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The American University in Cairo  
School of Humanities and Social Sciences (HUSS)

**Instructional Alignment in the Curriculum to Address Learner Diversity:  
The Case of High Schools in Egypt**

A thesis submitted to the Department of Educational Studies

In partial fulfillment of the requirements for

The Degree of Master of Arts in International and Comparative Education

Submitted by

Shrouk Nabil El-Shiekh

June 2, 2023

Thesis Supervisor: Dr. Daria Mizza

## Abstract

This research aims at exploring the connection between the instructional activities used by high school teachers to support diverse students, and the students' readiness for college. This is accomplished by considering teachers' awareness of their students' strengths and weaknesses and teachers' collaboration with college counsellors. Both from the review of the literature and based on my experience as a high school teacher and college counsellor, it has emerged the necessity of addressing the diverse high school learners' needs through the application of the Universal Design for Learning (UDL) principles. The preparation of students for college through a precise alignment of the instructional activities with the learning outcomes has been identified as the most important step to be taken. The research findings highlight the importance of the role of a college counselling department, regular curriculum and syllabus reviews, as well as the introduction of *ad-hoc* instructional strategies and techniques. In particular, the findings and the related discussion can be helpful for educators and high school administrators when choosing the effective instructional strategies and techniques to meet the needs of diverse students in high schools. The findings of this study on students' opinions of college counsellors, especially on how they assisted them in selecting a college, can encourage institutions to reevaluate their current college counselling program.

*Keywords:* Curriculum alignment, instructional activities, learning outcomes, college counseling, high school.

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## **Chapter One: Introduction**

### **Background**

This research establishes a connection between the instructional activities used by teachers to support diverse high school students and their readiness for college. This research demonstrates the need for teachers to be aware of their students' strengths and weaknesses while working in parallel to college counsellors. Yet, the teachers must be aware of the diverse types of learners in the class and the appropriate teaching methods to address each one of them in order to assess these skills. Learning diversity means being involved in and reflecting on life experiences by examining one's patterns of perception and action (Peterlini, 2023).

### **Problem Statement**

Forster and Greene (2003) stated that more than half of students who do complete high school, as well as more than two thirds of all freshmen, fail to meet the prerequisites necessary to apply to a four-year college or university (p. 1). The importance of college and career readiness programs is not well understood in Egyptian public schools, especially at high school level. This includes the perception of teachers and principals on how to align the learning outcomes to address diverse high school learners and maximize their learning opportunities. International schools in Egypt started to realize the importance of college and career counselors in preparing, supporting, and guiding high school students to colleges and universities recently. To get the students prepared for college, teachers should be aware of their learning styles, so that not only instructional activities aligned with the learning outcomes can be supported with Universal Design for Learning (UDL) principles and enhanced with technology, but they should also be monitored by the college counselors, so that they can follow students' academic growth.

## **Research Gap**

The need to address diverse high school learners' needs through the application of UDL principles and the need to prepare them for college through the alignment of the instructional activities with the learning outcomes have emerged both from the review of the literature and my experience as a high school teacher and college counselor. In the United States, numerous high school courses also fail to perform in actually preparing their students for the future due to a lack of focus on a number of crucial components needed for academic achievement (Wickli, 2018). This research focuses on the relationship between the instructional activities that support all types of learners inside the classrooms and how teachers and college counselors work in parallel to enable the students to have better learning opportunities in Egypt. In order to fulfil this gap, this research explores the effect of high school college counselors and teachers on the student's college and career readiness. In order to do so, the research considers a sample of instructional activities that help in shaping the student's personalities, figuring out their interests, and how to excel in college after graduating from school.

## **Research Aim**

The research purpose is to explore the effectiveness of instructional activities designed by high school teachers in addressing learner diversity and preparing students for college and career. This research intends to review a sample of instructional activities that are part of the curriculum in international high schools in Egypt. The intention is that the findings could be applicable also in the public schools in Egypt. Diversity can take many different shapes. There isn't a single combination of methods, evaluations, or accommodations that will guarantee every student's success in the classroom every time (Mazur & Doran, 2010). According to Mazur and Doran (2010), teachers need to have a wide range of skills and be up to date on the latest research on



language, diversity, and differentiated instruction. The effect of diversity is frequently correlated with student language ability, academic English language requirements, social and cultural contexts, and the backgrounds and abilities that students bring to the classroom.

The perception of teachers and principals on the effectiveness of the instructional activities to prepare high school students for college is also investigated. Throughout this research, several concepts and frameworks including the UDL framework are defined. The concepts of UDL help teachers recognize that individual variation is the rule rather than the exception. As a result, the curriculum should be flexible to accommodate the learner diversity (Sanger, 2020). They are plenty of obstacles that are put up during the curriculum design process, particularly when printed text is the almost sole available format. The most vulnerable learners are those with disabilities: those with motor impairments cannot flip pages, while those with dyslexia may find it difficult to interpret the text. However, many students who do not have impairments also feel that the curriculum does not fully address their needs for learning (Sanger, 2020). As a result, this study pays particular attention to how UDL meets the requirements of all learners and how it might guide effective, creative uses of technology to assist teachers in addressing diverse learners. When appropriate, the effect of technology to enhance as well as maximize the educational opportunities for all high school learners is also taken into consideration. Furthermore, this research aims at conveying valuable information for teachers to use to improve their teaching practices, especially in aligning the learning outcomes with the instructional activities.



Source: Universal Design for Learning Guidelines Version 2.2 (CAST, n.d)

## Research Questions

- 1- What instructional activities do teachers use to meet the diverse needs of high school students?
- 2- How effective is the use of technology to enhance such activities?
- 3- How can these instructional activities support the college and career readiness for diverse high school students?
- 4- How do teachers and college counselors contribute to maximize the learning opportunities for high school students?

## **Significance of the Research**

The relationship between the instructional activities and college readiness of the students presented in this research could impact the current understanding of schools in terms of reviewing their curricula regularly, considering new teaching methods, and the importance of having a college counseling department. Specifically, this research could benefit teachers and high school principals in deciding which instructional activities they should employ to address all learners' needs in high schools. The result of this research regarding the students' perceptions of college counselors and how they have helped them choose a college could push schools toward reviewing their current college counseling program.

## **Chapter Two: Literature Review and Theoretical Background**

It is important to define the term curriculum to comprehend the kind and scope of the curriculum's impact on learner diversity. "Curriculum is a constant reconstruction," writes John Dewey in 1902, "going from the child's current experience out into something that is represented by the structured bodies of knowledge that we call studies...the many studies...are themselves experience - they are that of the race" (pp. 11–12). Curriculum, according to Tyler (1957), is "every learning experience organized and controlled by the school to achieve its educational goals" (p. 79).

The hidden curriculum is transferred indirectly; it embodies and reflects beliefs, ideas, and behaviors that are transmitted or expressed without an intentional aim. The hidden curriculum is the unintentional lessons. It is about the values and unspoken messages delivered by the teachers at school. For instance, how students deal with their peers or acceptable behaviors when dealing with different races or groups.

### **Definitions of Curricula**

The curriculum is usually associated with the content and syllabus that teachers follow to meet the educational standards during a specific period. Some teachers can relate the curriculum with the textbook however in my opinion, the curriculum is a very broad term. A curriculum is about teaching a syllabus to a specific age group taking into consideration measurable outcomes to assess the student's knowledge while creating a learning experience that students pass by through their educational journey. This learning experience can be achieved through the teacher's guidance and instructional activities.

Learner can practice and master both academic information and practical learning skills by following a standard-based sequence of structured activities known as a curriculum. The curriculum acts as the main source of information for all instructors to guarantee that every student receives exposure to challenging educational experiences. The organization, structure, and goals of a curriculum are created to facilitate teaching and improve the learning of learners. The essential objectives, methodologies, materials, and assessments must be included in the curriculum plan to support educational instruction effectively (Curriculum Definition | RI Department of Education, n.d.).

### **Importance of Curriculum Development**

Change in curriculum is never simple. Most of the time, classrooms are still where teachers live. They make decisions about what is taught and how it is taught behind closed doors. Academic leaders with the best of intentions occasionally try to impose curriculum change on academics. They call for the submission and approval of lesson plans in line with the updated learning objectives. But after that, professors go back to their classes and basically continue to teach the same material (Harris et al., 2012).

A well-designed, up-to-date curriculum offers both students and teachers a number of advantages. The teacher can concentrate on creating particular lessons and evaluations to effectively teach each student when the curriculum clearly outlines the course objectives and the order of the information. It is essential to the operation of any school that, before moving on to the next stage, students must demonstrate the learning outcomes, standards, and core competencies listed in the curriculum. The school operation is responsible for creating standard-based benchmarks to achieve any curriculum for a specific grade level. To simplify this for the

teachers, paperwork, and documents such as a curriculum scope and sequence or unit planners are required to break down the curriculum over the school calendar.

### **Needs of Curriculum Development**

The curriculum is the core element of any school because it maintains rules and regulations that help them attain the desired outcomes for its students. Some of these needs are shown below:

- a) Achievement of educational objectives: the curriculum is the foundation of educational structures. The development of the curriculum is done to achieve educational goals. As a result, the curriculum is how the educational goals can be met. Learning Objectives differ from goals in that they are specific and have measurable aims for student achievement, while goals are an overarching plan of action. Goals are not measurable or observable, whereas objectives are.
- b) Effective use of resources: it specifies what teachers are supposed to teach and the learning expectations of the students, as well as the guidelines for both teachers and students.
- c) Establishing the content's structure: the content of every subject has a complex structure that must be taught from a lower level to a higher level. Therefore, establishing the content structure for a specific stage of instruction is the primary task of curriculum development. As a result, the curriculum for various subjects is developed from elementary school through university, and alignment between curricula should be maintained to ensure its effectiveness.

- d) Personality formation: the curriculum also influences the student's personality development. The curriculum is designed to foster positive character traits in students. It aids in the physical, social, and moral development of students.
- e) Getting the textbook ready: textbooks are a crucial component of instructional materials. For the educational process to be coherent, textbooks must adhere to curricula and be updated when they need to. This gives teachers the essential keys to delivering their teachings as well as material support for those lessons.
- f) Conducting the exam: educational systems are centered on exams. Everybody who is familiar with the rituals of education is aware of how the center of attention of the educational process is on how to do well on exams. The learners are deprived of the enjoyment of studying, are constrained, and find it nearly impossible to go further into any topic due to this instrumental approach. Consequently, the curriculum serves as the foundation for instruction, learning, and evaluation.

### **Types of Curricula:**

There are several types of curricula to achieve the outcomes mentioned above. The most important ones are given below:

#### **i. The Recommended Curriculum**

The recommended curriculum is a structured curriculum imposed by policymakers and governments. They decide the main subject areas, the criteria, and how they could be met through teaching and learning (Alvior, 2023).

#### **ii. The Written Curriculum**

The written curriculum is more detailed and structured than the recommended curriculum, focusing on the learning objectives and how they can be met. Materials prepared or provided by teachers, such as lesson plans, scope, sequence, and syllabus, are considered written curricula (Alvior, 2015).

### **iii. The Taught Curriculum**

The delivery method of the written curriculum is called the taught curriculum. It can be delivered through classes, presentations, group projects, and lab experiments. Teachers plan for their taught curriculum, taking into consideration the student's interests and methods of teaching and learning to deliver the knowledge best (Alvior, 2015).

### **iv. The Tested Curriculum**

The tested curriculum is the evaluation of materials taught to students. It can be formative exams, summative exams, or standardized tests (Alvior, 2015).

### **v. The Hidden Curriculum**

The hidden curriculum is referred to as the unintentional curriculum and is crucial to learning. It is generally made up of standards, principles, and practices. Lessons given informally and frequently accidentally in a school system are known as a hidden curriculum. This consists of the attitudes, viewpoints, and actions kids acquire at school. This is in contrast to the formal curriculum, which includes the courses and activities students take (Perera, 2023).

Early on in a child's schooling, there is a hidden curriculum. Students get the ability to develop ideas and attitudes about their peers and their surroundings. Through a formal, informal, and non-formal learning environment, learners acquire their values and attitudes. In addition to



the formal curriculum, they also gain knowledge from their peers and teachers at school, their parents and other relatives at home, and people they engage with in society (Little, 2014). For instance, teachers instruct students on how to act in 'appropriate' ways so they can get along with their classmates and teachers at school. They learn what is demanded from them, such as the fact that the outcomes of the year's final exams are what matter. Instead of receiving formal teaching, children naturally pick up these values and principles through observation and participation in social and intellectual activities.

### **Definition of Learning Outcomes**

Any course design is driven by its learning outcomes. Learning outcomes outline visible and quantifiable learner actions. Learning outcomes are statements that are action-oriented as well as clear and observable. They are not about the teacher outlining their teaching methodology; rather, they are about the students demonstrating what they have acquired and learned (Chatterjee, 2017). Thus, teachers should avoid words such as "know" and "understand," because they are not clearly observable or measurable.

Teachers should use the "Bloom's Taxonomy" which is a common starting point for action verb searches (Forehand, 2019). In 2001, the taxonomy from the 1950s was updated. There is a secondary axis to the taxonomy, the levels of knowledge, even though most educators concentrate on the cognitive domain levels (remember, understand, apply, analyze, evaluate, and create). They consist of factual knowledge, conceptual knowledge, procedural knowledge, metacognitive knowledge.

## **Importance of Learning Outcomes**

It is important for teachers to include learning outcomes when planning lessons because learning outcomes begin where teachers expect students to end. In order for teachers to help their students achieve their goals, teachers can better arrange their courses, choose effective pedagogical techniques, and create assignments, quizzes, projects, class discussions, and other course components.

## **Definition of Classroom Diversity**

Anything that sets humans apart from each other is diversity. The way that students, teachers, and other individuals perceive these and other characteristics affects how the world is viewed. Due to the growing diversity in classrooms based on preferences, hobbies, gender, cultural origins, and learning styles, teaching is now thought to be more difficult and complex than ever. However, diverse classrooms offer a learning environment that is more in line with the democratic aspirations of society and better prepare students for scenarios they could face in the real world in the future (Civitillo et al., 2019).

## **Importance of Classroom Diversity**

Recognizing the existence of learner diversity is crucial for the teaching profession because teaching must constantly recognize and successfully handle the reality of residing in and carrying out duties in a large, diverse school. Teaching and learning are not associated with textbooks, classes, and summative exams. Some attributes should be taught as well. For instance, International Baccalaureate®. 2017 promotes the ten learner profile attributes to have a global citizen with an international mindset (About the IB, n.d.). The student is put at the center of the International Baccalaureate (IB) education via the qualities and attributes of the learner profile.

The qualities showcase the all-encompassing nature of the International Baccalaureate (IB) education. They emphasize the significance of growing character traits like compassion and curiosity as well as learning and skill development. Additionally, they emphasize how the International Baccalaureate (IB) programs care for students' social, emotional, and physical well-being as well as their ability to respect others, themselves, and their environment in addition to their cognitive development. Throughout their education, the International Baccalaureate (IB) instructors assist students in developing these qualities, and as they get older, they display them in more robust and nuanced ways. Examples from the learner profile attributes are inquirers, caring, balanced, reflective, and open-minded. Beyond intellectual growth and academic performance, these attributes represent a broad array of human capacities and responsibilities.

Students benefit from diversity in the classroom by developing social awareness, which enables them to respect many opinions and draw more solid conclusions. Students can learn how to engage with their classmates and acquire the interpersonal skills they can use for the rest of their life by being challenged to think critically, which accomplishes both of these goals.

### **Differentiated Instruction**

An important question to ask is, are there various models or processes for developing a curriculum? First, curriculum models typically fall into three categories: the content model, the process model, and the product model. The steps teachers need to take to create the course could be influenced by the model they choose. By taking into their account, each model's features and any institutional requirements they must comply with.

### **1. Content Model**

Teachers use reading materials with a range of readability levels, record texts, reteach concepts to struggling students or help advanced learners develop their thinking skills, present ideas orally and visually, provide learning packets or activity cards, and divide students into small groups based on their abilities. Students conduct an additional study on similar topics after getting initial instruction to develop a common knowledge base (Scales, 2019).

### **2. Process Model**

These are tasks that students complete to comprehend or master the subject matter. Teachers design various activities with varied supports, challenges, or complexity levels; provide manipulatives, visual organizers, or hands-on activities; blend autonomous, whole-class, and small-group activities; and change the number of time students can spend on an activity (Scales, 2019). The option of choosing their resources is given to the students. To accommodate different learning styles and skill levels, teachers can make an effort to design learning centers. When the materials are properly developed, they can support a range of learning levels and learning preferences (Scales, 2019).

### **3. Product Model**

These are final assignments that require the students to put what they have learned in a unit into practice, apply it, and extend it. To exhibit what they have learned, students have various options, such as producing made-up journals, theatre performances, scenes, cooperative activities, or video lectures (Scales, 2019). Teachers allow the students to pick how they want to exhibit what they have learned, let them work individually or collaboratively in smaller groups on projects, and employ rubrics to assess their performance. Karnes and Bean (2001) recommendations for altering the learning environment for gifted kids include the following:

- Establish a learning atmosphere that values student autonomy, flexibility, and choice.
- Place more emphasis on intricacy than on simplicity.
- Permit a lot of movement inside the classroom and various grouping arrangements.
- Be open to experimentation and creativity.

Because their initial instruction is tailored to their degrees of preparation, their passions, and their academic profiles, differentiated instructional activities boost student achievement and inspire learners. A differentiation recipe does not exist. Instead, it is a way of approaching teaching and learning that respects the uniqueness of each person and may be applied in various ways in the classroom (MEd, 2019).

### **Mutual Curriculum Development Models**

Curriculum development can be into three basic models. The subject-centered, problem-centered, and learner-centered models of curriculum development are the most well-known ones.

#### **Subject-Centered**

This model emphasizes a subject area's specific skills and knowledge. The subject-centered approach encompasses the majority of widely standardized curricula. A subject-centered approach is the meaning of the term "core curriculum." Although this strategy aims to give kids in all classes and schools the same learning opportunities, this doesn't always happen. This approach promotes a lack of engagement between the learners and the teacher because it is not student-centered (Stutt, 2023).

#### **Problem-Centered**

This method aims to teach students useful skills in the real world. Students learn how to analyze a problem and find a solution. This method has some advantages, including a greater

emphasis on critical thinking, a greater emphasis on collaboration, and more classroom innovation. Key skills and knowledge are still taught to students in different contexts.

### **Learner-Centered**

A learner-centered design emphasizes the needs and objectives of each student. Using this method, educators could look at their student's prior knowledge and learning styles. The requirements of your students could guide the development of your curriculum (Stutt, 2023). In most cases, this kind of curriculum development is most in line with a curriculum that focuses on processes. Teachers should incorporate components from each of these models to create a comprehensive curriculum that strikes a balance ideal for their course, students, and subject matter. Over time, a given course could benefit most from a comprehensive and fully customized approach to curriculum design (Stutt, 2023).

The teacher can better identify the needs and objectives of each student by understanding their mental capabilities. They consider several forms of mental capabilities using Gardner's theory of multiple intelligence. If teachers are more aware of the types of intelligence students tend to favor, they could be better able to recognize their preferences. However, it shouldn't be mistaken for learning preferences and shouldn't be applied as a way of labelling. Instead of attempting to match what students learn to their perceived type of intelligence, teachers must place more of an emphasis on encouraging students to learn new things through a variety of modalities and forms (Cherry, 2023).

### **Gardner's Eight Areas of Intelligence**

Gardner's Theory of Multiple Intelligences identifies human intelligence using eight categories instead of focusing on a single or individual talent. Gardner defines intelligence as the biopsychological ability to manage and interpret information. The hypothesis contends that each

processes information uniquely and autonomously. According to Gardner's theory of multiple intelligences, there are eight different domain-specific intelligences. The eight intelligences are: Logical-mathematical, Linguistic, Musical, Spatial, Bodily-kinesthetic, Intrapersonal, Interpersonal, and Naturalist (Patanella & Ebanks, 2011).

Gardner's theory, which distinguished between different types of intelligence, was put forth in his book "Frames of Mind: The Theory of Multiple Intelligences," which was published in 1983. He claimed that his theory didn't want to confine students to just one type of learning, but rather to "empower learners" (Cherry, 2023). Additionally, he has emphasized the need to change how educational curricula are developed so that students can concentrate on their actual capabilities rather than following coursework that is limited in its depth.

According to Gardner, students should be given the tools they need in school to achieve their avocational and professional goals following their range of intelligence. In an interview, Gardner stated that he was thinking about including teaching-pedagogical intelligence, or the capacity to successfully teach others. Gardner himself has criticized how his theory has been implemented in classrooms, although many books have been written on the application of Gardner's theory in education and educational institutions adopted it into their systems. His philosophy is more in line with the utilization of particular human abilities. According to Gardner, learning styles and multiple intelligences should not be confused. There isn't enough proof to suggest that teaching to a student's intelligence levels leads to higher academic results. However, becoming more knowledgeable about various intelligences might help teachers better grasp the talents and preferences of their students (Cherry, 2023). According to his understanding, schools have thought that everyone could learn the same subjects in the same

way. As a result, they haven't attempted to link learning experiences to particular items in everyday life to foster a deep comprehension of information (Ferrero et al., 2021).

UDL is a practical strategy and comprehensive framework that supports inclusion, equity, and access throughout the construction of curricula and across all learning modalities. Implementing UDL is separate from the work educators already perform to build and deliver curricula. Instead, UDL is the framework that enables teachers to create, produce, and deliver curriculum so that all children may learn in a way that is more manageable, equitable, and inclusive.

### **Importance of Universal Design for Learning (UDL)**

Courses created with UDL allow teachers to design accessible courses to match the students' specific demands rather than providing a one-size-fits-all approach (UDL on Campus: About UDL, n.d.)

It is necessary for the following reasons. First, it is necessary for the following reasons. First, many students have different preferred methods of learning. Some people prefer reading a book, while others find listening to audio more motivating. While some people learn best by doing, others are motivated by seeing concepts visually represented. Depending on the purpose and goals, their needs change.

In addition, students make use of a variety of technological tools. Some people enjoy using a pen and a notebook while studying, while others use a laptop or smartphone to access learning materials. Depending on access and capacity, their needs change.

Finally, different personal circumstances exist for students. Some students live at home and are supported by their families, while others live on campus or with friends. The UDL



Guidelines are a tool used in its execution. These recommendations provide a set of specific recommendations that can be used in any discipline or field to make sure that all learners have access to and can engage in engaging learning opportunities

The UDL guidelines are used to create curricula that offer everyone the same opportunities to learn. We can't specify or label the student as normal or average, and variability in learning is the norm rather than the exception. There is no one particular teaching strategy that UDL focuses on.

- **Multiple modes of student engagement** that tap into learners' interests, challenge them appropriately, and motivate them to learn
- **Multiple methods of representation** give learners a variety of ways to acquire information and build knowledge
- **Multiple means of student action and expression** provide learners with alternatives for demonstrating what they have learned

Thus, UDL provides teachers with higher opportunities for student satisfaction and reduced the need of figuring out a solution for educational adjustments and differentiated instructional activities to fit individual needs. In addition to increasing the motivation of the students to learn and absorb the information based using their own pace. Regardless of the student's abilities or skills, UDL seeks to guarantee that every student has complete access to everything in the classroom. It provides support for students to self-manage their education and track their development.

Similarly, differentiation is a tactic used to cater to the unique degrees of readiness, interests, and learning profiles of each learner. Differentiated instruction is not the same as UDL.

It proactively examines classroom instruction and surroundings and offers access to the content on the front end, while differentiated instruction evaluates each student in a reactive manner and retrofits and adjusts on the back end. One element of UDL is differentiated education.

Differentiated teaching is the consciously used of particular lesson planning and a variety of learning methodologies to serve all learners (Tomlinson, 2001 as cited in Subban, 2006).

Differentiated instruction is a method that aids teachers in catering to the distinct aptitude, interests, and learning characteristics of each learner, which is the main distinction between it and the UDL (Nelson, 2021).

## **Digital Resources and Innovative Learning Instructional Activities**

In the next section, I will describe a plan for a blended learning course that I developed for high school students enrolled in grade 12 in the American diploma system at Newcastle International School in Egypt ([www.newcastle.edu.eg](http://www.newcastle.edu.eg)). Blended learning is a learning approach that combines instructor-led brick-and-mortar classroom training and online learning activities (Kolinski, 2022). This is the context in which I have been teaching during the school year. It embeds the blended learning model and digital resources while effectively using technology to create a learning environment that addresses diverse learning styles. Below readers will find a breakdown of the structure of each instructional activity within a given course.

*Course name:* Business Course – Human resources management chapter

*Learning outcomes:* At the end of the unit, students will be able to demonstrate concept of human resources management including approaches, theories, and internal and external factors.

Students acquire knowledge and skills from this course through the teacher using a blended learning model called lab rotation, where students rotate through stations on a fixed schedule (Joshi, n.d.) Some stations will be face-to-face in school and the lab station will be online but, in both stations, the whole class works together. The Lab Rotation approach provides unique education options and the teacher can tailor their own class needs. This considers both students' learning demands and the school's resource capabilities since I was dealing with high school students while implementing this plan. The Lab Rotation model can be configured such that students spend a portion of their day working through the online curriculum at their own pace in a computer lab. To reinforce what they learned in the lab and to address challenging questions, they spend time later in the day working in a class with a teacher. To implement this model, I designed a series of activities as follows:

### **Activity one: A brainstorming activity on Padlet about presentation skills.**

*Mode:* Online

*Description of activity:* Reverse game (The concept of working backward from a result)

1. Students will be divided into pairs to watch a video about a terrible presentation.
2. The question here is ‘how can she make her presentations more engaging?’. Before they answer that, reverse it and work towards the opposite goal – ‘how can she make her presentations more boring?’
3. Students brainstorm the answers to this reverse question, maybe with answers like ‘Monotonic, unorganized, presentation colors, and then add the contributions to Padlet.
4. From this, students can reverse the solutions, ending up with great ideas like ‘make the presentation interactive’.
5. Finally, each student is asked to contribute by commenting on two posts of their colleagues.

### **Activity two: Receptive skills: reading and/or listening**

*Mode:* In classroom and Online

*Description of activity:* Lead-in to engage students with the topic of the lesson.

1. The teacher shows students three images and elicits the topic of what’s the role of human resources manager.
2. Pairs discuss: How did your teacher got hired in school? What is the role of the human resources manager? What is the importance of having this department in any institution?

3. Students share with the whole class what they were talking about or what their partner told them

*Description:* Pre-teach to enable students to do comprehension tasks by integrating technology.

4. The teacher tells students they are going to read a short article about the approaches and theories but first, they need some words to help them. So, the teacher gives access to an online matching activity where students match six words in context with their definitions using Quizzes (a platform for learners that provides a variety of tools to create an enjoyable, interactive, and engaging classroom) on the class tablets.
5. The students start doing a Pair-check as part of the collaborative planning process then the teacher shares feedback with the class. The teacher clarifies the meaning using a PowerPoint presentation.

*Description of activity:* Reading to give students a general idea of the text online.

6. The teacher sets the first task by reading four questions, then reading two short articles from the textbook, and matching the articles and the questions. The teacher provides feedback on the answers.
7. The next day in class, the teacher follows up to allow students to practice by regrouping the students and start asking similar questions to ensure that everyone read the comments.

### **Activity three: Productive skills: writing and speaking**

*Mode:* In the classroom

*Description of activity:* Lead-in To engage students with the topic of the lesson.

1. The teacher creates five different groups of students.
2. The teacher provides scissors, glue, thread, construction paper, and a stapler to each team.
3. The teacher explains that they must use the materials at hand to construct a tower.
4. The tower will be judged based on three criteria: appearance, stability, and height
5. The job should be delivered to the students with 15 minutes to spare.
6. After the work is over, evaluate each team's towers based on the three criteria.
7. The teacher inquires and asks the pupils about how they completed the tower.
8. During the discussion, quiz the students on whether each team member was properly utilized to complete the tower-building task.
9. Request a self-evaluation from each team on a scale of one to ten. If the team was an organization, and the organization's goal was to construct the tower, they would evaluate their performance based on the team's effectiveness.
10. Application and guided practices: The teacher assign students to two-person teams. Each team must select one business from any sector. The human resources department at the company and its human resources policies must then be covered in a report.

*Follow-up (online): Informal Assessment*

1. The teacher will monitor the students' independent practice.
2. If necessary, the teacher will help the students.
3. An auto-corrected short quiz on the school learning management system

## **College and Career Readiness**

In the last ten years, there has been a dramatic change in the ways that children learn and the complexity of the knowledge that they must acquire. Counsellors must take into account the variety of information that students are exposed to as they learn about not only their academic courses but also sophisticated careers, college majors, and, in general, every aspect of the college advising process. Additionally, counsellors must develop their understanding of self-regulated cognitive and metacognitive strategies because potential cognitive overload may endanger students' abilities to learn and study. This is not just the responsibility of teachers; counsellors must do this as well. Recent research on cognitive development has emphasized the need to improve cognitive processing in order to acquire more knowledge in this technologically oversaturated society (Fitzpatrick & Costantini, 2012).

A high school student should possess a specific set of abilities, attitudes, and information before enrolling for their sophomore year of college. Teachers and advisors are crucial in ensuring this occurs and can assist students in achieving academic achievement in higher education. Due to an absence of preparation for the challenges that students would face in university, many high school students typically struggle in the first year at university. Increased time slots, assignments, complex assessment procedures, and demanding exams are some examples of these obligations especially if the students didn't get admitted in a college that match his interests (Chigbu & Nekhwevha, 2021).

Academic readiness is simply one component of a student's college readiness. Teachers must impart other life skills, such as responsibility and problem-solving, in the classroom (Buchholz, 2022). The minimum standard parents should have for a high school is that it should academically prepare their children for college. Today's high school students, however, need to

be prepared for life beyond the classroom when they graduate. Therefore, everyone can succeed in high school yet not every student could achieve a perfect score. Nonetheless, every student is capable of acquiring the knowledge and abilities required to contribute positively to the community and graduates could be able to think critically in the right direction if they were educated and guided properly by their teachers and counselors (Buchholz, 2022).



## **Chapter Three: Research Design & Methodology**

### **Method**

In order to answer the research questions, the research has used a qualitative type of methodology. In qualitative research, non-numerical data are gathered and analyzed to better comprehend ideas, viewpoints, or experiences. It can be utilized to uncover intricate details about a situation or to spark fresh study concepts (Bhandari, 2020). The research questions are listed below.

- 1- What instructional activities do teachers use to meet the diverse needs of high school students?
- 2- How effective is the use of technology to enhance such activities?
- 3- How can these instructional activities support the college and career readiness for diverse high school students?
- 4- How do teachers and college counselors contribute to maximize the learning opportunities for high school students?

### **Participants**

It is considered as phenomenological research because the selected respondents are questioned about how they would characterize their experiences. Phenomenological research is a qualitative research methodology that aids in portraying the lived experiences of an individual. The phenomenological approach concentrates on examining the phenomena that have affected a person. This method emphasizes the details and identifies a phenomenon as it is viewed by a person in a given circumstance.

Six teachers working in different international schools in Cairo, Egypt were recruited. To make the best use of the limited resources available, I employed purposeful sampling, a method

that is frequently used in qualitative research to find and select examples that are knowledge-rich. This entails locating and choosing people who have an extensive amount of unique expertise or experience about the phenomenon (Palinkas et al., 2015). The teachers had at least five years of teaching experience in subjects such as English, Mathematics, Humanities, and Sciences. Interviews were conducted to better identify the practical instructional activities they are using inside the classroom and differentiated instructional activities to address learner diversity in high school. I gathered information about the practical tasks using technology, the effect of technology on their classrooms, and real examples of how technology supported the curriculum alignment to address diverse students. In addition to interviewing a high school principal to understand how they align the curricula to address learner diversity, how often do they review the implementation of the curricula, and what corrective actions do they take?

I selected five students from international schools in Cairo, Egypt to ask them about the importance of having a college counselor in school and how it affected their college choice. All students were current students in international schools to ensure that the participants were chosen to help answer the guiding research question. Although they talked about their experience in school, interviews were used to gather information and comprehend their actual feeling.

### **Data Collection and Analysis**

Particularly at the high school level, the value of programs that prepare students for college and careers is not generally acknowledged in Egyptian public schools. This chapter is about how to address different high school students and maximize their learning chances; this also includes the opinions of teachers and principals on how to align their instructional activities to address diverse learners. Recently, international schools in Egypt have begun to recognize the

value of college and career counselors in assisting high school students with their transition to higher education institutions.

Six teachers were interviewed to understand what instructional activities they use to meet the diverse needs of high school students and how effective the use of technology is to enhance such activities. The purpose of the teacher's interviews is to determine how can these instructional activities support the college and career readiness indicators for diverse high school students. I looked into how well instructors and principals believe that educational activities are preparing high school students for college and how teachers and college counselors contribute to maximizing the learning opportunities for high school students.

Finally, I interviewed high school students and the selected respondents were questioned about how they would characterize their experience with the college counselor and how they benefited from having a college counseling department in the school. I presented the findings under three themes to better support the research purpose and address the research problem.

Before asking participants to participate, the interview's purpose was made explicit, and I presented a written explanation to all members explaining the study's goal. I set the time, venue, and length of the conversation ahead of time and notified the members so they planned. This research was developed using qualitative analysis of content. The procedure used in content analysis is intended to group unorganized data into themes and topics based on reliable deduction and interpretation. Three themes were developed including opportunities for diverse learners, the link between technology and differentiated instruction, and college readiness for high school students.

I conducted an individual member check by having a one-on-one talk with them using a list of interview questions and sending them an email requesting them to respond with a resume and letter of recommendation from their schools. I gave them a brief overview of the findings so they would have a chance to examine their comments, add more details if they desired, and revise their remarks.

## **Chapter Four: Presentation of Findings**

The three themes were developed to better identify the teachers' opinions about addressing learning diversity and discuss some of the activities they use in their classroom to approach all the students. On the other side, the students express their actual experience with college counselors and how their existence supported them to choose the right path. The three themes are all related as they establish a connection between the instructional activities used by teachers and college readiness of the students.

