

ASSESSING INTERMEDIATE LEVEL STUDENTS IN LEBANON DURING SCHOOL
CLOSURE

A Thesis
presented to
the Faculty of Humanities
at Notre Dame University-Louaize

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education-School Management and Educational Leadership

by
RASHA GHABASH

SPRING 2022

Notre Dame University - Louaize
Faculty of Humanities
Department of Psychology, Education and Physical Education

We hereby approve the thesis of

Rasha Ghabash

Candidate for the degree of Master of Arts in School Management and Educational Leadership

Dr. Kamal Abouchedid



Supervisor, Chair

Joseph Tannous (Fr.)



Committee Member

Acknowledgement

This thesis could not have been completed without the support of many people. I would like to thank the ones whose help was a milestone in the accomplishment of this work.

I would like to express my deepest appreciation for the support of all NDU professors and instructors who directed me through my graduate studies and enriched my academic development with their experience. Special thanks go to Dr. Kamal Abouchedid who was a supportive and encouraging advisor. I would like to thank him for his invaluable patience, contributions, encouragement, and efforts in guiding me through this work scholarly endeavor.

I am also grateful to my Dissertation Committee Members, Father Joseph Tannous, for his further support, guidance, and feedback.

I want to thank God because achieving all this was possible due to His enlightenment and guidance. A special thanks to my parents and brother for their continuous support, unconditional love, and unlimited encouragement. This work would not have been undertaken without them.

Table of Content

Contents

Acknowledgement	ii
Table of Content	iii
List of Figures, tables and charts	vi
Abstract.....	vii
Chapter One: Introduction.....	1
Statement of the Problem	1
Objectives	3
Assumptions	4
Research questions	4
Chapter Two: Theoretical Framework and Curricula.....	7
Introduction	7
Learning Theories	8
<i>Behaviorism Learning Theory</i>	8
<i>Cognitivism Learning Theory</i>	9
<i>Constructivism learning theory</i>	11
<i>Social learning theory</i>	12
<i>Sociocultural learning theory</i>	13
<i>Bloom’s Taxonomy</i>	14
<i>Social-emotional learning</i>	16
Definition of Terminologies:	23
<i>Competency</i>	23
<i>Skills</i>	25
<i>Ability</i>	27
Curriculum	28
<i>The Three Generations of Curricula around the world:</i>	28
I- <i>Content-based curriculum:</i>	29
II- <i>Outcome-based curriculum:</i>	30
III- <i>Competency-based curriculum:</i>	31
Chapter Three: Assessment Overview and Emergency Remote Teaching.....	34
Assessments:	34
A- <i>Cycle of assessment:</i>	37
B- <i>The three purposes of assessments:</i>	39

C- Role of assessments in education reform:	40
I- Role of assessments in learning and teaching process:	41
II- Role of assessments in curricula reform:	42
Alignment between curriculum and assessment:	44
The three types of assessments.....	44
I- Content-based assessments:	44
II- Outcome-based assessment:	45
III- Competency-based assessment:	47
21st Century Competencies that are being assessed and how?.....	48
How to teach and assess competencies.....	50
Assessment samples	54
Assessments in different countries:	56
A- In Singapore:	57
B- In Australia:	58
C- In Thailand:	59
D- In Lebanon:	61
Education now in Lebanon	63
Education around the world	66
Chapter Four: Education During Closure	68
Emergency Remote Teaching (ERT):	69
Assessments during COVID-19	73
Conclusion:	75
Chapter Five: The Research Design of the Study	79
Introduction.....	79
Research design.....	79
Tools in Qualitative Research	81
Research Questions.....	85
Assumptions	85
Data Collection.....	86
Participants.....	86
Procedure.....	87
Mapping table	88
Semi-structured interview	89
Document analysis	92

Chapter Six: Findings and Discussion	100
Chapter Seven: Conclusion and Recommendations	107
References	111

List of Figures, tables and charts

List of tables

<i>Table 1: The three purposes of assessments</i> _____	39
<i>Table 2: Teaching methods for competencies</i> _____	51
<i>Table 3: Assessment tools for assessing competencies</i> _____	54
<i>Table 4: Mapping table (a)</i> _____	88
<i>Table 5: Mapping table (b)</i> _____	89
<i>Table 6: Assessment examples during closure</i> _____	101

List of figures

<i>Figure 1</i>	15
-----------------------	----

List of charts

<i>Chart 1: School A data</i> _____	93
<i>Chart 2: School B data</i> _____	94
<i>Chart 3: School C data</i> _____	96
<i>Chart 4: School D data</i> _____	97
<i>Chart 5: School E data</i> _____	98
<i>Chart 6: School F data</i> _____	99

Abstract

The process of teaching students has always been dependent on face-to-face instruction in brick and mortar institutions. Students and teachers meet at the same place and at the same time for learning. However, some incidents around the world could make a change in the medium of instruction. Lebanon's political and economic volatility serves as an example of shifting educational practices as a corollary of myriad national problems affecting education. The massive popular uprising on October 17, 2019, the pandemic COVID-19, and the Beirut port-blast on August 4, 2020 have had their toll on the educational sector both private and public as well as higher education and vocational education and training,

This thesis dealt with the intermediate level because it is a critical one since it draws the future career path of the students in their education according to the 1997 educational ladder in which grade 9 is a point of departure either to vocational education and training track or to the academic one through transitioning students to formal higher education. During the pandemic COVID-19, teaching and learning in schools represented an era of 'learning loss' where little is known about what has happened in virtual teaching and online practices whose parameters are not yet well understood; a lacuna that incites speculations about emergency remote teaching during that period, particularly with regard to ensuring student learning via assessment. This research was conducted to discuss the ways teachers assessed learning among intermediate students during emergency remote teaching and learn how teachers reacted to the shift from face-to-face instruction to other makeshift modalities rather abruptly with a view on assessment. Qualitative research was adopted to uncover issues of teaching, learning, and assessments during emergency remote teaching. Research around this area has been gaining momentum since the

pandemic often generating mixed results.

The data in this research was gathered from documents analysis and interviews with intermediate level teachers. Document analysis was conducted on six different documents that include assessment policy in six schools drawn for the study. Semi-structured interviews were conducted with teachers teaching different subjects in the intermediate level.

Results obtained from fieldwork showed a variety of ways teachers used to assess students like conducting online quizzes, tests, reports, distributing the tests to parents through the school principals and then gathering it back for grading, reciting through online platforms, grading activities, presentations, multiple-choice questions. In addition, the majority of teachers interviewed have reported concerns during such situation such as cheating and not being able to fully assess student learning. Teachers have focused on the idea that assessments during closure were conducted yet with less credibility since students have many ways of swindling in the exams. The data gathered from assessments lacked accuracy; hence did not identify whether learning objectives were met.

The thesis has several limitations. