridging programs held either on school or college premises help students develop the culture of going to college and identify academic weaknesses to be addressed prior to matriculation (Alghamdi, 2017; Kirk & Day, 2011; Means et al., 2016; Prebble et al., 2004).

Some schools have agreed to have their students complete online courses offered by postsecondary institutions. Students in many cases are eligible to enroll in dual enrolment programs. Students are also encouraged in many schools to enroll in early college credit programs offered locally. Many colleges and universities offer leadership summer programs for senior high school students. In these programs, students learn how to navigate college resources, and have an opportunity to remedy deficiencies in mathematics or English writing using on-campus resources (Ahmad, 2011; Harvill et al., 2012; Shea & Bidjerano, 2014).

College Readiness in Saudi Arabia

The Tabuk school district is home to about 50,000 students. In a recent count of Tabuk high schools, there were 235 high schools in the Tabuk district (Alahmadi, 2022). Many schools

are situated in urban settings. Small rural high schools serve villages and towns far from the city of Tabuk. Note that some rural high schools only serve 100 students or less. It is noteworthy to state that all public high schools in Saudi Arabia are gender segregated (Alahmadi, 2022).

The education system in Saudi Arabia is divided in to five distinct stages. The first stage begins with pre-school education where children under the age of six attend public and private programs preparing them for primary grades. The second stage is the elementary school years starting from the age of six and spanning to the age of 12, extending over the first until grades. The third stage consists of three years in middle school. From age 12 until 15. The fourth stage is high school covering three years where students choose a specific track like science or liberal arts. Once a student graduates from high school, they enter post-secondary education consisting of either academic college like programs or vocational training workshops.

In 2021, the ministry of education introduced several sweeping changes to the Saudi education system. First, English would be taught from the first grade until students graduate from the high schools. Second, beginning from fourth grade, students would complete a numerical literacy course teaching them basic fundamentals of data organization and analysis .Additionally, fourth-grade students are required to complete a course in applied life skills. Third: The tracks system, which is considered one of the world's leading educational systems, aims to develop students' abilities, enhance their education, and provide them with future job opportunities. The system comprises three years of study, with the first year being a common year where students learn various subjects across three semesters. The remaining two years are specialized in one of the five tracks: General, Health and Life, Computer and Engineering, Business Administration, or Legal. Students are placed based on their aptitude test scores (20%), their grades in subjects related to the track (20%), and their grades in first-year common subjects (60%).

The General track is available in all schools and is not subject to any regulations, unlike specialized tracks that focus on track-specific subjects. Schools can offer specialized tracks if they have enough students, and private schools can also offer tracks if they meet the Ministry of Education's requirements.

To graduate from the tracks system, students must complete the required volunteer hours and a graduation project. The "Tajseer" system allows students to switch between tracks based on certain factors and conditions (Saudi Ministry of Education, 2022).

A defining feature of Saudi high schools is the use of memorization-based learning. Students passively receive knowledge passed onto them via teachers or content resources. Students are expected to memorize the material and be tested on it. High school teachers rarely engage students' critical thinking skills through assigning independent research-based projects. Students in many cases graduate from their schools without sufficient preparation in research skills. Madani (2020) performed classroom observations for science and mathematics teachers in Saudi schools. The author reported a high utilization rate of memorization-based classroom activities, as well as taking home assessments (Alghamdi, 2014). Teachers seemed to minimally engage students with critical thinking or problem-solving oriented projects. They have not fostered students' independent research skills by assigning intensive writing research-based projects.

Much of the curriculum in Saudi high school having to conduct performance-based activities. They graduate with little practical skills guiding them through rigorous college projects. Khoshaim (2017) demonstrated how the Saudi media repeatedly critiqued high school students' preparation for college. The common criticisms are schools do not provide students

with practical skills and they fail in equipping students with independent learning strategies and techniques.

High schools in Saudi Arabia fail in preparing students in basic content literacies like mathematics or English writing. Khoshaim (2017) concluded that many Saudi high school graduates are deficient in key content areas. First, the author highlighted the low performance rates of Saudi students in mathematics. Second, the study reported low English proficiency levels required to achieve basic comprehension of college level texts in English common throughout the college curriculum. A particular emphasized weakness in Saudi schools is students' preparation of working academic writing proficiency in English. Saudi students reach college with minimal writing practice. Many of them have never written an essay. Most students report low writing activity in their high schools. They cite the absence of systematic instruction concerning English academic writing.

Saudi high teachers fail to foster independent learning skills among their students. Khoshaim (2017) concluded that the common pedagogical approach followed by high school teachers in Saudi Arabia is spoon feeding. Spoon feeding is teaching students how to follow solutions routes without actively engaging them in the process of learning (Khoshaim, 2017). Teachers show students an example solution and expect them to follow it without any questioning. Teachers demonstrate to students how to perform a task and expect them to follow the same procedure. There is minimal thinking involved in such a teaching strategy. Students fail to activate their analytical thinking and critical reasoning. They lack the necessary attitudes and behaviors to make them independent learners. Almulla (2018) concluded that secondary school teachers in Saudi Arabia do not utilize critical thinking teaching strategies adequately. The analysis found that few teachers used open-ended questions to guide constructive discussions in

their classrooms. Further, few teachers reported the use of comparing and contrasting exercises making students present different arguments with their evidence. In addition, the use of performance-based tasks was rare in Saudi high schools' assessment. Al-Qahtani (2019) concluded that English textbooks and the curriculum used in high schools do not engage students with critical thinking and constructive reasoning. Students are expected to memorize ways of reading, writing, and speaking. They are not asked to apply their learned knowledge in new contexts allowing them to deepen their learning and transfer the knowledge elsewhere.

Saudi educators have noted the lack of study skills necessary for college success among freshman students. Alghamdi and Deraney (2018) demonstrated the lack of study skills in Saudi high school curriculum and instruction. In their study, they concluded that preparatory year students lacked research abilities. They showed how an intervention, a course, designed to enhance their research skills achieved desirable outcomes in developing students' critical thinking abilities in college. Alzubi, Singh, and Pandian (2017) confirmed that students lacked autonomous learning skills in the preparatory year program. Their analysis demonstrated how high schools do not prepare students in conducting their independent projects or pursue learning on their own. The authors recommended instructors to teach students necessary study skills allowing them to be self-regulated and independent learners. Nuriddin (2019) highlighted the increase of academic dishonesty incidents in the preparatory year programs across Saudi universities. The author concluded that high schools do not prepare students to perform expected assignments in college. This inability forces students to seek help from others in performing the tasks expected. This behavior has a high rate of diffusion where peers begin using external sources to conduct the work, they are supposed to do themselves. The author suggested that high

schools need to equip students with the necessary academic abilities to allow them to work independently without reliance on others.

Ebaid (2021) concluded that high schools do not prepare students to perform expected assignments in college. This inability forces students to seek help from others in performing the tasks expected. This behavior has a high rate of diffusion where peers begin using external sources to conduct the work, they are supposed to do themselves. High schools need to equip students with the necessary academic abilities to allow them to work independently without reliance on others (Ebaid, 2021).

Summary

This review presented an overview of college readiness conceptualization and measurement. College readiness is often defined as students' level of preparation for college courses without remedial education. Prepared students for college demonstrate high preparation in mathematics, English, and science. They exhibit a desirable English writing ability. They are proficient in self-monitoring, stress management, and prioritization. They know how to navigate college sites looking for the necessary information (Conley, 2008; Conley, 2007; Baber et al., 2010).

Current popular methods of assessing college readiness rely on test scores, GPAs, or standardized assessments performance. Such approaches fail to evaluate students' critical thinking, problem solving, creativity, research, goals setting, self-monitoring, and college navigation skills. All these skills are crucial for guaranteeing a better chance of completing postsecondary education with success. More detailed measurement tools like the College Career Ready School Diagnostic, Campus Ready, and College Readiness Assessment have been

developed to reflect the more comprehensive view of college readiness (Conley, 2007; Lombardi et al., 2011).

Within Saudi Arabia, college readiness is limited. High schools rarely implement formal programs preparing their students for college success (Khoshaim, 2017). Teachers rely on memorization-based instructional methods (Alghamdi, 2017). They do not challenge students. Students do not complete college-like projects requiring them to research a topic and write a rigorous analysis of the findings to be presented to their peers. Students graduate with minimal English writing skills and little to no critical thinking abilities. Colleges and universities attempted to resolve this problem by requiring students to attend a mandatory academic year known as the preparatory year program. The gap in the literature is represented by the limited number of systematic studies conducted to investigate the quality of college readiness in Saudi high schools. Relatedly, another gap in the literature is manifested in the paucity of investigations, collecting information on what high schools offer students with respect to college readiness preparation. Using qualitative information from principals, researchers are in a better position to paint a more accurate picture on what college readiness looks like in Saudi high schools.

Chapter Three

Research Design

This research is an exploratory investigation of college readiness practices at Tabuk high schools from the perspectives of principals. Since little information is available on college readiness practices in Saudi high schools, exploratory research generates further insights on unexplored phenomena like college readiness in Tabuk (Babbie, 2008; Babbie et al., 2022). Further, exploratory research helps build a preliminary overview of the prevalence, representations, and implications of college readiness in Saudi Arabia paving the way for extensive future research projects with more specific questions and hypotheses. On another front, exploratory research allows the uncovering of variation in the perceptions of principals about college readiness, how it should be conducted, and most importantly how it is currently practiced at high schools (Engel & Schutt, 2010, 2013). Further, exploratory research offers the advantage of better understanding and contextualizing the college readiness phenomenon (Neuman, 2006; Sarantakos, 2000). This research offers stakeholders a foundational block for future projects interested in better understanding and assessing college readiness in Saudi Arabia. For the current project, exploratory research is the most appropriate design given its purpose of learning the extent to which a phenomenon exists in a specific setting (Adler & Clark, 2008).

The qualitative research design guides this investigation. Qualitative research allows for the construction of the insider researcher element necessary for building a holistic narrative to make sense of the varying events, interactions, perceptions, and settings involved (Babbie, 2020; Fossey et al., 2002). Talking to participants about college readiness in their schools permits the building of rapport and probing, which are required for obtaining quality information about different elements concerning college readiness. Qualitative research concentrates on

understanding the specific context like college readiness in Tabuk high schools. Interacting with principals allows the researcher to identify useful information that supplements provided knowledge from principals to construct a more accurate account of college readiness practices. While the present study utilizes Conley's model as the main college readiness theory guiding the construction of research questions and interviews, qualitative research permits the flexibility of using more than a single perspective. Such an advantage adds to the inductive nature of the inquiry, which could potentially result in new practices of perceptions unaccounted for in prior theories or models (Crabtree & Miller, 2022). Qualitative methods allow the researcher to flexibly ask questions based on salient features noted throughout the data collection process making it a more responsive choice capable of generating useful rich information on the phenomenon under investigation (Merriam & Tisdell, 2015).

Case studies are one of the popular research designs besides experiments, surveys, and secondary data analysis. Additionally, case studies supply readers with rich descriptions of units of analysis, their environment, and interactions (Yin, 1992). This research utilizes the case study methodology. Case studies are appropriate when the researcher is interested in learning how a phenomenon unfolds in a real setting (Yazan, 2015). Further, case studies focus on contemporary events, practices, or representations of the phenomenon (Yin, 2009). More importantly, case studies are the preferred strategy when the researcher exerts little or no control over the setting under consideration (Stake, 2008). Cases could be events, people, processes, and institutions. In this research, cases are high school principals working for the Tabuk education authority. Babbie (2008) mentions that:

> As Charles Ragin and Howard Becker (1992) point out, there is little consensus on what constitutes a “case” and the term is used broadly. The case being studied, for example,

might be a period of time rather than a particular group of people. The limitation of attention to a particular instance of something is the essential characteristic of the case study (p. 326).

In line with exploratory research, case studies are the choice of many researchers when there is little to no information available on the topic under investigation (George & Bennett, 2005). The current research on college readiness practices in Tabuk high schools fit all the aforementioned criteria, and therefore case study was selected as an overarching methodology. Note that experts in case studies recommend the use of this methodology when researchers have inadequate information about the topic they attempt to investigate, the context of this research (Babbie et al., 2022; Babbie, 2008). This study uses the single case study design. The case for this study is Tabuk.

A single case study is an event, place, phenomenon, or any subject/object under investigation. The entity may hold significant intrinsic or extrinsic value to the researcher. The case may be an anomaly, a deviant observation, or a colossal important incident. Studying a single case helps better understand what happened and how variables interact together to generate observed outcomes. By focusing on a single case, researchers could generate a number of hypotheses to be tested using larger samples to assess the empirical fit of proposed models or arguments (Yin, 2012).

Participants

The unit of analysis for this research are high school principals in Tabuk high schools. The choice of principals is motivated by several considerations. First, models and theories of college readiness suggest that schools may provide students with various services across different departments delivered by numerous staff members. Such a holistic concept is more

likely to be clear to principals compared to anyone else working at the school. Additionally, principals are more aware of school practices across divisions, offices, and teams. Theory-driven cases selection is more likely to generate information capable of being used to generate hypotheses to be tested in further research. Also, principals have served in the school administration in various roles endowed with rich knowledge on school practices more than teachers and other staff.

Despite variability in demographic and social economic characteristics defining Tabuk high school principals, high school principals' population in Tabuk tends to be homogenous. All of the principals are Saudi citizens. Principals come from conservative families that believe in Islam as a way of life. Principals tend to be over the age of 40, married, and with children. The researcher has worked in high schools located within Tabuk region in Saudi Arabia for more than two decades, establishing knowledge over the demographic characteristics of schools' principals in the region. Like Saudi citizens, principals place high value on their familial relationships. In many cases, principals know each other because they have worked at the same education authority for years. More importantly, Tabuk high school principals tend to come from the areas that they worked in. Such similarities reduce the effect of diverse personal and communal characteristics defining principles.

School size and gender differ across Tabuk high schools making them important variables to consider in selecting cases for this research. According to the most recent tally of Tabuk schools, there are 235 high schools (Saudi Ministry of Education, 2022). Since gender segregation is mandatory in Saudi public education, 125 of the 235 schools are boys only. The statistic also does not exclude private or international schools, and therefore the overall number of public high schools is lower than 235. The city of Tabuk, the main urban hub in the province,

has the highest number of high schools compared to the rest of governorates administered by the Tabuk education authority office, the primary representative to the Ministry of Education in the area. Tabuk high schools differ with respect to size, facilities, and staffing. Urban high schools in the city of Tabuk tend to be larger, more modern, and better staffed. Gender is an important variable in Saudi education throughout K-12 schools, boys' and girls' study in separate facilities. Boys are taught by male teachers. Girls are taught by female teachers. Historically, the Saudi educational system favored males because of the perceived belief that men are the sole providers of their households (Ahmed, 2020). Recently, the new Saudi leadership has expanded access and resources to females' education (Ahmed, 2020).

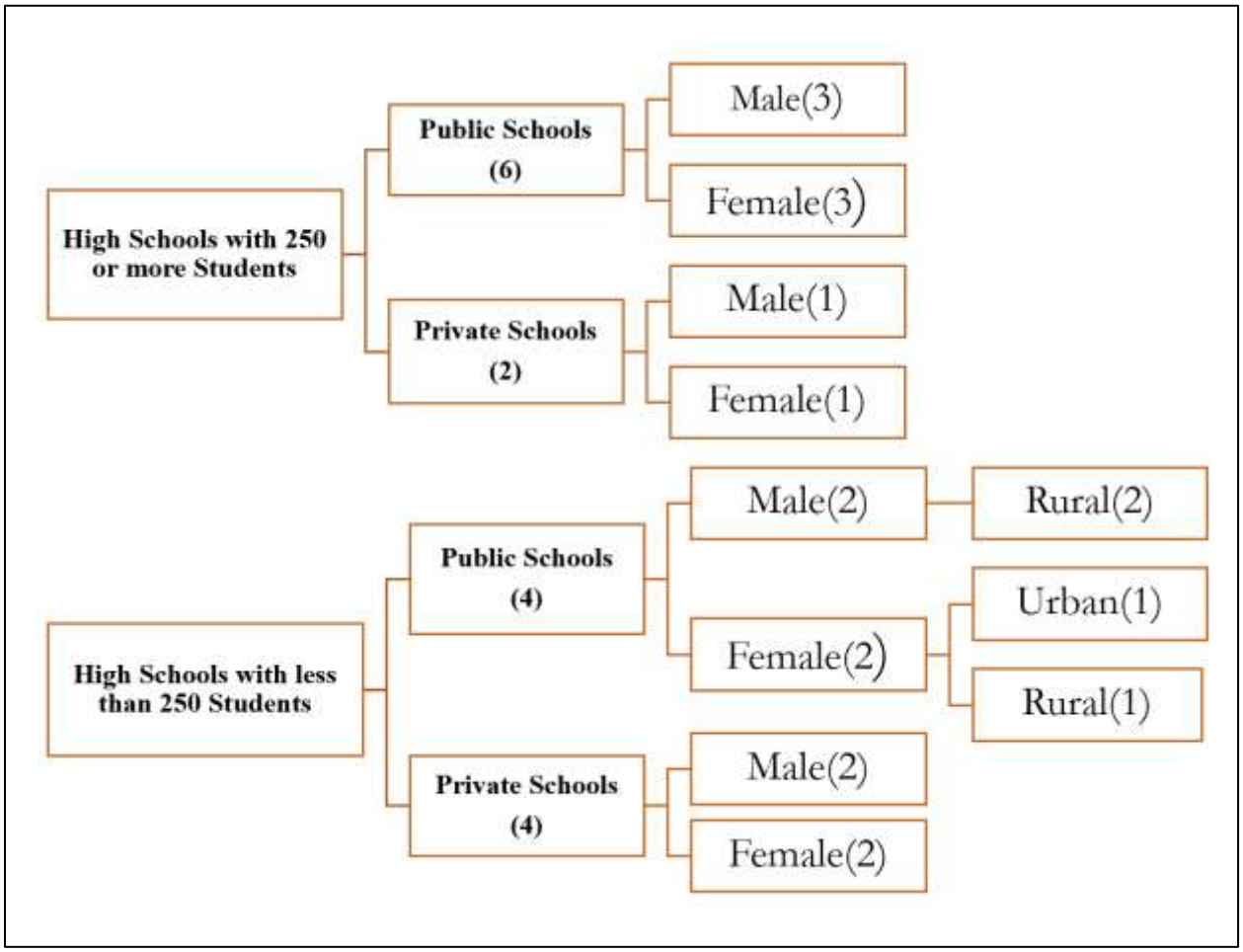
Tabuk high schools differ with respect to their students' enrollment sizes. Schools with large students' enrollments, 250 or more, receive more financial, staffing, and technology integration support compared to the smaller schools. In addition, larger schools tend to be concentrated in urban areas that feature a large proportion of the white-collar labor force in Tabuk. On the other hand, smaller schools tend to be located in remote rural areas or small villages away from the center of the city. The population in rural areas in Tabuk is comprised of small business owners, public service employees, and blue-collar laborers. Figure 2 provides the selection criteria for the participants.

The choice of sixteen principals is the suitable number for necessary cases to conduct this research is informed by the principle of saturation. Note that experts in qualitative research have concluded that 16 is an agreed-upon number to reach saturation (Guest et al., 2020; Saunders et al., 2018). Saturation refers to the representation of the phenomenon in an adequate manner (Saunders et al., 2018; Guest et al., 2020). The starting question driving saturation is how many participants are needed to account for the theoretical variation within a concept? The simple

answer to this question is that there is not a specific number to judge whether the researcher achieved saturation or not. For practicality purposes, a few researchers have recommended different cut offs like six, eight, 10 or even 15 or more (Nelson, 2017; Sebele-Mpofu, 2020). Sixteen participants who served as principals for five years or more in a relatively small area compared to other Saudi provinces is deemed appropriate. Such a conclusion is sound given the limited resources and the scope of the project the researcher possesses.

Figure 2

Participants Selection Criteria



Note. There were 16 participants in total.

Data Collection

Semi-structured interviews are flexible conversations with respondents that possess a degree of guidance. These interviews allow researchers to ask prespecified sets of open-ended questions while using probing techniques to obtain a better picture of the phenomenon under investigation (Magaldi & Berler, 2020). Semi-structured interviews are used to collect information from participating principals on college readiness. Semi-structured interviews are flexible allowing the research to focus on primary areas of interest while being responsive to answers provided by participants. This type of interview is not standardized nor close-ended. The researcher or interviewee asks questions based on general domains like college readiness dimensions while still engaging in conversations to obtain specific illustrations or examples on points shared by participants. The main areas of interest for this research are school practices to develop students in a) creativity, b) critical thinking, and c) problem solving. In addition, interests of this study cover high school students' a) time management, b) teamwork and c) self-monitoring.

To ensure the representation of all areas of interest in each interview with principals, the following set of questions guides the flow of the interview. Once each question from the following list was answered, a set of follow up questions were asked to better clarify important related points. Interviews took from 30 to 60 minutes. There were 16 interviews with Tabuk high schools' principals who work five years or more as principal in the region of Tabuk, in addition to other considerations on the basis of which participants were selected, such as the location of the school, the number of students and the type of school in terms of gender as I described in Figure 2. Interviews took place at the most preferred space and time for each principal. Interviews were conducted virtually to allow more comfort and convenience to participants.

Microsoft Teams was used as the medium to perform the interviews. All interviews were conducted in Arabic language. They were transcribed verbatim by Microsoft Teams. I listened to the recordings and compared them for accuracy against the transcription. Corrections to the transcripts were made as needed, then sent to a certified translator to be converted into English. Data was stored on a password-protected computer, as well as a password-protected file. No unauthorized access will be given to anyone other than the principal or the advisor. (see Appendix A for the interview questions).

During the interview, the opening five minutes introduced the participant to the purpose of the research. College readiness was defined, and its different dimensions explained. See Table 3 for the list of the participants. The researcher assumed little to no prior knowledge of participants about college readiness. Such a briefing allows participants to recall examples and illustrations, large or small, that align with college readiness activities. Once the participants agreed to conduct the interview verbally, the interviewer began by asking the general set of questions in the guide (see Appendix A for the Interview Protocol). After each question, probing was applied to better understand each important point. Once all questions were answered, the researcher debriefed the participant outlining the main practices noted by the principal. A chance was given to participants at the end of the interview to add information not represented in the debriefing or the interview as a whole. The researcher shares the personal contact information and offers participants the opportunity to obtain a final copy of the research report once prepared.

Table 3

Additional Criteria for Selecting Participants.

	Name	Years of Experience	Interview Date	Location	Type of School	Gender	Number of Students
1	Mutaib	12	02/24/2023	Urban	Public	Boys	450
2	Hamad	24	02/27/2023	Urban	Private	Boys	496
3	Albandri	5	02/28/2023	Urban	Private	Girls	174
4	Farah	11	02/28/2023	Urban	Public	Girls	512
5	Faisal	6	03/01/2023	Rural	Public	Boys	20
6	Bader	11	03/01/2023	Urban	Public	Boys	650
7	Rabee	12	03/01/2023	Urban	Public	Boys	450
8	Kaled	7	03/02/2023	Urban	Private	Boys	210
9	Mansora	14	03/02/2023	Urban	Public	Girls	320
10	Iman	18	03/03/2023	Urban	Public	Girls	90
11	Raid	5	03/03/2023	Rural	Public	Boys	67
12	Ahmed	19	03/04/2023	Urban	Private	Boys	250
13	Hoor	15	03/06/2023	Rural	Public	Girls	186
14	Hanan	7	03/07/2023	Urban	Public	Girls	251
15	Mona	5	03/07/2023	Urban	Private	Girls	180
16	Bashayer	14	03/11/2023	Urban	Private	Girls	770

The Need for Interviews

There is a dearth of information on the nature and content of college readiness in Saudi high schools. Principals are knowledgeable sources on the programs, courses, and workshops administered on their campuses. School administrators have extensive work experience in their own schools, as well as nearby schools allowing them to speak confidently about the offered programs geared toward preparing high school students for college. Interviews with principals

and administrators allow the research to access unexplored bodies of information to be documented and help answer the proposed research questions in this research.

Interviews allow the researcher to identify a larger range of variation to the same phenomenon (Harvey-Jordan & Long, 2001; Heath et al., 2022; Newcomer et al., 2015). Principals may provide varying manifestations, representations, or portraits of college readiness programs or practices in their schools. Additionally, interviews permit the researcher to ask for more clarification, as well as illustration to the provided argument by the school administrator. The interviewer could build on the provided answers to probe further information to reach accurate and credible answers documenting the observations highlighted by the interviewee (Alshenqeeti, 2014).

Interviews offer the researcher a flexible mode of data collection unafforded by other methods like focus groups or observations (Opdenakker, 2006; Segal et al., 2006). Unstructured interviews allow for constructing new questions based on answers provided by the respondent (Heath et al., 2018). More questions could be readily asked to obtain more details concerning provided descriptions of programs or courses (De Leeuw, 2008). The interview adds the opportunity to obtain more information about highlighted events or occasions pertinent to the outcome being investigated. Additionally, interviews provide contextual information that could be missed when the researcher utilizes quantitative or other close-ended qualitative data collection techniques (Jackman et al., 2022).

Interviews provide principals privacy and confidentiality allowing for a more comfortable environment to share information with the researcher (Allmark et al., 2009). Focus groups, participant observations, or electronic forms of data gathering all add an element of suspicion on the part of information providers (Gaskell, 2000). Interviews occur in private settings allowing

the interviewee to select his or her own place, time, and location allowing for more control. Once trust and rapport are established interviews are capable of producing important information regarding the phenomenon under investigation otherwise missed in group settings or non-human interaction (King et al., 2018).

Interviews strengthen data quality in many respects. First, the respondent allocates a specific time to offer his or her contributions to the research (Conrad & Blair, 2004). The respondent is aware of the general topic of the research and would prepare an idea or some notes in a few cases to be discussed during the interview. Additionally, the respondent holds the interview under the impression that it consumed some time, and act in a comfortable manner sharing information without being rushed. Moreover, interviews allow the interviewee to voice his or her concerns about the phenomenon being investigated, which would not have been gathered if surveys or questionnaires were to be administered (Pawar, 2004).

Data Analysis

This research uses an inductive thematic analysis approach to analyze the interview data collected to perform the study. Six steps as recommended by Braun and Clark (2006) were followed to conduct the thematic analyses. These steps are familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, and defining and naming themes, producing the report. The following provides detailed information about each stage and how it was performed using the data in this research.

Thematic Analysis Six Steps

Stage 1: Familiarizing Yourself with Your Data

The first stage in a thematic analysis involves the researcher's exposure to the data at hand. Being familiar with the information to be analyzed is crucial for the construction of

communalities and unique features in the corpus of information to be mined. Kiger and Varpio (2020) pointed out “while it can be tempting to begin coding data and searching for themes immediately, familiarizing oneself with the entirety of the data set first provided a valuable orientation to the raw data and is foundational for all subsequent steps” (p. 5). Beginning by repeatedly going through the data collected for the thematic analysis introduces the researcher to a wide array of core and peripheral elements to highlighted in subsequent analyses. For this research, the transcribed Arabic versions of interviews with the principals was read three times at various occasions to allow the researcher to immerse herself with the varying patterns represented in the interview responses. Each reading of the data was held on separate days to allow the researcher to examine the evidence at hand. Once all the readings were performed, an initial familiarity level was garnered prior to analytically examining the transcripts.

Notice that the three readings were performed on one document that featured all interviews. To build more familiarity, once each interview was translated from Arabic to English, the interview was read in its entirety. Prior to generating any themes, the researcher built close familiarity with each interview on its own and the entire transcript of all interviews.

Stage 2: Generating Initial Codes

Once a solid familiarity is built with the data at hand, the second phase of the thematic analysis entails the construction of initial codes describing the information. Majumdar (2022) recommends that “stage 2 of thematic analysis begins that aims producing initial codes from data.” (p. 207). A code is defined as the basic element summarizing an interesting or primary idea represented in the textual transcription of the interview responses (Labra et al., 2020; Scharp & Sanders, 2019). During this stage, the researcher reads each interview’s transcript on its own and generates a list of initial codes per participant (Herzog et al., 2019). Practically, a code may

be a statement, few sentences, or an entire paragraph. Table 4 represents an example of a statement and its corresponding initial codes for a hypothetical respondent. Once a list of initial codes is constructed per participant, the researcher rereads all transcripts together to produce a universal list of initial codes for the entire data. The end result of this stage was a long list of initial codes for each participant as well as the entire textual corpus.

Table 4

Illustration of Initial Codes

Statements	Initial Codes
Our school holds an annual conference where we invite two local universities to educate our students about college life and success.	1. College contextual skills training 2. Conferences for college life training

In this research, each set of three statements formulates the input for a code. The assumption is that the principal conveys at least one idea with adequate details in three sentences. While this decision is subjective, any decision about the input for a code is interpretive. If the researcher considered each sentence as a separate code, potentially, there could be 200 codes. If the entire paragraph was considered as input for a code, fewer number of codes could have been generated. Therefore, three sentences ensure a sufficient number of codes exist within each interview.

A code is considered as such if four different principals spoke about it. Thus, ensured that it is present in more than a single context. A principal could echo the same code again and again in the same interview. A total of 52 distinct codes were identified describing principals' responses to interview questions.

Stage 3: Searching for Themes

According to Xu and Zammit (2020), this stage "involves considering how relevant codes could be sorted, collated, and combined to form an overarching theme" (p. 6). Once the long list of initial codes was generated and available to the researcher's perusal, the researcher then attempted to classify codes into separate themes. A theme is defined as a set of related codes representing an underlying or latent phenomena within the text. The researcher begins with each list of initial codes per participant and generates an initial list of themes per interview. The same procedure is applied to the universal list of initial codes based on the reading of the entire textual manuscript. A helpful strategy is the construction of conceptional maps linking each theme with its corresponding list of initial codes. The end result of this stage is a long list of initial themes per participant as well as for the entire textual transcript of the interviews.

In this research, the list of 52 codes was classified into initial themes. Each interview transcript was analyzed on its own. Additionally, the entire text of interviews was analyzed for comparative purposes. Once an initial list of themes was generated for each interview, a universal list of themes was generated. The results of this section were the generating of different number of themes per interview and the entire transcript. The range of initial themes was between six and ten among all interviews and nine for the entire transcript. Note that these were the initial themes results.

Stage 4: Reviewing Themes

After generating a list of initial themes, a thorough review of all themes was conducted. Kiger and Varpio (2020) discussed that at this stage, "data extracts can be re-sorted, and themes modified to better reflect and capture coded data" (p. 6). During the review process, some initial themes were broken down into more refined themes given the high variation among the set of

initial codes comprising the initial themes. On the other hand, a few initial themes were collapsed with other themes to represent similar latent or unobserved phenomena represented by the similar initial codes. Similarly, some themes appeared to be highly heterogeneous which likely resulted in the removal from the list of initial themes. Once the initial review process was complete, the refined list of initial themes was further examined. Each list of initial codes within each initial theme must exhibit high similarity in content. By the same token, each set of initial codes and each theme were likely to exhibit difference from other sets of initial codes in other initial themes. In other words, parallel to quantitative analysis, a heuristic level of convergent and discriminant validity based on the researcher's view existed within the final list of initial themes.

For this research, reading the list of initial themes for each interview resulted in deleting or collapsing some themes. Some themes represented similar ideas noting their merger. The resulting refined list of themes was six. These included: high school objectives, college readiness activities, celebrating success, creativity activities, private school advantage, and barriers to college readiness.

Stage 5: Defining and Naming Themes

Starting with the final list of refined initial themes, the researcher begins to name and label each theme appropriately. Majumdar (2022) noted that "the analyst's job is not only to summarize the content of the data extracts as themes, but also to point out what are most interesting about them and more certainly, why they are important to be collated as themes." (p. 209). Each theme was given a descriptive name as well as a definition that contains the fundamental domains each theme covers. The nomenclature and conceptual parameters of each theme represented the list of initial codes as well as the excerpts such codes are based on. The

research viewed the different excerpts representing each theme in a holistic narrative describing how the various initial codes are related together to produce the outcomes associated with the theme. The end result of this stage is a list of refined themes, their definitions, their conceptual parameters, and narratives connecting the various excerpts corresponding with each final theme.

Stage 6: Producing the Report

Kiger and Varpio (2020) suggested that this "step involves writing up the final analysis and description of findings (p. 7)." The final step in a thematic analysis is the write-up of the analytical report. In the manuscript, the research constructs a story summarizing each theme and its association with the theoretical and the practical implications of the underlying researched topic. Within each theme's discussion, the researcher collaborates the different elements within the narrative with vivid illustrations from the interviews data. While writing the report, the researcher connected the themes to ensure proper flow and connectivity to the main ideas represented in the transcripts. Each discussion reflected a crucial idea represented by the theme without the use of too many illustrations or too little excerpts. Finally, a conceptual map linking all themes showing the interrelations among them was constructed to summarize the basic narratives found within the research.

Trustworthiness Definition and Strategies

Trustworthiness in qualitative research refers to the credibility, transferability, dependability, and confirmability of the information, findings, and descriptions found in the written final report of the analysis (Shenton, 2004; Lincoln & Guba, 1986). Credibility is the extent to which the results in reports are true depictions of the realities they intend to clarify (Connelly, 2016). In addition, Shenton (2004) mentioned that "ensuring credibility is one of most important factors in establishing trustworthiness" (p. 64).

To ensure the credibility of research results, the researcher utilized triangulation of evidence with available reports was used. Triangulation was performed by comparing the results from the interviews in this research to published data from general high school students and university entry examinations. Evaluating the fit between the findings found from qualitative information like interviewer responses and quantitative information such as exam scores would better inform decision makers' awareness of the need to enhance existing or future college readiness programs.

Transferability concerns the extent to which findings from a given qualitative study apply to similar contexts (Krefting, 1991). For example, Shenton (2004) pointed out that "the concern often lies in demonstrating that the results of the work at hand can be applied to a wider population" (p. 69). Transferability of the findings could be achieved through the provision of thick descriptions of results in the report (Connelly, 2016). The author needs to describe the details of data collection methods, timeliness, restrictions, and scope. Also, the researcher is required to describe all potentially influential factors affecting the setting of receiving and applying the findings in the field. This research achieves transferability by providing readers with rich descriptions of all college readiness practices, and how each could be applied in Tabuk high schools.

Dependability is the degree to which information in a report represents respondents' actual representations of the phenomenon under investigation (Stahl & King, 2020). Shenton (2004) suggested that "if the work were repeated, in the same context, with the same methods and with the same participants, similar results would be obtained" (p. 71). Considering this aspect of the concept, according to Gunawan (2015), dependability is related to the reliability of the qualitative study.

To ensure dependability exists in this research, two strategies were implemented. First, the researcher reported how the findings was constructed in detail. Second, each participant or theme featured the same treatment in terms of composition and style of presentation.

Confirmability refers to the extent to which the information in the report represents respondents' actual observations and not the biases of the researcher (Connelly, 2016; Shenton, 2004). Shenton (2004) discussed that:

> The concept of confirmability is the qualitative investigator's comparable concern to objectivity. Here steps must be taken to help ensure as far as possible that the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher (p. 72).

Confirmability in this research was assessed using numerous techniques. First, the final findings were shared with respondents to ensure that the representations truly correspond with their intended descriptions. Second, the final findings were judged against initial codes extracted throughout the thematic analysis. Correspondence is achieved when a high degree of matching between the findings and initial codes occurs.

Research Ethics

Site and Accessibility

The research site is Tabuk Saudi Arabia. The researcher reached out to the local education authority office managing all Hugh schools in the governorate of Tabuk. The researcher obtained administrative approvals to conduct the study from the education authority office in the city of Tabuk. A designated officer at the Human Resources unit in the education authority was named to help the researcher access the sample of the research. Note that there is no personal relationship between the author and the personnel working at the education authority

office. The office designates specific individuals to help partnering researchers achieve their objectives as part of the organization's efforts to encourage local initiatives.

Voluntary and Confidential Participation

The researcher shared a written informed consent form with all participants. Within the form, participants were told that their participation in the study is fully voluntary. Moreover, participants were informed that the information and identities shared during interviews are confidential. Additionally, prior to the start of interviews, all participants orally agreed to perform the interviews after the researcher informs them that participation was voluntary and confidential.

Information collected during interviews was kept in secured locked laptops and cabinets accessible to the researcher and the dissertation chair. No one was permitted to access the information other than the researcher and her chair. Additionally, to protect the identity of principals, pseudonyms were used when referring to names in the research. Institutional Review Board's policies, regulations, and procedures were followed in this research to protect the participants' confidentiality.

Researcher Role and Positionality

Through my study of qualitative research on my Ph.D.'s journey, I am fully aware that the qualitative researcher must be impartial. Although it is difficult for the researcher to be completely neutral, there may be conditions that help them control their bias as much as possible. In this research, being away from the field of administrative work for several years helped me control my bias and stay on track during working on this study.

I have acknowledged that I play both an insider and an outsider role in this study. I am an insider because I am a Tabuk high school principal in Saudi educational system. Nevertheless,

because I wasn't a principal since 2017, I am also an outsider. This dual role's intimacy enables me to be authentic to the subject of the study and myself. My role in this study enables me to make sure that both sides are properly balanced.

This balance results from my experience as the high school principal in Tabuk, where I am familiar with the needs, struggles, challenges, and experiences of principals while also I am eager to understand the perceptions of students toward the principals, I am a part of. Conducting this study allowed me to understand how students view my role as a principal in Tabuk high school.

My professional experience in educational leadership is heavily informed by field practice and empirical research. I attempt to utilize sound methodologies like qualitative research strategies to better understand how schools prepare students for college. I rely on human driven data like interviews to paint the understanding of the phenomenon under investigation in this project. I believe in the value of qualitative research in providing useful and accurate information that describes real phenomena observed and experienced by people. I follow empirically proven data collection and analysis strategies to systematically evaluate the evidence I observe and collect from interviews or the field. I attempt to paint an objective reality to guarantee an impartial role as a researcher. Nevertheless, all research endeavors are subjective regardless of researchers' attempts to systematize their methods or approaches. The following are a few strategies I took throughout this study to ensure that my emphasis on objectivity and empiricism are mitigated to the fullest extent. First, in my trustworthiness section, I describe several techniques I use to mitigate the threats to the quality of the information, analysis, and reporting mechanisms I utilize in this research. For instance, the use of experts at more than a single stage provides another perspective to uncover some of the hidden biases I carried out through the

research. Second, the use of respondents to verify the information accuracy and representations' precision provides a refreshing perspective as to what degree my interpretations deviated from participants. Third, the documentation of all steps allows me to observe all steps unfolding with records that constantly remind me of what is needed. The documents were shared with my chair who provided guidance as to what to be avoided to ensure consistency in the results.

To deeply ground this research, a serious discussion involving reflexively is in sight. To begin, I, as the researcher, acknowledge that college readiness is a tangible, measurable, and most important worthy construct to be studied. Such a conclusion I reached after serving schools and students for decades. I witnessed how college ready students move through the educational system easier than non-college ready children. The difference in college readiness, therefore, in my view is real among different students‘, and worthy of study.

As a researcher, I believe that qualitative research provides valid methods of recovering accurate descriptions of constructs experienced by people every day. The information provided by participants constitute important sources of knowledge about the constructs. The informants supplying interview responses attempt their best effort at giving the researcher rich information helping in constructing the reality one seeks to learn about.

On an ideological front, I realize that my convictions are closer to being neutral. On the one hand, I believe that education is a right to be provided for all on an equitable fashion. On the other hand, I advocate for government interventions to remedy deficiencies left by the private sector or the marketplace. If college readiness is not working, the government could perform actions to steer change in positive directions. Such beliefs are more than likely to affect how I organize and interpret the information to complete this research.

I begin writing on college readiness realizing that the historical development of the practice is at the infancy stage. My prior normative assumptions that Saudi college readiness is an emerging discipline defines how I approach the research. More importantly, my convictions about the limited knowledge of principals about the subject forces me to believe that I need to do more explanation before asking questions on the interviews. I am assured that few individuals are working diligently to institutionalize college readiness in Saudi schools, however, I am confident that most people working in the educational sector across the country have little awareness about the field.

Limitations

One of the noticeable limitations in this research is the inability to collect a large amount of information in short interviews. While each interview was 45 to 60 minutes long, the principal only offered a partial view on college readiness. Such a reality is caused by the few questions asked during each interviewing session given limitations on the duration of the data collection sessions. Principals were allowed to share other information on college readiness before the conclusion of the interview. Nevertheless, many did not likely remember everything and only provide some information about college readiness on their campuses.

Another limitation of this research is the timing of interviews. Many principals were either on special assignments or busy conducting leadership and administration initiatives giving them a lower chance of being able to participate in this research. Further, some principals maybe covering for teachers in schools that suffer from staffing problems especially in small rural schools. The availability of principals to partake in this research is a crucial factor that limits the findings of this study.

One of the potential limiting factors for this research is the principals' willingness to share information with the researcher. Many principals may share socially desirable information about their schools to make themselves and their institutions seem to look better than what they actually are. Since the researcher has no way of verifying the information other than the use of probes, the information was taken and considered as accurate and truthful. Principals may withhold information thinking that it could make them, or their schools perceived as ineffective. Such tendencies impact the quality of the data generated through the interviews. Another limitation is concerned with principals' insights. The conclusions in this research are based on the information and their interpretations provided by the principals. They frame the way facts are presented and outlined.

Summary

This chapter outlines the research design, participants' selection, data collection and analysis strategies followed in this research. Ethical considerations, trustworthiness, and positionality are all taken seriously, and measures were described to mitigate subjectivities and biases throughout the entire process of performing the research. Each step of the participants' recruitment, contact, and interaction was fully described ensuring that principles of privacy, voluntary participation, and confidentiality are well respected.

Chapter Four

Results

Introduction

There are six themes defining principals' college readiness perspective in Tabuk high schools. On the one hand, schools prepare students for creativity, critical thinking and problem solving. Schools provide students with support in participating in and winning contests. Teachers train students in tine management and self-monitoring. Further, schools train students in collaboration and teamwork through volunteering opportunities.

The purpose of this investigation is to examine Tabuk high school principals' perceptions concerning college readiness activities on their campuses. After conducting in-depth interviews with sixteen principals, six themes were found defining college readiness activities. These were a) high school objectives, b) college readiness activities, c) celebrating success, d) creativity activities, e) private school advantages, and f) barriers facing schools. Each of the six themes is represented by a series of sub-themes that are confirmed by a set of codes. The set of codes are related forming an overall idea, the sub-theme, that represents a larger overarching concept, the theme. Table 5 presents the themes, sub-themes, supportive codes, and the frequency of principals mentioning each code.

Table 5

College Readiness Themes in Tabuk High Schools

Theme	Category (Sub-Theme)	Supporting Codes	Number of Principals Referencing the Code

Theme One: High School Objectives	1) Advancing Students' Needs	1.1) Identification of Student's Needs	6
		1.2) Student Guidance of Higher Education	4
		1.3) University Preparation (Admission and Registration Explained)	4
	2) Teachers Professional Development	2.1) Professional Development of Teachers	5
		2.2) Specialized Teachers Recruitment and Retention	4
		2.3) A Role Model	4
		2.4) Personal Coaching (External Sources)	4
	3) 21st Century Skills Preparation Activities	3.1) Nourishment Creativity	6
		3.2) Critical Thinking Development	5
		3.3) Global Competitiveness	5
		3.4) Exemplary Behavior (Self-Confidence, Motivation, Etiquette in Behavior)	4
		3.5) The Development of Islamic Values	4
Theme Two: College Readiness Activities	1) Assessment	1.1) Test Preparation	5
		1.2) Competitions (The Reading Challenge Program)	4
		1.3) Reading and Writing Critical Thinking Challenges	4
	2) Instructions	2.1) Critical Thinking Course and Curriculum	4
		2.2) Core Content Preparation	
	3) College Preparation Activities	3.1) University Recruitment Events	6
		3.2) Counseling Sessions with School Staff	5
		3.3) Partnership with University	4
	4) Key Academic Behaviors	4.1) Time Management Awareness	5
		4.2) Teamwork Culture	5
		4.3) Volunteering	4

Theme Three: Celebrating Success	1) Schools' Achievement	1.1) Schools' Accomplishments	6
		1.2) Schools' Competitiveness	6
		1.3) Schools' Aspirations	4
	2) Students' Awards	2.1) Winning Trophies	4
		2.1) Recognition	4
Theme Four: Creativity Activities	1) Dedicated Staff	1.1) Talents Discovery Stuff	5
		1.2) Active Learning Through Discovery	4
	2) Technology Use	2.1) Uses of Robots	4
		2.2) Using Hardware and Software	4
	3) Institutional Support	3.1) Cultural Orientation	5
		3.2) Participation in Creativity Ministry Programs	4
Theme Five: Private School Advantages	1) Superiority	1.1) Better Quality Education	6
		1.2) Quality of Students' Output	5
		1.3) Quality of Stuff Training	4
	2) Consumer Orientation	2.1) Higher Customer Satisfaction	5
		2.2) Private School Flexibility (They Can Open All Tracks)	4
Theme Six: Barriers to College Readiness	1) Geography	1.1) School Location	5
		1.2) Shortage of Teachers	4
	2) Culture	2.1) The Evil Eye	3
		2.2) Decreased Aspiration	4

Findings

Research Question One

In what ways does Tabuk High School prepare their students for college in a) creativity, b) critical thinking, and c) problem solving?

High school principals prepare students in creativity through the use of innovative technology, dedicated staff for talent discovery, and institutional support. By the same token, high school principals indicated that students go through thinking modules and challenges

preparing them in writing, logical interpretation of information, and evidence-based interpretation. Relatedly, high school principals spoke about barriers to preparing students' critical thinking and creativity skills. For instance, distant schools faced lack of staffing and resources to effectively prepare students in key content areas as well as problem solving.

Research Question Two

How does Tabuk High School prepare their students for college in a) time management, b) teamwork, and c) self-monitoring?

High school principals suggested that schools prepare students in time management through participating in competitions and challenges. Teaching work collaboratively with students on preparing them for succeeding in local, national and international competitions. Throughout this process, students learn how to monitor their own progress and manage important deadlines. Furthermore, high school principals indicated that schools have a wide array of objectives including preparing students in collaboration as well as volunteering. Finally, principals demonstrated few barriers to college readiness represented in staffing challenges and inadequate school resources.

Theme One: High School Objectives

One of the dominant recurring themes in participants' answers is the goals or objectives of secondary or high schools. Five principals believe that high schools need to identify the needs of their students and teachers. For instance, Ahmed, a high school principal of 19 years, stated that "the role of high schools and secondary schools is to identify students' needs." Similarly, six principals perceive schools as learning institutions that assist teachers in furthering their training and development. For instance, one of them was Farah, a high school principal of 11 years, who stated that "we are very keen to first train the teachers and have them join training courses." The

achievement of students' and teachers' needs identification and the process of developing them is through the organization of programs of activities. Six principals referred to the active role of the school in delivering meaningful learning and service activities that further the personal and professional development of their students' body, as well as personnel. Mansoura stated, "we are a school that keeps up with everything new in the university." In sum, high schools' objectives in the eyes of six Tabuk high school principals revolve around students' needs identification and development, teachers' professional development, and activities that achieve students' and teachers' growth. One illustration about students' development was voiced by Bashayer who stated,

> We focus on the psychological aspect of the student. What is she interested in? If she wants to try something new, I support her by providing her with time, encouragement, and appropriate guidance.

Sub-Theme One: Advancing Students' Needs

Six interviewees voiced their support for the active role of schools to identify the specific needs of their students. The six principals believed that schools are obliged to teach students how to avoid mistakes by learning problem solving. Mansoura a high school principal of 14 years, stated that "the student learns to solve problems on their own before making mistakes." By the same token, the six principals agreed that the aim of schools should be the development of students' independent learning and autonomy allowing for better decision-making. Hour, a high school principal of 15 years, stated, "the school is also committed to developing students' abilities and overcoming their weaknesses." Tabuk school administrators acknowledged the active role of schools in nurturing students' spiritual needs through offering faith-based learning

environments. In the view of six Tabuk principals, students' needs of neighborhoods independent, problem-solvers, and God fearing are primary goals high schools should advance.

One of foundational objectives of high schools from the prism of four participants is higher education guidance. Four principals suggested that schools should prepare students to college across all relevant domains. One of them who is Farah stated that “through our work as a high school leadership, we found that girls are in dire need of guidance for higher education.” To remedy the guidance gap, these four principals referred to several activities that expose students to university or college academic and social lives. For instance, Farah indicated that “we conduct courses for students to introduce them to everything new in the university.” By the same token, the four principals utilize several activities like field trips to expose students to college life. More importantly, principals indicated that their schools feature special sessions facilitated by external experts or lead teachers on how to identify college majors and navigate the application process. All in all, these four principals in Tabuk schools advocate for the schools' role in introducing students to postsecondary education options and guide them to arrive at effective decisions shaping their futures.

High schools need to support students in the college identification, application, and enrolment processes. Four principals in Tabuk schools indicated that their students need to receive additional support in every step leading to college matriculation. One of them who is Ahmed stated that “students are introduced to the university through university officials to talk about university life, available majors, admission requirements, and visits to university colleges to get a close look at them.” These four principals demonstrated the mobilization of community resources to advance the preparation of students for college life. Ahmed stated that “partnerships are established with universities in different disciplines to introduce students to the existing

specialties.” To conclude, high schools in Tabuk prioritized college identification and enrolment processes as students' needs and invested in a variety of activities that support students' endeavors.

Sub-Theme Two: Teachers Professional Development

Five principals repeatedly reiterated the need for preparing teachers for delivering exemplary instruction to students. For Tabuk administrators, schools must supply teachers with the necessary training on mandated curriculum by The Ministry of Education. For instance, teachers need to be trained in how to best instruct students in the areas of problem solving and critical thinking as a new course targeting both competencies was introduced in recent years. One of the five participants who is Ahmed explained,

> We also bring in specialists to teach teachers how to teach students problem-solving, as we focus on teaching in a problem-solving way to instill this value in the student and enable him/her to use it in different areas of his/her life.

By the same token, schools are expected to constantly invest in their teachers’ professional development to achieve desired goals. Ahmed pointed out that “teachers have taken training courses on how to deliver instruction to students properly. This has greatly helped in developing students' critical thinking skills.” In sum, high school principals in Tabuk believe in a normative duty for schools to train and retain quality teachers.

One of the primary objectives of high schools is to recruit and retain quality teachers. Four principals seek talent when hiring teachers at their schools. One of these principals highlighted the importance of STEM (science, technology, engineering, and mathematics) training when hiring teachers. Mutib, a high school principal of 12 years, stated that “I have a laser cutting machine that I use to create shields for outstanding students. The teachers in the

school make them, and I don't buy anything from outside." Similarly, these four principals in Tabuk high schools favored the hiring of engaging teachers capable of implementing critical thinking and problem solving in their schools. Ahmed stated, "This subject (critical thinking) includes class activities, debates, asking questions, group work, self-assessment, problem-solving learning, and active learning. Teachers carry out those strategies in class, inside and outside." Schools also need to retain and promote high performing teachers. One of the strategies principals indicated, was the use of professional development programs.

Four principals believed that schools inculcate the foundations of exemplary model character on teachers to serve as role models for their students. For instance, exemplary behaviors like self-monitoring or time management are expected to be exhibited by teachers in hopes of impacting students' behavior. One of these four principals who is Hanan, a high school principal of seven years, stated, "as a religious principle and obligation urged by Islam, we are brought up on this principle (self-monitoring) since childhood, and it is significantly reinforced in the secondary stage." Schools urge teachers to be effective and efficient when delivering class sessions or activities. In addition, Ahmed stated that "we tell teachers not to waste the class time on unproductive activities. Continuous awareness through the role that parents and the school play in urging students to be careful with their time is essential." Raising character standards for teachers to serve as role models is a recurring priority principal in Tabuk expressed as a school objective.

High schools are expected to create opportunities for teachers to develop on their own through self-learning and development according to four principals. One strategy a principal expressed is to award teachers autonomy in curriculum and instruction where teachers pursue courses on best practices in their areas of interest. One of these four principals who is Ahmed

stated that “we also participated in other competitions such as the Kangaroo Mathematics Competition.” Further, the four principals suggested that teachers are encouraged to participate in conferences whether virtual or face to face to advance their own learning. Farah stated, “all this learning comes, as we previously said, through the use of teachers and teachers to these strategies in class, inside and outside of class, in lessons, and in various educational activities.” The creation of community partnerships is also encouraged by principals exposing teachers to new spaces of knowledge sharing.

Sub-Theme Three: 21st Century Skills Preparation Activities

21st century skills referred to a myriad of competencies necessary for college and career readiness in the contemporary era. Such skills include creativity, critical thinking, adaptability to change, information literacy, discipline, and cultural competence. Six Tabuk principals referred to a collection of competencies that high schools need to develop for students prior to postsecondary education. Tabuk high schools organized activities defined as intentional efforts by administrators or teachers using tangible resources or institutions to advance a specific competency. Six principals referred to specific activities geared toward the nourishment of the activity competency. The collection of 21st century skills echoed by principals were (a) creativity, (b) critical thinking, (c) global competitiveness, (d) exemplary behavior, and (e) the development of Islamic values.

High schools aim to foster creativity as an overarching educational goal is a recurring pattern in six principals’ answers. Tabuk principals perceived high schools as institutions advancing creative thinking and practice among students. Schools need to foster creativity at all levels among students to nourish their innate talents. For instance, one of these six principals who is Farah described the school’s aggressive campaign in promoting creativity by listing several

specific venues students may frequent to sharpen their skills by stating “there is a national program for gifted students such as the National Week of Talent and Creativity, the Gulf Day of Talent, and the King Abdulaziz Foundation for Talent and Creativity in partnership with the Ministry of Education for the National Olympiad of Creativity.” Relatedly, high schools are observed as transforming educational institutions moving away from traditional teaching methods to creative instructional approaches. Complaining about the limits of traditional instruction, Ahmed stated “I believe the best practice is to get rid of the old traditional teaching method that relied solely on lectures. While this method is still useful, it kills students' creativity.” In sum, these six principals viewed creativity as a priority for Tabuk high schools organizing instruction and assessment practices.

Like the nourishment of creativity, critical thinking development constitutes a fundamental objective for high schools’ instruction in the view of five Tabuk high school’s principals. The focus on building 21st century skills like critical thinking by the Ministry of Education has been applauded by few principals since it aligns with their mission of preparing critical informed college prepared citizens ready to succeed in postsecondary life. One of these five principals who is Ahmed stated that “in our school's track system, we added a new subject that I consider one of the great benefits of the track system, which is a critical thinking course taught in the first semester of the eleventh grade.” Principals advocated for a holistic instructional approach that incorporates critical thinking to be representative of all schoolwork inside and beyond school premises. In support of such perspective, Mansoura stated that “outside the classroom, there are also activities that promote critical thinking, such as reading challenges, where students are engaged in critical thinking activities, such as writing summaries, solving problems, and expanding vocabulary.” All in all, high schools are learning spaces that

promote the development of healthy critical thinking attitudes and practices contributing to the preparation of students for college success.

The advancement of global competitiveness culture is a primary function of high schools leading to the creation of activities supporting such an endeavor according to five interviewees. One of them who is Farah stated that "of course, each path provides a different and renewed educational opportunity, and secondary education now achieves comprehensive and global competitiveness." These five principals demonstrated how their schools participate in competitive activities that enhance students' aspirations and competencies to become more successful in postsecondary education and work. Principal Ahmed elaborated on the school's active role in promoting international competitiveness by stating,

> As I mentioned earlier, we participated in competitions such as the USAMO (United States of America Mathematical Olympiad), where we ranked in the top three in the world, and of course, we were honored by the prince of the region for our achievements as male and female students.

The five principals recognized the crucial part schools play in nourishing the competitive attitude and behaviors necessary for success among students as a foundational pillar high schools need to protect.

Another overarching function for high schools is to teach exemplary behaviors to students setting them for success in postsecondary roles given the statements of four participants. The inculcation of compliance and respect of laws, regulations, or policies is an indispensable part of the work of administrators and teachers in schools. One of these four principals whose name is Mansoura stated that "we have rules of behavior and attendance, but we also have violations. We have preventive measures that can solve the problem. We know the student and intensify efforts."

Students are expected to follow directions instructed by the principal, their teachers, and the support staff working at the school. Learning how to stick to deadlines, and respect time for everyone in the operation of the school is a key practice for ensuring the success of any assignment or function performed on school premises. Further, the identification and resolution of behavioral problems with corrective learned action constitutes a working principle for high schools in Tabuk. Mansoura stated that "for us, solving problems, whether behavioral or academic, comes first. The critical thinking skill of problem solving is present during the educational process for teachers." Teachers and leaders alike have a mission of teaching students' optimal behaviors and the avoidance of insalubrious actions.

Education institutions need to promote Islamic values in all learners in Saudi Arabia. Four principals of Tabuk high schools emphasized the need for teaching student's faith-based behaviors defining their lives at school and beyond. One of them, Bader, a high school principal of 11 years, stated that "regarding self-monitoring, it happens automatically. It is ingrained in the students from a young age." Islam has a special place in all teaching in Saudi Arabia. Leaders and teachers promote the teachings and values of the religion and ensure the enforcement of Islamic behaviors like prayers at the school and the receipt of formal class time on religion. Hamad stated that "through monitoring the Creator in all our actions. By instilling faith-based principles in various ways, whether through study sessions or through seminars or through learning by example." Schools prioritize building students' character with reference to Islamic principles and foundations.

Theme Two: College Readiness Activities

One of the dominant themes in four principals' interview responses was college readiness activities. Six principals echoed four groups of activities their schools perform to

prepare students for postsecondary education. First, schools focused assessment practices like test preparation sessions, performance-based tasks, the participation in academic competitions, and beyond classroom reading and writing critical thinking exercises. Second, these six principals indicated the use of instructional activities to strengthen students' content preparation. Such practices featured the delivery of critical thinking courses, problem solving modules, English and mathematics supplemental instruction, and additional academic courses like Etkan (i.e., perfection). Third, schools provided a host of activities preparing students for college and university matriculation process, life, and environment. This group of activities included university recruitment visits, one-on-one counseling sessions, partnerships with schools, English proficiency training, and meetings with college coaches. Fourth, principals suggested a wide range of activities geared to nurturing students' key academic behaviors for college. Preparatory activities to enhance students' time management, collaboration, financial awareness, and volunteering.

Sub-Theme One: Assessment

One of the recurring activities five principals indicated to prepare students for college is the administration of tests and assessments. Since students are expected to complete a general abilities test as part of their high school journey, like the SAT in the US, schools emphasize the role of tests to prepare learners for their upcoming assessment day. For instance, one of the five principals, Raid, a high school principal of five years, stated that "the truth is that I organize courses related to the academic achievement test and additional courses related to the abilities test." Mock examinations to The Ministry of Education required comprehensive tests like the general abilities defined the approach of many schools in Tabuk in their journey to prepare their students for postsecondary education. Ahmed stated that "In addition, the school has been

working for decades to develop training programs for students in abilities and academic achievement, and to put them through simulated tests. The fact that our students achieve high grades in these tests helps them to reach university." In sum, these five principals in Tabuk schools focused on the use of tests to academically and mentally prepare their students for testing sessions. For instance, Bashayer, a high school principal of 14 years, explained that "courses like preparatory and aptitude tests, career paths, and etiquette can be very beneficial for them at university."

Another common activity four principals suggested to prepare students for college was the participation in assessments-based competitions. Talented or skilled students are encouraged to enroll and partake in competitive events to advance their intellectual and academic competencies. For instance, one of the four principals whose name is Hour stated that "these talented students participate in competitions organized by the educational administration of Tabuk region in special programs for them. Our participation in this field is limited, but we encourage students who have a desire to participate in competitions such as reading challenges, as well as competitions in mathematics, physics, and chemistry." Tabuk high schools' principals were excited to announce their participation in local, regional, national, and international competitions promoting their students' aspirations, self-confidence, and abilities. Farah stated that "the competition we created last year had a very beautiful echo in the thinking of the students, their ability to solve problems, and also identifying the problem through strategies within the classroom." In conclusion, Tabuk high schools have prioritized the participation in assessment-based competitions to enhance the educational value and experience for their students.

Reading and writing challenges or activities beyond the classroom constitute primary activities four principals indicated to prepare their students for postsecondary education. Reading challenges to either improve literacy or enhance critical thinking feature a common practice schools utilize to ameliorate learners' academic performance. Celebrating the success of his school in mastering reading challenges, one of the four principals, Khaled, a high school principal of seven years, stated that "we have several participations, and many of them were almost in the previous year, a student obtained approximately third place at the level of the kingdom in the reading challenge. Also, there is a competition at the level of the Tabuk region, and many participations that I cannot recall right now." These four principals suggested the formation of peer groups supporting academic growth for lagging learners. Students meet with each other on school premises to help each other overcome academic challenges. Describing her students' collaborative efforts to improve writing ability, Iman, a high school principal of 18 years, stated that "a student who is good at computers can help a student who is good at writing, and so on." The use of reading and writing drills, challenges, and practice described one-way Tabuk schools prepared students for postsecondary education.

Sub-Theme Two: Instructional Activities

Critical thinking and problem-solving activities defined many schools' approaches to nourishing students' academic skills and abilities. Core courses on critical thinking and problem solving were featured as part of the core curriculum schools delivered to their learners. Students were expected to complete independent research projects requiring them to formulate questions, hypotheses, and logical arguments. Classes featured course activities that demanded students to dismantle scenario-based problems into pieces and work through solutions in a trial-and-error

fashion according to the four principals. Illustrating his schools' emphasis on critical thinking and problem solving, Hamad, a high school principal of 24 years, stated that real learning

> Happens through the consolidation and adoption of scientific thinking as a constant and important method in students' lives to solve problems, whether through classroom activities or through experimental scientific thinking or through the school's interest in establishing integrated labs that support these aspects, as well as non-scientific subjects.

In a similar vein, one of the four principals whose name is Raid demonstrated how critical thinking became an indispensable part of the schools' curriculum in preparing students for college. He stated that "Now, some curricula in high school have been designed to include critical thinking skills, which means that students now have some skills or knowledge in this field of critical thinking." In sum, the four Tabuk principals prioritize the instruction of critical thinking and problem solving in their attempt to enhance the readiness of their students for college.

Core content preparation formulates an important activity for Tabuk schools in preparing their students for postsecondary education. Four principals repeated their commitment for the provision of excellent English language education to their students. Realizing the importance of English language as a lingua franca, principals dedicated a great deal of resources to improve their learners' proficiency levels. For instance, Ahmed stated,

> We know that the English language is important nowadays, so the school offers extended courses for students throughout the school year, not just regular classes, to help them pass English language tests such as TOEFL and IELTS. This is important for students who want to enter military colleges or universities, so they are prepared for the language requirements.

Broadening the focus, Hour suggested that students' preparation needs to be linked with the job market. Thus, schools ought to provide courses in computer science and mathematics to keep students competitive. She stated that "by focusing on subjects needed by the job market, especially English language and computer skills, the school can improve the students' preparation in these areas, which are areas of weakness for some students." Tabuk schools emphasized core content courses including English, mathematics, and computer science as necessary subjects for college success.

Sub-Theme Three: College Preparation Activities

Six principals in Tabuk high schools invite university personnel to help students build more familiarity with college life, expectations, and available postsecondary educational options. Celebrating the rich tradition of his school in qualifying students to top universities in Saudi Arabia and abroad, for instance, Ahmed stated that "this makes students ready upon graduation and familiar with its systems and requirements." High school principals organize frequent regular visits to local college campuses introducing their students to university departments and facilities. Promoting the ongoing partnerships with Tabuk universities, Mutaib indicated that "field visits, every semester target graduating students to visit the university, including visiting the university's departments, especially in his first year in college." Such interactions improve communication between students and university personnel advancing the familiarity and preparedness of students for college.

Five principals suggested a wide range of counseling sessions for increasing students' awareness about college. Schools invite experts and coaches to talk about various matters related to college experience including study habits, major selection, and application/registration processes. Expressing the schools' commitment for college preparation, one of these four

principals whose name is Ahmed stated that "what is required of them [students] for admission and how to be admitted to the university, starting from the second stage of high school." Such an observation leads to the inference that students meet with experts on the college experience at host universities to discuss their personal plans amounting for counseling sessions. The invitation of professors and academics to school to offer expert advice on how to apply for college, navigate its processes, and deal with its stressors was a recurring activity for principals in Tabuk. Elaborating on his school's methods of counseling students about college, for example, Hamad stated that "visits, inviting some professors and academics to schools" constitute the best group conventions achieving the college preparation awareness purpose.

Establishing partnerships with universities is a common activity high schools in Tabuk perform in their endeavors of preparing students for college according to four principals. For example, Mutaib stated that "I have signed a partnership contract with the Colleges of Tomorrow Health in the Tabuk region. We always organize two to three programs every year to prepare students for university." Principals aspired to encourage more students to matriculate timely in college, therefore, they increased their local networking endeavors with colleges and universities to establish more interest among students. In addition, Rabee a high school principal of 12 years, stated that "we have a community partnership with English institutes and a community partnership with computer institutes, and of course, they offer us free services." All in all, the four principals in Tabuk founded partnerships with local and regional colleges and universities to facilitate college readiness endeavors.

Sub-Theme Four: Key Academic Behaviors Activities

Five high school principals in Tabuk concentrate on activities fostering key academic behaviors for college success. These interviewees demonstrated their commitment to the training

of their students in time management. For instance, Rabee stated that “time management starts with the school itself, including teachers and administrators, making an effort to value and respect time. We try to instill the idea of time management from the beginning, starting with the discipline of students in line and in class.” The value of time and discipline constituted schools’ initiatives in inculcating time management practice among their students. Hanan stated,

> Regarding time management, it is an essential skill in high school, where being committed to arriving early to school, attending classes on time, and participating in extracurricular activities during the school day helps students maintain and manage their time effectively. This optimal investment in time management benefits students, who become aware of their goals and can determine what they want to achieve after high school.

These five high school principals emphasized time management in every activity on their premises.

To imbue teamwork culture among students, five high schools perform a host of practices that nourish collaboration among community members in the school. One of the strategies teachers utilized to buttress the collaborative peer-to-peer quality is the use of group activities. One of the five principals, Mansoura, pointed out that “our school prepares students for teamwork by involving them in group projects, class presentations, and extracurricular activities that require cooperation and collaboration.” These five principals suggested their commitment to the bolstering of collaboration among all the ranks within the school by creating spirits of teamwork. For example, Ahmed explained that “when we work in teams, we always express gratitude for our accomplishments. This is one of the things that instills in students a spirit of teamwork.” The five Tabuk high schools recognize the importance of collaboration and integrated into its instruction and community partnerships.

Volunteering is an indispensable part of high school activities for preparing students to college. Four Tabuk high schools feature several avenues for their students to participate in their local and regional communities by volunteering in a variety of projects. For instance, Iman explicated that "The field of volunteering is open and there are many voluntary projects for students. Now we have a system of counting volunteering hours for each student, and the students are aware of the importance of volunteering within the school." Schools invest resources in preparing students for community work through volunteering opportunities. The ministry of education in Saudi Arabia has instituted a volunteering requirement prompting schools to mobilize internal and external stakeholders to accommodate students' volunteering needs. In addition, Raid mentioned that "nowadays, volunteer work has become a requirement for high school students to complete before they graduate." Tabuk high school students are more active in the field helping their school and community members achieve project outcomes through volunteering.

Theme Three: Celebrating Success

Six Tabuk high school principals celebrated their schools' success in achieving high levels of accomplishments, accolades, competitiveness, and aspirations. Additionally, these interviewees repeatedly emphasized the culture of competition and talent on their campuses, and how students have risen to win trophies and prizes. The six principals frequently recognized the hard work of their teachers, staff, and students to elevate the status of their institutions at many levels. The celebratory tone of many principals alludes to the increasing competitive education of Tabuk high schools.

Sub-Theme One: Schools' Achievement

Six Tabuk high school principals suggested their institutions' participation in many competitions. These six principals recognized the success of their students at different venues elevating the status and recognition of their schools. For instance, Iman stated that "The student's commitment is also important, and at the end of each month, we honor those who have shown outstanding discipline and excellence in a particular with recognition at the school level." Students' achievements have not been restricted to a single domain like science or mathematics, but also spanned the humanities and social sciences. Bader stated that "we have many creative students in technology. We also have students who excel in the National Mathematics Olympiad and competitions related to the Quran and Prophetic Hadith, who are honored at the level of the Kingdom by some princes of certain regions." In sum, these Tabuk principals reported a variety of accomplishments their students have received, thereby improving the reputation and competitiveness of their schools.

Six high school principals in Tabuk inculcated a culture of competitiveness in their schools to promote students' learning and creativity aspirations. Participation in many competitions across several domains is a recurring theme in many principals' answers. For instance, Albandari a high school principal of five years, suggested that "We have programs for talented students with enrichment programs and participation in national and regional competitions. We support and encourage students to be creative in every subject and to present non-curriculum projects and research at the end of each subject." The breadth and width of competitions has created a culture of talent, creativity, and skills promotion across schools. These principals and teachers attempt to identify talent through different methods, and attempt to nourish them by focusing on competitiveness. Describing the efforts at his school to discover and

nurture talent, Khaled suggested that "In terms of creativity development, there are committees formed in schools, including committees responsible for nurturing the talented, who recruit talented students and work with them to develop them." Tabuk high schools has engaged in the creation of competitive learning environments promoting the abilities and skills of their students.

Four high school principals in Tabuk expressed their excitement concerning the improvements on their schools' rankings, reputation, and prestige in their communities. Recognizing the high-level accomplishments of his school, Ahmed indicated,

> Our schools have a long-standing reputation and have achieved advanced rankings in the Kingdom and first place in the Tabuk region and 30th in the Kingdom of Saudi Arabia. Our students have achieved high grades due to continuous training through extra sessions within the curriculum for both quantitative and verbal skills.

Few high schools in Tabuk have invested in facilities, staffing, and training to advance the school's aspirations, becoming among the best in the country. Bader stated that "private schools have well-prepared teachers and administrative staff, while government schools may lack certain facilities such as laboratories and classrooms, and sometimes have insufficient numbers of teachers." The four Tabuk high school principals reiterated their efforts in making their institutions better learning spaces to elevate the quality and rankings of their premises.

Sub-Theme Two: Schools' Awards

The celebration of schools' success emphasized students' specific achievements in competitions and contests. Four principals referenced their students' winning of trophies or rankings in major local and international competitions. Recognizing the achievement of one of her students, Farah stated that "we have a student named Fannoun in the second year of high school who developed a device, which means I'm talking to you now, but if I send you on

WhatsApp, God willing, the device is a small, simple electric vacuum cleaner that works on batteries. It collected small pieces of car toys and some pieces of websites and designed an electric vacuum cleaner that works on energy, meaning something simple and beautiful." High schools in Tabuk reward creativity by providing recognition within the school and the community. Additionally, these four principals were proud of their students' receiving trophies on competitive stages celebrating the accolades of their community members, beloved students. Albandari stated that "the students' participation was in creative drawing, and a student from our school won at the kingdom level. Also, we have a student who won at the kingdom level in the Raawi Al Taasees and Raawi Al Diriyah competitions last year, and she won the Raawi Al Taasees competition in the region this year." In sum, the four principals have recognized the individual achievements of their students celebrating the success of their institutions in promoting talent at local, national, and international stages.

Four school principals not only recognized students' awards and trophies, but also the great work of their teachers, staff, and supportive community members. These four interviewees shared several illustrations on how thriving individuals in their communities generated tangible impact on students' and schools' success. Emphasizing his schools' commitment to STEM education and talented teachers with expertise on robotics, Ahmed recognized the tremendous effort of his staff by stating "our schools have also brought modern and advanced robots, and specialized trained teachers have worked on training a select type of students and achieving centers at the kingdom level and at the Arab world level." High schools in Tabuk heed talent as an asset, and dedicate teachers and supportive staff to recognize it, and nurture it to be translated into awards at competitions. Albandari stated that "we also create an environment with teachers who support and facilitate their participation in competitions and showcase their creativity

through social media in the school's board. You know, these things motivate students." In sum, the four high school principals in Tabuk invest time, funding, staffing, and support to students' competitive endeavors to elevate the quality of the institutions' reputation and rankings via winning awards and trophies.

Theme Four: Creativity Activities

One of the common responses to school's college readiness activities six principals shared revolves around creativity. Many principals indicated hiring or training teachers to discover students' talents to be further nourished and developed. Schools featured talent discovery activities to identify potential students who would benefit from the Ministry of Education creativity resources and competitions on schools' schedules. Additionally, schools have facilitated active learning opportunities to assist students discover their own creative talents. In these six principals' views, creativity is as important as academic achievement, and therefore, teachers need to prioritize it when instructing students at the high school level.

Sub-Theme One: Dedicated Staff

Five principals suggested having teachers who are tasked with identifying talents within their classrooms. Further, schools utilize counselors, support staff and expert teachers to pinpoint hidden talents capable of being translated into tangible results. One of the five principals, Bader, stated that "I attended the classes, and we have a computer teacher who uses a projector to explain the video work to the students. Mashallah, we have a lot of creative energy and talent." Similarly, principals indicated that many of their teachers completed professional development training on talent discovery in schools. Teachers are constantly encouraged to nominate students for competitions or resources that improve their abilities. Also, guidance and counseling staff engage in regular advisory sessions with students to discover unrecognized talent. Hanan stated

that “these programs are sent by the ministry and disseminated to schools, and these programs are activated or implemented in schools through talent classes, which greatly contribute to identifying the talents and creativity of students.” Schools in Tabuk dedicate tangible resources to elevate creativity as a core competency for college readiness. Financial and logistics support for the teaching and development of creativity constitute recurring patterns in five principals' approaches to preparing students for college I'm Tabuk Saudi Arabia.

Teachers in Tabuk high schools utilize active learning activities to explore their students’ talents. Science fair projects, class research assignments, and field research tasks all feature autonomous components where students could nourish their own interests. The four principals also suggested that teachers urge students to pursue their passions and turn them into artifacts, products, or tangibles. One of the four principals, Hour, stated that “there are, of course, talented students in schools, and our school is considered a comprehensive school. However, this does not prevent the existence of talented students with a passion for creative work.” Further, teachers engage students in collaborative learning activities to helper learners discover their peers' passions. The four principals firmly believed that the exposure of students to others' ideas open new avenues for talent discovery and development. Raid stated that “by assigning group projects, students can learn how to work together and collaborate effectively, which will prepare them for college.” Schools have prioritized creativity discovery as part of their endeavors of preparing students for college. Everyone at the school participated in the talent discovery process including the principal’s office, teachers, and the supportive staff.

Sub-Theme Two: Technology Use

Four high school principals cited several examples on the use of technology for piquant and developing students' creative abilities. The use of advanced robots to introduce students to

engineering design and practice was present in few schools. Ahmed stated that “one of the things that has been introduced into our schools is robots, which have been there for a long time.” Additionally, these four principals indicated that teachers worked closely with students to be properly trained on the use of technology. For instance, few principals cited the presence of the computer and engineering track as an option for high school students in their schools. The four principals appeared invested in making necessary technology resources available and functioning for their teachers and students. Hanan stated that “for example, the computer science track requires the presence of computer equipment to prepare the students.” Saudi high schools engaged students in the utilization of technology to support their creative thinking. Students could practice on advanced technologies like 3D printers and systems modelling or simulation software to sharpen their technical abilities.

Accessibility and prevalence of software and hardware technology for creative learning defined principals’ views on the appropriate preparation of students for college. Four principals indicated their full support for investing in useful devices and applications that foster creative learning for students. Bader stated that “we even have students who excel in technology and have YouTube channels where they discuss various topics.” Tabuk high schools featured advanced laboratories equipped with recommended tools and devices by science experts. These four principals expressed their commitment for updating and upgrading available labs on their school premises. Further, the purchasing of new innovative technologies like Virtual Labs or Augmented Reality to guarantee better learning experiences was a common reiterating by many principals. Mona stated that “We encourage students to participate in clubs and activities that help them develop problem-solving skills, such as robotics, programming, and entrepreneurship.” In sum, the four principals used technology to facilitate the development of students' creative skills and

talents. Teachers actively deployed available technology resources in their classrooms or at the school to expose students to new creative ways of thinking and generating tangible artifacts.

Sub-Theme Three: Institutional Support

Five principals emphasized their endeavors of making creativity part of their school's culture. On the one hand, these principals communicated the mission of creativity cultivation to teachers, support staff, and parents. On the other hand, the five principals institutionalized creativity by hosting on-campus competitions and sending students to other campuses to partake in creative contests. For example, Mansoura stated that "we have already participated in a student competition for positive behavior, and our students won against other schools in Tabuk region for two consecutive years in 2020 and 2021." Further, these principals introduced school events that facilitate talents nurturing like crafts workshops. Teachers were instructed to teach creative learning elements in their assignments to ensure student's exposure and experiencing of creative thinking skills. In addition, Ahmad suggested that "I believe that there are aspects that need to be nurtured in the student in high school, and we should not always limit the learning process to the student's academic learning." The five principals exhibited high levels of top management support for making creativity an indispensable ingredient of school's work.

The Ministry of Education in Saudi Arabia offers a plethora of programs for student development. The four principals demonstrated their high participation rates in such initiatives. For instance, Hanan stated that "the school assumes the financial fees for joining the talent and creativity programs through the budgets allocated by the ministry, for example, in the field of scientific research, students are prepared to participate in their research and innovations through special training programs from the ministry." Relatedly, these principals ensured informing parents about the availability of programs to students. In formal and informal meetings with

schools' personnel and parents, principals indicated the need to explaining existing development programs to students and interested stakeholders. Furthermore, Hanan stated that “as for talent and creativity, it is a mandatory ministry program and not a new one. It has been in government schools since ancient times and is annually disseminated to schools from the elementary to the secondary stage, as it is a ministerial directive and not only at the school level.” Compliance with The Ministry of Education instructions and directives on development constitutes a pattern defining principals' views on development in Tabuk schools.

Theme Five: Private Schools Advantage

Six principals agreed on the private school advantage in the Tabuk region. First, these six interviewees alluded to the better-quality education provided by private schools compared to public institutions. Private high schools are believed to be equipped with better facilities, technology, and support services. Teachers working for private schools are perceived by few principals as better trained and prepared to address the needs of modern-day Saudi students. Also, the six principals cited evidence showing that private schools are home better students who have excellent academic records at a higher rate compared to public schools. In sum, interview responses suggested the superiority of private schools over public schools in Tabuk.

Sub-Theme One: Superiority

Six principals concluded that private schools offer higher levels of education quality compared to public schools. Teachers tend to have smaller classes devoting more attention to the needs of students in private schools. Private school administrators invest in purchasing up-to-date technology resources to facilitate the learning of students. One of the six principals who is Bader stated that “honestly, private schools are equipped with everything and are different from government schools.” These principals observed that private institutions engage the community

and parents more than public schools creating better learning environments. Further, extracurricular activities are more frequent and common at private schools compared to public schools. Private schools hire coaches and experts to guarantee better learning conditions for students. For instance, Bader stated that “Private schools have everything required to easily implement all tracks, unlike government schools.” The superiority of the educational experience provided by private schools in Tabuk was a defining pattern in interviews responses.

Five principals alluded to private schools' ability to hire and train talented teachers. Unbound by bureaucratic tape, private schools gave more autonomous in hiring and onboarding teachers compared to public schools. The quality of personnel at private schools surpasses that at public schools. For example, Albandari stated that “…private schools offer more opportunities. In public schools, there is usually only one or two tracks available, while private schools open up all the pathways.” Additionally, private schools furnish teachers with better updated professional development opportunities compared to public schools. Expectations for teachers at private schools are strictly related to performance making personnel more engaged in their duties compared to public institutions. In addition, Ahmed stated that “as I said, the Minister of Education himself is among the graduates, which indicates the quality of education in private schools, their care for the student, and their commitment to providing a good education that helps the student to have a good future after high school.” The flexibility in recruitment, retention, and firing allows private schools to identify highly productive teachers and supportive staff and retain them more than public schools.

The quality of students at private schools is perceived to be much higher compared to public schools by four interviewees. Students attending private institutions achieved better scores on standardized assessments. They participate in more competitions at the national and

international levels compared to their peers at public institutions. For instance, Ahmed stated that "our schools are very particular about this, and the evidence for that is the results of external assessments where most of the top-performing schools are private schools." These four principals indicated that students exhibit lower levels of disciplinary or behavioral problems at private schools compared to public schools. Parents are more closely involved in their children learning experiences at private schools. Ahmed stated that "private schools produce excellent outputs, and they take care of their students and the quality of their education." Students' achievement, academic aspirations, and college readiness activities' participation rates are higher at private schools compared to public schools in Tabuk.

Sub-Theme Two: Consumer Orientation

Five principals suggested that private schools possess a consumer-driven orientation. Decisions at the school level are affected by parents' desires. For instance, the number of tracks offered to students rely on parental requests. One of the five principals whose name is Ahmed stated, "we want the student to know which major suits him. Unfortunately, some of our students enroll in majors chosen by their parents, knowing that they have no inclination toward it, which may be the reason for their failure in that college." More importantly, parental satisfaction with school services seems to play more important roles in influencing programming at private schools compared to public entities. These five principals indicated that the type of extracurricular activities or competitions initiated at the school should conform to parental expectations. Mona stated that "parental awareness is important; parents have a big role to play on choices." In sum, private schools were more responsive to parental demands representing the interests of consumers paying tuition for their adolescents' education according to the five principals.

Flexibility is an advantage for private schools compared to public schools. Four principals suggested that the choices of tracks in private schools could be modified depending on the need. On the contrary, public schools are bound by a series of legislative rules preventing administrators from unilaterally opening new tracks. For example, Khalid stated that "what distinguishes private schools is the abundance of teachers. This abundance helps in forming committees, where the teacher is dedicated to the tasks of the committee, such as the committee for nurturing talented students, the creativity committee, and the student activity committee, which helps them perform their tasks to the fullest." Furthermore, private schools possess freedoms in setting expenditures on tracks, labs, or technology. The fiscal liberty endowed by private institutions facilitate the improvement of the quality of education delivered. One of the four principals, Bader, stated that "they [private schools] have complete facilities, including councils and everything else." In conclusion, private schools were deemed to outperform public schools in enhancing the educational experiences of high school students in Tabuk.

Theme Six: Barriers to College Readiness

According to six principals, another important theme defining principals' answers to college readiness questions is the barriers preventing schools from preparing students for college. On the one hand, geographic distance between communities and local colleges or universities decrease interactions between the institutions leading to decreased immediate contact between higher education personnel and students. Additionally, the diminished value for college education perception among many parents lead students to pursue non-educational income-driven choices upon graduation, which decreases the value of any activity linked with college readiness at the school. The Islamic belief in the evil eye prevents many students from participating in competitions organized locally or away from the school. For instance, Bashayer stated that

"families and students are hesitant to showcase their ability. They feel like others would make them sick or something. Unfortunately, there is this general belief that smart people should hide their skills. They do not want to catch an eye."

Sub-Theme One: Geography

Five principals suggested that students do not pursue college because of the long distances needed to be traveled from rural areas, where they live, and college campuses. Across many communities in Tabuk, students either join the military or work with their parents in operating local businesses serving their villages or towns. One of the five principals who is Faisal stated that "due to the school being in a remote area, I sometimes feel frustrated when I ask students about their aspirations to enter university. For example, there may be one or two students in each class who want to continue their education, but others are looking for the fastest way to get a job." Rural communities in Tabuk suffer from inadequate access to readily adjacent quality universities. The five principals complained that students need to either move away to attend reputable institutions or matriculate in satellite campuses that feature less support services compared to the large colleges. For instance, Bader stated that "we expect that the selection of schools applies to the readiness of the schools and the geographical location in the area." Geographic proximity to colleges and universities presents a barrier for schools in preparing students for college.

Rural schools in Tabuk suffer from teacher shortages and staffing problems. Talented teachers desire more attractive metropolitan cities offering all the amenities of modern lifestyles. Four principals suggested having difficulty retaining quality competent teachers who excel in preparing students for college across all domains. One of the four principals who is Mona stated that "in case I see that I have a new teaching staff without experience, but they are competent, I

seek help from the college deanship and start working with my acquaintances to contact the university doctorate to conduct courses for our students to educate them." The retention problem is more pronounced in villages and small towns away from the city of Tabuk. The four principals opined that teachers prefer to work in their hometowns or in large cities where opportunities for professional development and growth are more prevalent compared to small towns. In sum, high schools in rural Tabuk face unique challenges impacting the quality of college preparation for their students.

Sub-Theme Two: Cultural Factors

Four principals referred to cultural factors as impediments for achieving optimal college readiness experience. Parents are worried about their adolescents being envied by their peers or others. In the Islamic faith, it is recommended to humble oneself by hiding talent fearing an evil eye. Many people around the Muslim world believe that others could cast a curse on them by giving them an evil eye causing a loss of tangible talents or health. Therefore, many children abstain from participating in competitions. One of the three principals who is Mutaib stated that "there are some students who are very talented and have certain ideas, but they fear jealousy and the evil eye, so their participation is limited." Despite principals' endeavors to eliminate such a mentality, many parents still believe in the evil eye effect causing children and adolescents to drop out of competitions to hide their abilities or talents. Diminished academic aspirations constitute another barrier for high schools in Tabuk in preparing college ready students. Rural communities feature less emphasis on education and more importance of earning incomes to support families, according to the four principals. Students across many schools refuse to participate in schools' college readiness events or programs because of their perceived idea that college is not necessary for making a living or earning immediate incomes. One of the four

principals, Mona stated that “we did participate. For workshops, we did participate in some small competitions, but sometimes we face a problem where students refuse to participate.” Many parents also do not inculcate the culture of education in their children making them place diminished value for college education. These four principals in Tabuk face pushback from parents who misinform their children about the benefits of education. Cultural factors prevent Tabuk high school principals from efficiently and effectively delivering quality college readiness programs.

Important Observations

While research identified six main themes, there were two overarching ideas represented in the responses of the principals. These are a) parental involvement and b) pathway systems. Many principals spoke about parental involvement when discussing college readiness. Others expressed their views on the pathways or tracks high school system. The following discussion summarizes the main ideas represented in principals’ interviews. These two overarching ideas were not considered as themes in this study. None of the expressed sub-ideas was repeatedly mentioned sufficiently to make it a separate subtheme or an independent code. Therefore, the following discussion highlights the main points raised by the principals.

Parental involvement encapsulates key cognitive strategies and academic behaviors necessary for college completion. First, communicating with the school, parents, and teachers sharpen students' collaborative and teamwork skills. Second, involving parents informing students about the importance of college education for them and their families' future. Such a mentality activates the strategies of responsibility, accountability, and resilience. Through communicating with parents about the progress of students, learners become more aware of self-monitoring and their own journey to fulfill desired states.

Tracks/pathways touch on key strategies and behaviors students require to attain college degrees. First, the track system requires students to complete an independent research component. Across many courses throughout college, students will need to author research papers of various lengths. The ability to research and communicate findings are requisite strategies captured by the track system. Further, the track system introduces students to options and flexible curricula. When joining college, students realize their need to choose majors, courses, and electives. Prior exposure to choosing prepares students mentally for making important decisions impacting their life throughout college.

Parental Involvement

A common theme in Tabuk six principals' answers was parental involvement. The schools engaged parents in a variety of activities like conferences, events, and community functions. For instance, Hour stated that "one of the best practices that the school implements is teamwork, whether it is in school activities, programs, or even outside of school." Parents reached out to schools' personnel in a multitude of ways converting their concerns about the academic future of their children. Further, some parents were closely involved in the selection of classes or future college majors of their children. Mansoura stated that "these activities and sessions aim to develop the students' skills in working together towards a common goal, which is essential for their future college and career success." School principals indicated their deliberate sustained efforts to involve parents regarding academic and extra-curricular developments of children at the school. These six principals emphasized the importance of keeping parents as primary stakeholders in their children's education progress.

Parental Communication. Six Tabuk principals echoed the apparent concerns of many parents about the academic choices for their children in the schools. The availability of high

school academic tracks encourages parents to have active conversations with their children and teachers about the best option that fits their children. Some parents are concerned about the potential mismatch between their children's abilities and interests and the chosen or available tracks in the high school. Mona, a high school principal of five years, stated, “before choosing any track, they [students] should have comprehensive awareness and a general idea.” Relatedly, parents engaged in constructive discussions with teachers and counselors about the potential of each track. Some parents pressed schools to offer more tracks besides the general to accommodate their children's interests. Mona stated that “in my opinion, the tracks are very good because they allow students to choose the track that is suitable for them.” Parents were heavily involved in their children's selection of tracks and majors for college. The six principals suggested involving parents in awareness sessions concerning the meaning and potential of each track available to learners at the high school level.

Six principals demonstrated a variety of communication techniques establishing bridges with parents. These principals regularly emailed or phone parents informing them about ongoing events at the school. Moreover, schools partnered with local institutions like mosques, universities, and health centers to distribute information about upcoming events. In few cases, principals and teachers have visited the home of their students to elevate levels of parental engagement. For example, Faisal, a high school principal of 6 years, stated that “…the future plan includes visiting the nearest university, which is Prince Fahd bin Sultan University, and sitting with admissions to explain the available fields and departments at the university to students.” The six principals suggested partnering with local non-profit organizations to improve civic activism for making communities better places for all. In such partnerships, parents were invited to play vital roles in making efforts more effective. These interviewees suggested that parents reached

out to schools to learn more about their children and how to contribute to the quality of education offered in Tabuk.

Four principals commented on parental concern for their children's future as a key point in discussions with schools' personnel. Parents were worried about the choices made by their children. They asked principals about the potential of selected tracks in securing remunerative employment for their children. For example, Raid stated that “I mean, its partnership with universities and high school students to prepare for jobs, and our club means training that leads to employment. The programs for the students have been recognized more, meaning whenever there is an opportunity, if there is a program in the school, we start training the students directly.” By the same token, principals indicated that parents demanded better explanations about each offered track and its applicability to college majors and the job market. Parents were worried that their children may not be admitted to a quality college or may not even secure a job upon completion of college. Rabee stated that “...if a student chooses the health track or computer science track, for example, acceptance into those fields is not guaranteed, and the student's options are limited.” Uncertainties about the new tracks system fueled many parents to question principals about the future potential of each track. More importantly, parents engaged principals in genuine discussions about their children's abilities shaping current and future academic decisions.

Community Engagement. To encourage parental involvement with the school, five principals shared information on community events with students and parents. Schools invited parents to their field trips, college counseling events, and competitions. The five principals urged parents to assume leadership roles in organizing community functions that strengthen bonds among members of the school and their communities. For example, Faisal stated that “the best way is for the students to sit down with the student as a brother and friend and present the

problem.” Additionally, principals organized community events on school premises. They invited families to enjoy what the school may offer and be more active in the immediate setting of their children education. Parents frequented community organized events and exhibited interest in broadening school's endeavors for creating participatory spaces that improve learning in their neighborhoods. Hanan stated that “two years ago, we had a program that involved planting trees in the school's outdoor yard, and we did it with the participation of students, parents, and neighbors of the school.” These five interviewees indicated the creation of external volunteering roles for their students and their parents to make an impact on their communities. Local universities, mosques, and civic organizations facilitated parental involvement with schools in community events.

Parents took active roles in schools' ongoing programs. Four principals suggested that some parents worked as volunteers on their after-school programs. Mansoura suggested that “the school encourages volunteer work, and it is not solely the responsibility of the student.” Further, parents participated in schools' committees for making informed decisions about the quality of institutions. For instance, parents offered expert advice on making informed decisions about school's culture, climate, and safety. One of the four principals who is Khalid stated that “the impact of teamwork on volunteer work is significant, especially with the volunteer work programs implemented last year in the school's academic tracks system.” The role of parents as mentors or coaches for students was a recurring pattern in principals' responses. Parents gave expert guidance advice about college and careers to students noting their active involvement with schools. In sum, parental involvement was a major theme in defining four principals' views on college readiness in Tabuk Saudi Arabia.

Pathways System

One of the common themes six principals discussed throughout the interviews was the new high school system known as the Pathways or tracks system. These principals expressed their concerns about the limited information regarding each pathway available to students and how it applied to postsecondary outcomes. Moreover, the six principals complained about the lack of resources at their institutions to support all proposed tracks. Issues like staffing or training were common to many principals making them reluctant to support the change. Nevertheless, principals believe that the tracks system carry several advantages over the traditional system. For instance, the Pathways system feature research opportunities and independent project assignments similar to college courses. It also requires students to complete specific courses in critical thinking. Such benefits allow students to be better prepared for college.

Pathways System Concerns. The Ministry of Education in Saudi Arabia introduced the Pathways system for students at the high school level recently. Students select whether they would like to pursue a general track covering core content in the curriculum or more specific tracks like health, computer and engineering or administrative/social sciences/humanities tracks. Six principals indicated that the Ministry of Education did not supply sufficient information explaining what each track means or lead to after graduation. Parents voiced their concerns about having their adolescents choose specific majors. One of the six principals who is Iman indicated,

> Nowadays, the education system has changed, and the parents of the students are encouraging them to work in fields that are in demand in the Saudi Arabian job market. Based on this, the plans for the secondary stage have changed, and there are many tracks and systems in education. At the end of the day, the student can now determine their interests or desires for the future.

Most students select the general track because it seems to be the safest bet concerning postsecondary outcomes like admissions and matriculation. Principals complained about the inadequate resources in staffing and technology available to them at schools to support all tracks offered by The Ministry. Therefore, many schools only choose to offer the general track. Mona stated that "…at the beginning of the year, when it comes to the real deal, everyone changes their track to the general track because of their concerns about the future." In sum, there is a level of opacity defining tracks content, future, and linked outcomes among Tabuk high schools.

Four principals in Tabuk schools expressed their concerns about the readiness of their schools to accommodate all mandated tracks. Staffing, available technology, professional development needs, and space are all requisite conditions that must be furnished to schools to offer all tracks. One of the four principals, Bader, complained that "I agree that there is some injustice in this situation. Let's say you decide to have five tracks or six or seven schools in a large region like Tabuk, which has a population of approximately 1,000,000." Further, the four principals suggested that The Ministry of Education passes changes without really considering the conditions of many schools around the country. These principals indicated that their communities are resistant to the Pathways System because it is new and carry uncertain outcomes. Students tended to overwhelmingly select the general track because all public schools offer it. Specialized tracks like health or computer and engineering are only provided by few schools that invested in updating their resources. For example, Ahmed stated that "…due to the awareness among students or because the Ministry has not yet fully implemented these tracks with universities, there is still a gap between high school and university, so students wanted to stay or transfer to the general track." All in all, the new Pathways System raised real concerns among four principals given their limited resources to expand their schools.

Pathways System Advantages. Five principals argued that the track system offer students more personalized learning experiences compared to the curriculum-based system. Within the Pathways system, students may take more electives that suit their own interests. Each track allows students to take more courses in one specific area compared to others similar to college study. By the same token, five principals believe that the track system is like the college system preparing students better for college life. One of the five principals who is Mansoura stated that "in addition to academic guidance, we now have the Pathways system which prepares the student for the university." Besides, students are exposed to specific topics like college advanced courses acquainting them with the content of their sought majors. Such an exposure, in five principals' views, help students determine whether such disciplines are what the students expected them to be or not. For instance, Bader stated that "the current tracks now motivate the student and give them an idea about the specializations that the student wants." The Pathways system enable students nourish their skills and abilities within specific disciplines that appeal to them maximizing fit between interests and learning.

The track system features several components that helps students become ready for college. Five principals indicated that the Pathways system require students to complete independent research projects. Such tasks demand high levels of time management and self-discipline, which are common features in college assignments. One of the five principals who is Ahmed stated,

> We are now in a race with second-year high school students, and you know that in the third year of high school, the student will be completely occupied as it is the last chance for abilities, and they have the research project for graduation.

Further, five principals believe that the new tracks system expose students to semesters lifestyles in college where the student completes a set of courses each semester. Students in the tracks system are expected to earn certain number of credits per track like college life. For example, Ahmed stated, “this system has many advantages, such as the quality of the subjects that are taught, which the student really needs, especially in higher education stages such as critical thinking or even in his society, financial knowledge, and other subjects that add value to the student, whether in his university life or on a personal level.” In conclusion, Tabuk high school principals deem the tracks system as a better alternative compared to the traditional system for preparing students for college.