### **Theme one: Opportunities for Diverse Learners**

Teachers have their own ways of addressing different learners in a specific classroom. Despite the subject, each teacher considers teaching the students different skills with the aim to address all learners and develop their personalities. Teachers can define differentiation in their own words. They all have their methods to approach the diverse learners by using multiple ways of teaching to ensure that all students are prepared for the next step of life which is college.

According to the first interviewee who teach English language to high school students, he stated that “Teachers can ensure that each student has an opportunity to develop their personal talents through teaching five skill sets”.

The teacher here summarized the way he addresses learner diversity and develops their personal talents through teaching them five skillsets. First, teachers can focus on teaching collaboration as a value and skillset because preparing the students for the future workplace is vital and these workplaces require individuals to work collaboratively not individually. Teachers are required to get the learner involved in group activities, pair assignments, and debates. The second skill set is to teach the student how to build their own evaluation and analysis of knowledge and learning. In this fast pace world, the knowledge that the students are receiving

can be different from the knowledge they will receive five years later so it is important for them to evaluate, analyze, and assess their own knowledge to keep themselves up to date with the market requirements. The third set of skills is to teach the learners how to be tolerant and resilient so they can thrive in a developing, collaborative, and international world. Employers in the future could seek employees who are receptive to novel situations and concepts. Students could need some exposure through open discussions, in-school conferences, and debates about global topics during their sessions. This includes school trips especially those organized for other countries or different cultures, and student exchange programs can be very helpful to promote this idea. The fourth skill set is to help students learn through their own strengths. One size doesn't fit all the learners and the development process. Tailoring the curriculum is about using different instructional activities and strategies to address each student's strengths and interests. The fifth skillset is about learning beyond the classroom. Learners need to learn repeatedly in different ways and to be able to teach themselves new ideas even if they are not introduced in the classroom. The teacher cannot confine what the students learn in a specific session to the subject or the content of the curriculum. Teachers should teach them how to teach themselves and how to acquire new knowledge because not everything can be taught and learned in class.

According to the second interviewee who teach the English language, he agreed on the importance of teaching the three learning skills of reading, speaking, and writing. He stated that "It is important to allow the students to practice the three skills simultaneously. Speaking and writing are considered as final product outcomes while reading is considered as the input in the language".

For instance, teachers provide a reading passage related to the speaking or the writing they are intended to teach. Students use the reading passage as a resource for the brainstorming phase that

should happen later on in the writing or speaking phase. He agreed that providing the students with the knowledge before they generate or produce their speaking or writing is necessary that's why implementing integrated exercises in which the three skills are performed is essential.

According to the third interviewee who teach physics and math to high school students, the greatest advantage of differentiated instruction is that students deeply understand the concept in multiple ways. He claimed that:

The teacher can ensure that all the students have completely understood the explanation through various explanation methods and activities. On the other hand, some of the students can get confused about the multiple methods or approaches to solving a single equation so they need only a single method of solving.

According to the fourth interviewee who teach English subject, he said that “Teachers found many challenges to implement the differentiated instruction process during class. The time needed for the process to be implemented correctly is limited as not all schools’ timetables are flexible to fit with the process.”

According to the school principal, she said that “The curricula are examined yearly to ensure the updated material is in the hands of each student”. They implement programs for learning support for those who struggle within the basic curriculum. Within other departments, they incorporate events such as garage sales, school trips to monumental/historical landmarks, donations such as for both breast cancer awareness, and even care about global issues such as recycling gardens and silent marches to show how the world overcomes its weaknesses. Reports are given on progress within a trimester time frame to look over by the parent, teacher, head of the department, and principal to ensure no child falls behind.

## **Theme two: The Link between Differentiated Instruction and Technology according to Teachers**

According to the third interviewee who teach physics and math to high school students, he defined differentiation as “Having students in the same classroom coming from different backgrounds and educational systems. Each academic system has its own approach to solving equations and not all the systems cover the same syllabus”.

For example, in the same classroom, they can find a student who prefers mental calculations and other students who prefer to write down detailed solving steps. The teacher tailors the materials and content given during the class to approach all the students at a time.

According to the sixth interviewee who teach English language to high school students, she said that “The actions taken by teachers to address differences among students in the classroom are known as differentiation.” A teacher differentiates his instruction to meet the needs of the students whenever he or she reaches out to an individual or a small group to modify his teaching in order to produce the best learning experience possible. She stated that:

Differentiation can happen in content, the process, the product, or the learning environment itself. When it comes to the content, specific content is needed for specific students to match their interests, what process this type of learner needs in order to guarantee better results or better performance? Similarly, the product and learning environment can be varied as well.

The teacher agreed that technology has a positive impact on the learners. Digital classrooms became an important part of the learning process and using it helps them address the learners easily. Teachers are using different digital materials and embedding technology in the classroom. For example, each student has access to the school pc and tablets. In some schools, students have



access to a digital library to help them with their research and essays. Moreover, the school learning management system has advanced options such as auto-corrected assignments so students can solve as much as they can according to their own pace while receiving immediate feedback on their results. She mentioned that gamification websites are now part of their academic plan. Schools provide subscriptions to many gamified websites and interactive online competitions where students can find it enjoyable as well as informative.

According to the school principal, she confirmed that technology helps teachers address many learners and support the students in their study plan. For instance, the school learning management system is an important tool for the students to learn on their own pace. The learning management system allows the teacher to integrate into the system many games and academic competitions which encourage and support the students in their learning.

### **Theme three: College and Career Readiness for High School Students**

I asked the students four different questions in order to identify the importance and the effect of having a college counselor at the school, and how can schools support and provide opportunities for high school students to better identify their strengths.

According to the first student, she met a counselor at her school and she agreed that it is very important for each school to have one because they help the students move in the right direction and organize their thoughts when it comes to choosing the right path for the future. The school hosts a couple of events and campaigns that include many universities so students can have the opportunity to navigate and search for the college that suits their needs. The existence of a college counselor helped her personally to calm down, organize her thoughts, and showed her the path to choose the best university. Over the academic year, she said that her school hosted counseling programs along with many charity events that pushed her to move forward, be

a decision-maker, and gained leadership skills. She classified the elements to choose the right university to study locally or abroad, budget, location of the campus, and safety. She assured me that it is important to feel comfortable and safe with the choice because she will spend many years studying in this place.

According to the second student, she agreed on meeting a school counselor before and she believes that their role is important in school. School counselors help students in making academic and career plans. The college counseling sessions are conducted in school to decide and choose the right major for each student based on their interests and needs. Her school provides leadership opportunities through group projects, volunteering, and participating in social events. The elements that she considers to choose the right university are academic and financial elements.

According to the third student, she assured that the college counselors help her make a plan for the future, assess her needs, and assist her to see the bigger picture. She claimed that the school counselor can assess her needs more effectively than choosing a college alone. For instance, she described the college preparation phase as tough and rigid, but the counselor can support by recommending some universities or specific majors based on academic standing and professional aspirations. The counselors can differentiate between public and private higher education, explain the application process, and apply for scholarships. These steps are difficult for a high school student if there was no guidance from an expert. Her school provides events when most of the university students were searching for a collab in one place. These events help her compare and gather information about many universities. She sees that leadership skills can be gained through sports, competitions, and volunteering. For example, she volunteered at a school event which helped her gain more experience in management and communication. She

can better identify the right university for her based on the acceptance criteria, scores, and the cost of studying.

According to the fourth student, agreed with the importance of meeting a high school counselor because as a high school student, she already has lots of tasks and assignments to accomplish, and searching for a university alone is very stressful. When she meets with a counselor, he facilitates the admission requirements and advises her on the needed documents, and the early admission dates. Her school sends the students to many campus visits, and college fairs to give them an opportunity to compare the colleges. The school promoted leadership skills through working on group projects. For instance, if a student is assigned to be a group leader so he can start disturbing tasks and take the leadership of other students which helps him gain experience in how to work collaboratively. She claimed that the right fit has two aspects. The first one is an educational aspect based on the availability of the major she wants to pursue at a specific university. The second one is social life. She said it is more of a balance between both as she is seeking a social life, making friends, and new connections, and participating in activities throughout the college year.

According to the fifth student, he met a college counselor before in school. He agreed that the college counselor helped him to choose the right major and most importantly he communicated his preferences with his parents as they weren't on the same track. The school supported him to develop leadership and other important skills by participating in many simulations such as the model of the United Nations. He said that the financial aspect is very important when choosing the right college as he doesn't want to burden his parents for five more years of study.

## Chapter Five: Discussion

The study demonstrates a relation between differentiated instruction and the readiness of students for their academic and career future aspirations. The results indicate that teachers can better identify the student's strengths and skills based on the concept of differentiation, and provide different instructional methods, and different ways of strategies to deliver such activities, in order to address all the students in the classroom. According to the American University School of Education (2019), students benefit from diversity in the classroom by increasing social awareness, which enables them to appreciate a variety of viewpoints and come to more logical conclusions. By requiring students to think critically, which achieves both of these objectives, they can learn how to interact with their peers and develop the interpersonal skills they could need for the rest of their lives. The process can only be implemented successfully if teachers are aware of the type of learners they have in the classroom, so they can better plan instructional delivery and potential student retention (Cherry, 2023).

These results build on existing evidence from the literature review and the interviewees' responses. The data contribute a clearer understanding of the relation between differentiated instruction and the college readiness of the students. There are mutual curriculum development models that teachers can use to better approach the student such as the subject-centered, problem-centered, learner-centered approaches. Since it is not student-centered, the subject-centered approach, which makes up the majority of widely standardized curricula, encourages a lack of engagement between the students and the teacher (Stutt, 2023). On the other hand, the problem-centered approach teaches the students practical skills for the real world and allow them to identify problems and develop solutions. While in the learner-centered, teachers can use this

approach to consider the prior knowledge and learning preferences of their students, and develop the curriculum in accordance with the student's needs (Stutt, 2023).

(Tomlinson, 2001 as cited in Subban, 2006) defined diversified teaching as the intentional use of specific lesson design and a range of learning approaches to meet the needs of all students. The results indicate that there is no one best method of instruction, and not every student can be taught in the same way. When teachers are aware of the concept of differentiation and use various instructional strategies and activities to reach every student in the classroom, they are better able to pinpoint each student's strengths and abilities. The application of UDL principles to meet the needs of diverse high school students and the need to get them ready for college by matching instructional activities to learning objectives have both come into focus as a result of the literature review. The key difference between differentiated teaching and the UDL is how it helps teachers accommodate to the unique aptitudes, interests, and learning characteristics of each student (Nelson, 2021). Although this is a complex process, teachers can effectively design their lesson if they are aware of the types of students, they have in a given classroom. This research clearly illustrates that teachers need to be aware of their students' strengths and weaknesses because college counselors need to list information about the student's preferred learning style, academic development, classroom behavior, and other skills in their reports. Teachers should place more of a focus on encouraging students to learn new things through a range of modalities and forms rather than seeking to match what they learn to their perceived type of intelligence (Cherry, 2023).

Diverse learning environments are more conducive to society's democratic objectives and better prepare students for future situations they could encounter in the real world (Civitillo et al., 2019). Teachers and counselors work together under the school guidance to address the

learner diversity and better benefit the students. However, teachers in public schools must receive training on how to interact with diverse learners and comprehend the career readiness indicators as the generalizability of this research results is limited. Specifying preparatory teaching instructional activities and focusing on all types of learners while adhering to high school curriculum requirements is one way to ensure their success. The information provided by students and teachers on academic aptitude, involvement, exposure to demanding learning experiences, and graduate performance are just a few of the many indicators of readiness for college and the career. High school teachers and counselors alike share a big responsibility in this because every high school student needs to be prepared for college, career, and life. Since the school management is responsible for supervising and implementing such techniques and projects, I argue that both public and international schools in Egypt must launch a strong college counseling departments to support the students along with ongoing professional development to high school teachers to align their learning outcomes and curriculum to address diverse learners while considering that the purpose of learning outcomes is for students to demonstrate what they have learned and acquired, not for teachers to describe their teaching methods (Chatterjee, 2017).

According to Chigbu and Nekhwevha (2021), many high school students generally suffer in their first year of college since they weren't prepared for the difficulties they would face there. These commitments include more time slots, assignments, challenging tests, and difficult assessment procedures, especially if the student wasn't admitted to a college that matched his interests. Beside the importance of the college and career counseling department, other aspects must be considered by the schools such as building partnerships with recruitment teams in universities, arrange campus visits, plan orientation events, or invite keynote speakers in specific fields to give a practical advice to the students in which career they should pursue. According to

Forster and Greene (2003), more than half of students who do graduate from high school, along with more than two thirds of all freshman, do not have the minimum qualifications to apply to a four-year college or university. Teachers who want to prepare their students for college should be aware of their students' learning preferences so that instructional activities that are in line with learning outcomes can be supported by UDL principles and enhanced with technology. These activities should also be observed by college counselors so that they can track students' academic development. Collaboration and coordination between high school teachers, college counselors, principals, and universities can help students effectively prepare for college and professions, which could ultimately increase retention and completion rates. Specifying preparatory teaching instructional activities and addressing all types of learners while adhering to the criteria of the high school curriculum is one way to ensure their success. If students were properly educated and advised by their teachers and counselors, every student can be capable of obtaining the knowledge and skills necessary to contribute constructively to the community and graduates will be able to think critically in the appropriate direction (Buchholz, 2022). Ideally, there is a link between the college preparation of diverse high school students and the instructional strategies utilized by teachers to support them. This study showed the importance of the effective collaboration between teachers and college counselors in order to be aware of their students' strengths and limitations. In order to evaluate these skills, the teachers must be aware of the various learner types present in the class and the best teaching strategies to use with each one of them.

## **Implications**

There is a connection between differentiated instruction to address diverse learner and the use of technology on the college readiness of the student. The research found that teachers can ensure that each student has an opportunity to develop their personal talents using differentiated instruction in their classrooms. These findings suggest that students acquire the concept in many different ways, which is differentiated instruction's greatest benefit. Through various explanation techniques and activities, the teacher has the opportunity to ensure that every student has comprehended the explanation. Therefore, students are able to understand their learning preferences as well as their strengths and weaknesses. Technology has a positive impact on the learners. These findings suggest that integrating technology in teaching is essential to keep student engaged and active in all subject areas. Technology tools can be chosen and successfully incorporated into a curriculum where the instructional activities are in line with the learning outcomes.