Summary

This dissertation investigated college readiness practices in Tabuk high schools from the perspectives of principals. Responses suggested that schools provide a plethora of ways in preparing students to be creative or sharpen their skills. On the one hand, schools ask teachers and staff members to identify talent. On the other hand, schools invest in technology like robotics to enable students practice their skills. Relatedly, schools support students’ creative endeavors through funding participation in competitions and challenges. Principals shared many examples on how their students join local and national science and engineering fairs winning trophies and prizes.

High school principals indicated that schools prepare students in critical thinking and problem solving. Students complete a full course on critical thinking featuring reading challenges and writing exercises. Further, teachers assign independent research projects that require students to identify a problem, as well as solve it. Relatedly, students complete

volunteering projects where they collaborate with peers on how to address a community challenge predating them further in problem solving.

This chapter outlined the six themes defining principals' answers to interview questions on college readiness. The themes were high school objectives, college readiness activities, celebrating success, creativity activities, private schools' advantage, and barriers to college readiness. Each theme has several supportive codes. Within each of the themes, key cognitive strategies and key academic behaviors were emphasized by more than a single code. In the interpretation of the findings presented in chapter five, a more thorough analysis of each theme's relationship to the research questions is offered. All in all, principals in Tabuk referred to a variety of college readiness practices in their schools.

Chapter Five

Discussion

This chapter offers readers a succinct summary of the research objectives, significance, and need. Additionally, the discussion covers the main findings answering the two research questions presented in chapter one. The chapter outlines the research contributions to relevant theories, as well as education administrators' practice. The concluding sections of the chapter furnishes a list of limitations that constrained the investigation and a number of future research directions based on the identified results in this research. Finally, advice on future practice at schools is detailed to improve schools' readiness for preparing high school students for college.

Summary of the Study

The purpose of this research was to investigate college readiness perceptions among Tabuk high schools' principals. More specifically, the study uncovered Tabuk high schools' college readiness practices with respect to creativity, critical thinking, problem solving, time management, self-monitoring, and teamwork from the perspectives of principals. The need for this research stems from the limited information and knowledge on actual college readiness practices in Saudi secondary schools. Faculty members at the postsecondary level complain about the ill preparation of incoming high school students to Saudi universities. This research aimed at discovering whether schools in Tabuk, one region in the country, truly provide college readiness practices to their students or not.

Findings of this research are noteworthy in many respects. First, high school principals are able to observe what their peers do in other schools concerning college readiness. Teachers are exposed to how other teachers practice college readiness within the classroom and beyond. Policymakers have access to the first account on how Saudi schools prepare students for college

impacting funding decisions to existing or new programs on college readiness. Moreover, this research established that girls' and boys' schools do not drastically differ concerning college readiness. On the other hand, private schools outperformed public schools in providing exemplary college readiness services. In particular, private girls' schools emerged as the best institutions engaging in college readiness. The data in this research presents the first original account of college readiness activities voiced by senior administrators like principals.

To guide the conceptual design of this research, Conley's (2007) college readiness framework structured the development of research questions. Conley (2007) believed that college readiness is best measured by four competencies: key content preparation, key cognitive strategies, key academic behaviors, and college contextual knowledge. Given the broad scope of the model and the limited resources and time devoted to a doctoral dissertation project, two key elements from the four college readiness dimensions were selected. These were key cognitive strategies and key academic behaviors. From the essential cognitive strategies necessary for college success are critical thinking, creativity, and problem solving. Of the many key academic behaviors necessary for college success, time management, self-monitoring and teamwork were chosen. Such strategies and behavioral were selected because of the empirical support they bear on college success.

To carry out the research, a qualitative methodology was designed. The case study approach considering Tabuk as the case for this investigation followed. Sixteen high school principals were recruited with the help of the educational authority office to participate in the research. Each principal was interviewed virtually to be asked about his or her schools' college readiness practices. Interviews were semi-structured featuring questions on strategies and behaviors, as well as follow up inquiries based on provided answers. Once the interview scripts

were translated from Arabic to English, a thematic analysis was applied to the data. The research recovered codes defining a basic idea in the responses. At least four distinct principals had to talk about the same code to be considered as such. Once all codes were prepared, they were grouped into categories, a larger idea. Once all categories were constructed, they were grouped into themes, overall concepts.

The findings of this research notes to the presence of six autonomous themes defining the answers of Tabuk high school principals when asked about college readiness practices. These themes were 1) high school objectives, 2) college readiness activities, 3) celebrating success, 4) creativity activities, 5) private schools' advantage, and 6) barriers to college readiness. Each theme is directly related to at least one of the key cognitive strategies or academic behaviors necessary for college success.

Summary of Main Findings

The first theme high school objectives encompass the school's function of developing key cognitive strategies like critical thinking development and creativity. By the same token, the same theme represents key academic behaviors like the inculcation of Islamic values such as academic integrity, honesty, and hard work. Further, the theme tasks schools with the duty of teaching students' exemplary behavior like respect, valuing of diversity, and reverence to education. Theme one, therefore, offers a variety of strategies and behaviors Tabuk high school principals referred to in supporting their students' journey to postsecondary education.

The second theme, college readiness activities, covers many key cognitive strategies. On the one hand, a full critical thinking course is delivered to all students at the high school level developing such essential skills like analysis and interpretation. On the other hand, reading and writing challenges supplement students' argumentation and evidence-based communication both

being parts of critical thinking. The theme also nourishes students' key academic behaviors like teamwork through groups assignments. Further, volunteering activities are completed in all schools requiring high school students to coordinate with internal and external stakeholders. Such communication prepares students for better collaboration and team building skills, which are essential behaviors for college success.

Theme three, celebrating success, represents key cognitive strategies and behaviors for college resilience and excellence. Schools implant the proclivity to compete fairly among students. Through organizing competitions and challenges, students acquire the aspiration to succeed and persist. Moreover, enrolling students in competitions teach them the principle and practice of hard work. To win trophies, students need to repeatedly practice and rehearse. Such exemplary behaviors lead to better chances for college success. Students learn how to reward their earned grades and ranks, which is a recommended behavior reinforcing positive learning.

The fourth theme, creativity activities, directly develop students' key cognitive strategies. First, students become more aware of their own talents and adopt experiential learning strategies. Second, students become more adept to active learning styles fostering further experimentation to discover new findings on their own. On the academic behaviors front, students practice modern technology to hone their talents generating tangible gains. Similarly, students build self-confidence in utilizing software or hardware making them less likely to resist the use of new useful technology for learning.

The fifth theme, private schools' advantage, encircles few key cognitive strategies and academic behaviors crucial for postsecondary education attainment. The higher quality of education features the culture of setting high expectations. Students learn to hold themselves accountable for learning making them more likely to invest time and effort to achieve learning

objectives. The enhanced teacher to student relationship at private schools provide students with more concentrated support services that help them build better relations with their faculty once they matriculation at the college level. Students who were close to their high school teachers, the private school experience, are less likely to avoid contact with their higher education staff. Students, therefore, learn to be open and brave, which are key strategies and behaviors for college persistence and completion.

Finally, the sixth theme, barriers to college readiness. impacts students' development of key cognitive strategies and behaviors required to complete postsecondary education. When students socialize in environments that place more emphasis on earning incomes compared to attaining education, academic aspirations plummet among learners. Further, when schools are located in rural areas with little connectivity to higher education institutions and experiences, students build low affinities toward the pursuit of college education favoring other options like local employment or joining the military.

Discussion of Findings

In what ways does Tabuk High School prepare their students for college in a) creativity, b) critical thinking, and c) problem solving?

Tabuk principals utilize cutting-edge technologies to sharpen students’ creative skills. For instance, the use of robotics is on the rise among private schools who are more equipped in terms of facilities, staffing, and the training experts compared to public schools. Similarly, public schools’ principals suggested professional development opportunities for teachers who learn and deploy various software and hardware applications in science technology engineering and mathematics applications. For instance, high school biology and chemistry teachers have increasingly used modeling and the graphing software to teach students how to draw systems and

produce finished materials to be used in competitive events. Such practices are consistent with prior research on the development of creativity as a core competency for college preparation in schools.

One of the most creativities inciting practices is talent discovery. Tabuk principals have repeatedly demonstrated multiple ways of scouting creative talents in their classrooms. On the one hand, teachers are trained on identifying talented individuals and enrolling them in the ministry of education funded creativity programs for in-school development initiatives. Furthermore, counselors and supporting staff are asked to identify talented to students and brief the principals' office on any arising stars at the school. By the same token, principals have increased their participation in competitive challenges supporting the culture of excellence and academic superiority.

High school principals have indicated the insertion of a core critical thinking course to the high school curriculum. Teachers are provided with specific training on how to instruct and evaluate essential critical thinking skills among students. The course features modules on argumentation, interpretation, evidence-based writing, as well as analysis. Throughout the course, students are asked to prepare short independent research assignments requiring them to ask provocative questions and test scientific hypotheses. Moreover, students are asked to present their findings to their peers as well as teachers in a variety of formats including face-to-face and virtual methods. Teachers are also trained to be critical thinkers to foster a better environment for learning, mimicking the higher education classroom experience.

Tabuk high school principals cited several practices that facilitate the mastery of problem solving among students. On the one hand, principals have indicated that many of their students participate in national, regional, and international competitions presenting solutions to the

problems addressed by events organizers. Further, many teachers across Tabuk high school require students to research local problems and suggest solutions to help their communities overcome present challenges. Similarly, schools tend to support students with specific interests by providing them with more supervised assistance to help in designing new products or materials that potentially could solve a specific problem. Broadly speaking, students are presented with the use of software, hardware, and laboratory equipment to assist in building core competencies of identifying problems as well as solutions.

How does Tabuk High School prepare their students for college in a) time management, b) teamwork, and c) self-monitoring?

High school principals have indicated that students receive formal in-class training on time management. In practical terms, in more than one class, students are asked to prepare calendars using paper and pencil methods as well as virtual platforms like Google calendars. Relatedly, students are asked to prepare work breakdown structure with deadlines to complete their assigned projects. By the same token, teachers invite guest speakers from local colleges and universities to present the importance of time management for achieving college and career success. School principals have suggested that all time-related policies are uniformly implemented to plant the time commitment idea and practice in the minds of their students.

Students in Tabuk high schools volunteer with internal as well as external stakeholders on a local project to satisfy a graduation requirement. Tabuk high school principals have suggested that students collaborate with teachers, peers, and supportive staff to facilitate their participation, engagement, and completion of volunteering assignments on school premises and beyond campus doors. Oftentimes, students conduct meetings with government officials or community leaders to learn more about projects and how they better fit in their communities.

Relatedly, students visit local sites or important physical facilities that feature critical information or resources on the projects they work on. Most importantly, students complete assignments as part of their volunteering experiences facilitated by stakeholders they collaborate with. In sum, volunteering experiences teach Tabuk high school students how to collaborate with various participants to complete projects which is an essential skill for college success.

High school principals have indicated the use of multiple methods to teach their students how to monitor their academic progress as well as behavioral development. Teachers ask students to recognize their baseline achievement metrics on core competencies based on initial assessments at the start of the academic year. Students are encouraged to track their progress on academic subjects given their test scores on formative and summative assessments throughout the year. On the other hand, students complete behavioral assessments with counselors on school campuses identifying areas of improvement with clear and specific measurable strategies. Students are encouraged to track their behavioral changes over time to improve their conditions conducive to healthy development. Such practices are key self-monitoring competencies that facilitate college success for Tabuk high school students.

Relevance to Past Research

The findings in this research are consistent with earlier studies on college readiness practices (Bausmith & Barry, 2011; Camara, 2013; Darling-Hammond). While principals may not have developed a holistic view on college readiness that incorporates cognitive skills and academic behaviors, their responses alluded to the manifestations of college readiness in the form of behaviors and strategies. For instance, principals spoke about the insertion of critical thinking exercises to classes like Arabic or English language.

This research extends the emerging efforts of researchers trying to understand college readiness in Saudi Arabia (Al-Jadidi, 2012; Al-Qahtani, 2019; Daif-Allah & Alsamani, 2014). The findings supported the general impression that schools in Tabuk, and other cities, still do not practice college readiness as part of their standard operations. For instance, most of the creativity endeavors discussed throughout interview responses were the results of individual effort. Further, principals still are under the impression that college readiness is mainly about field trips to universities and taking advanced courses in high school. The idea that college readiness encompasses cognitive strategies and academic behaviors is still developing among the ranks of Saudi high schools (Ahmad, 2011; Alghamdi & Deraney, 2018).

The assessment of college readiness in this research is consistent with the broad approach implemented by schools more recently (Kuh et al., 2006; Zelkowski, 2010). Principals did not only consider course titles or the perceived difficulty level of courses. They relied on more metrics like teaching students critical thinking and problem solving skills. More importantly, creativity emerged as a dominant skill that principals focused on in preparing students for college. Further, students complete volunteering opportunities that cultivate their skills in collaboration and self-monitoring while working on different tasks with specific timeliness (Bausmith & Barry, 2011; Conley & French, 2014).

The results in this research suggest the potential broadening of college readiness as a construct. Few researchers have pointed to the possibility of more dimensions encompassing college readiness like unique cultural aspects (Alghamdi, 2017; Khoshaim, 2017). Principals in this research referred to the overall objectives of high schools in preparing the character of students like the installation of Islamic values in them. Such a finding calls for the consideration of the specific context in which college readiness studies take place.

Relevance to Theoretical Framework

The findings supported Conley's (2007) college readiness model. Across the six themes, two primary dimensions were reiterated: key cognitive strategies and key academic behaviors. Evidently, the presence of these two dimensions across the supportive codes formulating the themes was directly related to the questions principals answered. This study concentrated on these two dimensions. Despite the emphasis on strategies and behaviors, two of the four dimensions in Conley's (2007) model, the remaining two dimensions were also present across some themes.

College contextual skills, which refers to students' abilities to apply for college, register for classes, find information about supportive services, and contact higher education personnel, was represented in more than a single theme. The first theme, high schools' objectives, featured schools' activities like holding guidance sessions to teach students about college options and how to apply for school. Further, the second theme, college readiness activities, encompassed recruitment visits, consultation sessions, and college life workshops.

Key content preparation was also present across several themes defining principals' views on college readiness activities in Tabuk. The second theme, college readiness activities, featured test preparation drills and mock assessments in key content areas like Arabic, English, and Mathematics. In the same theme, school principals indicated that students complete a number of exercises in reading and writing. In the seventh theme, tracks/pathways, principals suggested that students complete independent research project requiring intensive writing. Additionally, college readiness activities included preparation in English language assessments that are viewed by many principals as necessary to advance the foreign language proficiency of their students.

Notwithstanding the theoretical support for Conley's (2008) four-dimensional model for college readiness, the findings may point to the existence of more dimensions to the concept. While key cognitive strategies and academic behaviors share commonalities with twenty first century skills, the later concept has influenced how schools and universities have structured or modified their curricula. In Conley's (2007) model, concepts like global competitiveness, diversity/equity/inclusion, informed citizenship, and statistical literacy are assumed to be part of the four dimensions with little emphasis on their presence. The findings in this research allude to the potential existence of a twenty first century skills dimension that schools ought to instill in their learners prior to graduation.

Another dominant trend across supportive codes in the various themes reported within principals' answers is the emphasis on the Islamic faith and its characteristics. Concepts like the exemplary character, high discipline, and the avoidance of the evil eye are all related to the Saudi Muslim majority cultural values defining the way of life for most ordinary citizens around the country. Conley's (2007) college readiness model is silent on the relationship between culture and postsecondary education competencies. The addition of a cultural dimension to the existing four dimensions in the college readiness framework could be a positive shift reflecting the reality of what many schools and principals experience every day.

Limitations

One of the limitations in the study is the partial portrait of college readiness activities in Tabuk high schools. College readiness is a vast topic featuring several dimensions. To consider few, Conley's (2007) four-dimensional conceptualization features emphasis on cognitive strategies, academic behaviors, content preparation, and college contextual skills. Within each of the dimensions, there are several sub-dimensions. For instance, key content preparation includes

students' completion of a rigorous curriculum featuring mathematics, English, computer science, social sciences, languages, and arts courses. The limited scope of an interview constrained the inclusion of all relevant questions. Therefore, only few questions made it to the interview primarily focusing on cognitive strategies and academic behaviors. The resulting findings constitute some rather than all college readiness activities held at schools directly related to cognitive strategies and academic behaviors.