As a result, the findings suggest that the school counselor's role is important for high school students as they help them not only in college search process but to discover their interests and facilitate the admission process. The collaboration between the teachers and the college counselors is essential to address all the students and find the right fit for their future studies. Schools play a vital role by coordinating with the counselors to range in-school college fairs, career counseling sessions, campus visits, and other initiatives to promote the needed skills for college.

## **Limitations**

The research has potential limitations as its purpose is to explore the effectiveness of instructional activities designed by high school teachers in addressing learner diversity and



preparing students for college and career. Nonetheless, these findings need to be taken cautiously, and there are several restrictions that need to be kept in mind because the objective of this research is to examine a selection of the curriculum-related teaching methods used in Egyptian international high schools. The data was only collected in international school and may not have the expected relevance in public schools.

Phenomenology, a sort of qualitative research that required an in-depth comprehension of the interviewee's thoughts and perceptions of the topic I was examining in this study. It enabled me to come to conclusions about the phenomenon that complement or even go against what I had previously held internally. It was a useful method to learn more about the audience and raise awareness of the issue being researched. Since phenomenology is based on audience experiences, its correctness is entirely dependent on how well the audience can communicate their thoughts and feelings. Due to the qualitative nature of phenomenological research, it was challenging to summarize and explain the findings. In order to focus in-depth on relatively small samples, I used purposive sampling, which is a sampling approach in which I rely on my own judgement when selecting people of the public to participate in the study. Therefore, this research needed a lot of time and the data interpretation as well as taking appointments from the interviewees was time consuming and took weeks.

### **Recommendations**

The research results along with the literature review revealed a connection between the instructional strategies used by teachers to support diverse high school students and their readiness for college. Future studies should take into account how can the curriculum learning outcomes serve as indicators to the students' readiness for college and the workplace.

To better understand the implications of these results, future studies and further research such as a mixed method research could address the effect of college counselors on public schools and how can high school teachers collaborate with them to better identify the students' strengths, interests and academic profiles.

## **Conclusion**

The teaching profession continuously acknowledge and successfully manage the difficulties of performing tasks in a large, diverse school, making the existence of learner diversity critical. By requiring students to think critically, they can learn how to interact with their peers and develop the interpersonal skills they will need for the rest of their lives and later on in preparation to college. This research aimed to identify the effectiveness of instructional activities designed by high school teachers for addressing learner diversity and preparing students for college and career. The central ideas of this research were to discover the instructional activities that teachers use to meet the diverse needs of high school students, the effect of technology to enhance such activities, and how can these instructional activities support the college and career readiness for diverse high school students?

Most participants agreed that differentiated instructional activities increase student accomplishment and motivate learners when the teaching is adapted to the students' levels of preparation, their interests, and their academic profiles. Understanding each student's personal capacities helps the teacher better grasp their needs and goals. Gardner's theory of multiple intelligence helps teachers take into account many types of mental abilities, better be able to identify the students' preferences, and be more aware of the forms of intelligence that students often favor. While previous research has focused on that there is no single way to teach and not all students can be educated the same way (Prabhu, 1990), these results demonstrate

that technology has the potential to play a vital role in addressing learner diversity as the new generations are growing in a fast-paced tech community where technological advancements dominate most of their life. Courses designed with UDL allow teachers to prepare accessible lessons to match the students' needs and personal preferences rather than providing a one-size-fits-all approach (UDL On Campus: About UDL, n.d.). In a curriculum where the instructional activities are aligned with the learning outcomes, technology tools can be selected and effectively integrated in the curriculum. In the decision of whether and how to use hardware, software, or other methods to enhance the learning process. It is also important the school administration recognizes the need for teacher technology training, not in terms of technicality but also and foremost in terms of strategies that can be implemented when integrating the technology tools.

As far as the student counseling is concerned, the students agreed on the importance of having a college counselor. Students classified the universities based on both tangible and intangible aspects such as financial aid, cost of accommodation, transportation, and the availability of the desired majors. I argue that counselors at this point must direct the students towards universities and colleges based on several elements other than the above-mentioned aspects. The academic progress and the student performance, for example, are necessary when choosing a major. These two elements cannot be achieved except if the counselor and the teachers work in parallel to understand the student academic progress, their learning styles, their learning preferences. For instance, if two students prefer to pursue an engineering degree but they are not aware of the majors. The mathematics teacher can recommend to the counselor that both students prefer hands on projects but one of them prefer drawing tasks and graphs, and the other one prefer solving mathematical equations. In this case, the counselor is aware of the

majors in the faculty of engineering that he can recommend and explain to the students. The counselor must follow up with the student to produce a career plan that includes the required subjects to enter a specific major, the need for external standardized tests, and the minimum score requirements to apply for college. In order to assess if a student is prepared for college-level work and is appropriately in line with the standards of the college, teachers must meet the needs of a diverse group of students while maximizing each student's learning opportunities. Thus, the college counselor is a crucial element in facilitating the admission process, thus in ensuring success in the future academic and professional career of each student.

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## **Appendix A**

### **Interview Questions**

This appendix consists of the interview questions which were used during the interviews with high school teachers, high school students, and a head of school. High School Teachers were asked these questions to support the aim of the research.

1. How would you define the concept of “differentiation” in the classroom?
2. Have you ever applied differentiation in the classroom? If so, how? If not, how do you think you would apply it? How can teachers ensure that every child has opportunities to develop his or her individual talents?
3. Try to list some of the pros and cons of differentiated instruction.
4. How do you integrate the three macro-skills of speaking, reading, and writing?
5. What do you think is the effect, if any, of implementing or using technology in your classrooms?
6. How can technology support the curriculum alignment to address diverse students? Give some examples related to your experience in which technology helped you reach the desired outcomes.
7. What mistakes do you see students make when it comes to choosing courses in high school?



## **Appendix B**

### **Interview Questions**

High school students enrolled in international schools were asked these questions to better identify the career and college support each school provides to them

1. Have you ever met a high school counselor or a college and career counselor? If so, do you think meeting with a high school guidance counselor is important?
2. Are there any events/campaigns that your school offers to help you decide on a career track or a major?
3. Are there opportunities at school where you can gain more leadership experience?
4. How do you know if a specific university is a right fit for you? What are the elements that you consider to choose the right university?

## CITI Certification



Completion Date 12-Mar-2022  
Expiration Date 11-Mar-2025  
Record ID 47912579

This is to certify that:

**Shrouk Elshiekh**


Has completed the following CITI Program course:

**Social & Behavioral Research - Basic/Refresher**  
(Curriculum Group)  
**Social & Behavioral Research**  
(Course Learner Group)  
**1 - Basic Course**  
(Stage)

Under requirements set by:

**The American University in Cairo**

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