The limited time available to Tabuk high school principals to participate in the research hindered the ability of the researcher to collect more in-depth information about some interesting aspects within each interview. Semi-structured interviews constrain the ability of the researcher to ask many questions based on provided answers fearing the loss of interest from the participant if the interview lasts for too long. All interviews were kept between 30 and 60 minutes. Principals ensured to indicate that they are preoccupied and thankful for participating in the research. Such dynamic handicapped the ability of the researcher to ask too many questions about specific college readiness activities to save time allocated for other competing questions within the interview. The researcher established trust and rapport prior to interviews and did not want to risk losing the trustworthy relationship for keeping a principal too long in an interview.

Keeping control over the direction of interviews presented another challenge for the semi-structured interviews. Some principals desired control over the direction of the interview by providing answers unrelated to the question asked. The researcher needed on several occasions to redirect the interview to cover the necessary themes. Interviewees provided lengthy answers to simple questions and wanted to provide more detail. The researcher tried to control the pace and tempo of the interviews to the best of her ability. In few occasions, principals provided succinct answers without any detail. When probed, principals did not reciprocate the expected

relationship by supplying details. They simply reiterated the answer and wanted to change the topic.

Building trust, rapport, and relationships with principals presented a challenge. Many principals who participated in this research have not taken part in academic research prior to this study. They were weary of sharing genuine honest information about their school. On the other hand, many experienced principals did not want to portray their schools as not having college readiness activities, and therefore, they felt the need to provide some generic answers that capture the most fundamental form of college readiness practice. Social desirability absolutely seems to be present in few statements voiced by many principals in the study. Simply put, since the researcher is from Tabuk and works for the Tabuk education authority, few principals refused to share useful information for perceived fear of any implications that could occur. Despite assuring participants with the confidentiality of the research, some principals indeed withheld information when asked about college readiness activities at their schools.

Recommendations for Future Practice

Notwithstanding principals' detailed answers to some of the interview questions on college readiness activities, principals did not exhibit a systematic understanding of what college readiness actually entails. To them, it largely referred to contact with local universities or colleges to increase students' exposure to the postsecondary educational experience. Principals are encouraged to pursue professional development training on college readiness practice. By the same token, teachers need to access quality college readiness awareness and practice training to be part of their teaching work at the high school level.

High school principals in Tabuk concentrated on having strong connection with local colleges or universities. They did not emphasize the importance of key cognitive nor key

academic behaviors necessary for college success. This outcome is expected because principals are trained by local administration preparation programs. Throughout the program, the focus on college readiness is limited. Therefore, principals developed a limited view of college readiness rather than a broader perspective on college readiness.

The measurement and assessment of college readiness activities in Tabuk high schools is low. Principals are urged to measure whether their schools or teachers engage in college readiness activities or not. The assessments need to examine the preparation of students in various key cognitive strategies like critical thinking, creativity, and problem solving. Further, the evaluation needs to include whether the school or teachers prepare students in self-monitoring, time management, or teamwork. Each of the strategies or behaviors need to be measured using several specific items. Further, the school needs to assess its preparation work concerning core curriculum and college contextual skills.

Tabuk high school parents appear to be invested in their adolescents' college readiness. Principals must capitalize on this interest by educating parents about the importance of college readiness and how they could help at home. Principals are encouraged to invite parents to on-campus talks featuring the different competencies students need to develop to achieve success at the college level. Moreover, principals need to disseminate useful content on parents to improve awareness on college readiness, and its predictive power in generating a better college experience for students.

The findings indicated the exclusion of certain populations in Tabuk from high school college readiness activities. Rural students attending remote schools surrounded by environments supporting earning incomes after high school completion or joining the military are at risk of having low exposure to college readiness practices. Today, the Ministry of Education in Saudi

Arabia offers many programs to develop students' critical thinking development, creativity, and problem solving. Principals and teachers are encouraged to take advantage of available virtual resources like open education platforms and collaborative remote networks that offer supportive services for all schools in Saudi Arabia. College virtual tours, remote guidance sessions, and virtual learning supportive activities all help increase students' exposure to college readiness activities regardless of residence type or locale.

Recommendations for Future Research

Future researchers are urged to develop universal assessments for college readiness for Saudi high schools. While this research uncovered many college readiness themes, principals varied greatly with respect to activities. Establishing a baseline of the extent to which college readiness exist is an important step in improving college preparedness. Assessments that cover many dimensions like cognitive strategies, Islamic culture, key content areas, and other relevant competencies need to be administered on representative samples of schools to observe the prevalence of college readiness in each school.

Future researchers are encouraged to examine the moderators of college readiness practices. The type, size, staffing levels, or climate of a school could determine the frequency or intensity of college readiness levels. Researchers may uncover the characteristics of schools that offer more college readiness compared to others. While this research established a link between private schools and quality of college readiness, other moderators may carry equal or more important role in influencing schools' levels of college readiness.

Despite the emphasis on cognitive strategies and academic behaviors in this research, future studies may focus on other significant dimensions of college readiness. Interviews with principals may touch on schools' activities to prepare students in applying for college,

completing necessary forms for admissions, looking up classes, or finding information about their majors. Similarly, qualitative researchers may look at different subjects preparation like computer science, programming, or design. Core subjects like English or mathematics could be further divided into other subfields. Interviews could target specific or generic subjects to examine whether schools truly prepare students or not.

Culture is an important factor that determines the norms, institutions, and practices that define schools. The world is a more diverse place featuring the intersection of different cultures in unexpected places. For instance, rural Tabuk students who are normally blood-related because of the small villages' environment surrounding them may encounter teachers from Egypt, Jordan, or Lebanon. By the same token, English teachers from Canada, Australia, or the United States could come to instruct students in English language making the place more diverse. Understanding various cultures prepares students and teachers to operate more successfully in an educational environment. On another note, education in some countries is not only about learning the content, but education is also about building character. Such a topic varies from one place to another depending on the culture one considers. For instance, Saudi Arabia is an Islamic nation that desires students to learn about their heritage and maintain its desirable religious practices.

Conclusion

This chapter presented the main findings in this investigation. Further, the discussion covered the need, significance, and novelty of this research. The chapter outlined the fundamental conceptual and methodological foundations underpinning this research. Relevance to practice, theory, and past research were detailed throughout this chapter. The most important limitations constraining the researchers' ability in conducting and interpreting results were briefly

discussed. Future research directions were suggested to guide subsequent work on college readiness in Saudi Arabia.

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Appendix A

Interview Protocol

Topic: College Readiness in Saudi Arabia Based on High Schools Principals' Perceptions.

Location: Video Interview

Goal: To learn about college readiness in Saudi Arabia based on high schools' principals' perceptions.

Interview Questions

Today, I'd like to ask you a few questions about your students' college readiness. Is that ok? Before we start, I want to go over the consent form. If you have any questions, let me know, ok? [go through form]. Do you have any questions?

There are two questions: I plan to record the interview. Is that ok?

I'm going to ask some simple questions. You don't have to answer them if you don't want but they may help me make sense of all these interviews. Remember, all answers will be confidential. I don't share them with anyone.

Ok. I'm going to start the interview. I'm going to ask some basic questions to get a sense of who you are. Then, we'll talk about more specific things. Ok?

Introduction

1. I am interested in learning about your background and experience. Could you share some of your educational background with me today?

2. Could you share some of your work experience in Tabuk school?

3. Could you share some of your leadership experience in Tabuk with me?

College Readiness

4. Could you provide your experience concerning college readiness?

5. Regarding the recent changes that have put in place in the Saudi education system in recent years. Do you think that it helps high schools to prepare their student for college

6. In your opinion, how does your school prepare students to develop creativity for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in creativity?

7. In your opinion, how does your school prepare students to develop critical thinking for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in critical thinking? How does your school

prepare students in formulating hypotheses, writing research questions, and conduct independent research projects?

How does your school prepare students in evaluating quantitative or qualitative evidence to construct logical arguments?

8. In your opinion, how does your school prepare students to develop problem solving for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in problem solving?

9. In your opinion, how does your school prepare students to develop time management for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in time management?

10. In your opinion, how does your school prepare students to develop teamwork for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in teamwork?

11. In your opinion, how does your school prepare students to develop self-monitoring for college? Could you please elaborate with examples or illustrations? To you, what are the best practices your school uses to make students better in self- monitoring?

12. In your view, in what ways do you feel that your school best prepares students for college?

Also, in what ways do you feel that your school could improve preparing students for college? college? In the near future, what activities do you plan to take as principal to ensure that your students are better prepared for college?

Conclusion

13. What sorts of things do you think I should know that I didn't ask?

14. Do you have any questions for me?

Appendix B

Informed Consent Form

Title of Research Study: College Readiness in Saudi Arabia Based on High Schools Principals' Perceptions

Principal Investigator: Modhi Albalawi

Department Affiliation: Department of Education Leadership, Management & Policy, Seton Hall University, South Orange, NJ 07079, United States.

Sponsor: This research is supported by the Department of Education Leadership, Management, and Policy.

Brief summary about this research study: The following summary of this research study is to help you decide whether or not you want to participate in the study. You have the right to ask questions at any time. The purpose of this study is to examine the prevalence of college readiness practices in Tabuk high schools. You will be asked to complete an interview. We expect that you will be in this research study for 60 minutes. The primary risk of participation is loss of confidentiality. The main benefit of participation is that you can learn about your school's college readiness practices.

Purpose of the research study: You are being asked to take part in this research study because you are a fulltime high school principal working in the Tabuk region.
Your participation in this research study is expected to be between 45 and 60 minutes in a semi-structured interview.
You will be one of sixteen people who are expected to participate in this research study.

What you will be asked to do: Taking parts in a one-to-one interview held at your chosen time and space. The interview will ask you the following questions:
1. How does your school prepare students for college?
2. How does your school prepare students to develop creativity for college?
3. How does your school prepare students to develop critical thinking for college?
4. How does your school prepare students to develop problem solving for college?
5. How does your school prepare students to develop time management for college?
6. How does your school prepare students to develop teamwork for college?
7. How does your school prepare students to develop self-monitoring for college?
8. In your view, how does your school practice college readiness? College readiness here is the preparation of students to pass first-year college courses without remediation or additional help.

Your rights to participate, say no or withdraw: Participation in research is voluntary. You can decide whether to participate or not. You can choose to participate in the research study now and then decide to leave the research at any time. Your choice will not be held against you.

The person in charge of the research study can remove you from the research study without your approval. Possible reasons for removal include missing study visits and non-compliance with the study procedures.

Potential benefits: There may be no direct benefit to you from this study. You may obtain personal satisfaction from knowing that you are participating in a project that contributes to new information.

Potential risks: The risks associated with this study are minimal in nature. Your participation in this research may include loss of privacy or confidentiality. Please note that our conversations throughout the interview will be recorded.

Confidentiality and privacy: Efforts will be made to limit the use or disclosure of your personal information. This information may include the research study documents or other source documents used for the purpose of conducting the study. These documents may include conversation recordings, researchers note, and transcriptions of the recordings. We cannot promise complete secrecy. Organizations that oversee research safety may inspect and copy your information. This includes the Seton Hall University Institutional Review Board who oversees the safe and ethical conduct of research at this institution.

This interview will be held at Microsoft and involves a secure connection. Terms of service, addressing confidentiality, may be viewed at their website. Upon receiving the results of your survey, any possible identifiers will be deleted by the investigator. You will be identified only by a unique subject number. Your email address, which may be used to contact you to schedule a study visit will be stored separately from your survey data. All information will be kept on a password protected computer accessible by the research team. The results of the research study may be published, but your name will not be used.

Data sharing: Data collected from this study will not be shared with anyone outside of the study team.

Cost and compensation: You will not be responsible for any of the costs or expenses associated with your participation in this study. There is no payment for your time to participate in this study.

Conflict of interest disclosure: The principal investigator and members of the study team have no financial conflicts of interest to report.

Contact information: If you have questions, concerns, or complaints about this research project, you can contact the principal investigator (Modhi Albalawi) at albalamo@shu.edu, (Dissertation Mentor: Randall F. Clemens, email address: randall.clemens@shu.edu, phone number: [973] 761-9397) or the Seton Hall University Institutional Review Board ("IRB") at (973) 761-9334 or irb@shu.edu.

Optional Elements: Audio and/or video recordings will be performed as part of the research study. Please indicate your permission to participate in these activities by placing your initials next to each activity.

I agree	I disagree	
_____	_____	The researcher may record my audio and/or video during the interview. I understand that this is done to help with data collection and analysis. The researcher will not share these recordings with anyone outside of the study team.

I hereby consent to participate in this research study.

Signature of participant	Date
Printed name of participant	
Signature of person obtaining consent	Date
Printed name of person obtaining consent	

Appendix C

IRB Resubmission Approval

SETON HALL UNIVERSITY
1 8 5 6

February 20, 2023

Modhi Albalawi
Seton Hall University

Re: Study ID# 2023-426

Dear Modhi,

The Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled "College Readiness in Saudi Arabia Based on High Schools Principals' Perceptions" as resubmitted. This memo serves as official notice of the aforementioned study's approval as exempt. Enclosed for your records are the stamped original Consent Form and recruitment flyer. You can make copies of these forms for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Thank you for your cooperation.

Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board
Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.275.4654 · Fax 973.275.2978 ·
www.shu.edu

Appendix D

HIPAA Authorization Form

Seton Hall University
Institutional Review Board
FEB. 20 2023
Approval Date

Expiration Date
FEB. 20 2024

FORM 3 - HIPAA[1] AUTHORIZATION TO USE AND DISCLOSE INDIVIDUAL HEALTH INFORMATION FOR RESEARCH PURPOSES

1. Purpose. As a research participant, I authorize **Modhi Albalawi** and the researcher's staff to use and disclose my individual health information for the purpose of conducting the research project entitled College Readiness in Saudi Arabia Based on High Schools Principals' Perceptions ,M5A

2. Individual Health Information to be Used or Disclosed. My individual health information that may be used or disclosed to conduct this research includes **E-mail addresses**.

3. Parties Who May Disclose My Individual Health Information. The researcher and the researcher's staff may obtain my E-mail addresses from:

The central office of Tabuk

Hospital: _____

Clinics: _____

Other Providers: _____

Health Plan: _____.

and from hospitals, clinics, health care providers and health plans that provide my health care during the study.

4. Parties Who May Receive or Use My Individual Health Information. The individual health information disclosed by parties listed in item 3 and information disclosed by me during the course of the research may be received and used by [**Modhi Albalawi**] and the researcher's staff. [OPTIONAL: Also, if I receive compensation for participating in this study, identifying information about me may be used or disclosed as necessary to provide compensation.]

5. Right to Refuse to Sign this Authorization. I do not have to sign this Authorization. If I decide not to sign the Authorization, I may not be allowed to participate in this study or receive any research related treatment that is provided through the study. However, my decision not to sign this authorization will not affect any other treatment, payment, or enrollment in health plans or eligibility for benefits.

6. Right to Revoke. I can change my mind and withdraw this authorization at any time by sending a written notice to **Modhi Albalawi (albalamo@shu.edu)** to inform the researcher of my decision. If I withdraw this authorization, the researcher may only use and disclose the protected health information already collected for this research study. No further health information about me will be collected by or disclosed to the researcher for this study.

7. Potential for Re-disclosure. My individual health information disclosed under this authorization may be subject to re-disclosure outside the research study and no longer protected.

[1] HIPAA is the Health Insurance Portability and Accountability Act of 1996, a federal law related to privacy of health information.

For example, researchers in other studies could use my individual health information collected for this study without contacting me if they get approval from an Institutional Review Board (IRB) and agree to keep my information confidential.

7a. Also, there are other laws that may require my individual health information to be disclosed for public purposes. Examples include potential disclosures if required for mandated reporting of abuse or neglect, judicial proceedings, health oversight activities and public health measures.

8. [Optional Item] **Suspension of Access**. I may not be allowed to review the information collected for this study, including information recorded in my medical record, until after the study is completed. When the study is over, I will have the right to access the information again.

This authorization does not have an expiration date.

I am the research participant or personal representative authorized to act on behalf of the participant.

I have read this information, and I will receive a copy of this authorization form after it is signed.

signature of research participant or research participant's personal representative	date
printed name of research participant or research participant's personal representative	description of personal representative's authority to act on behalf of the research participant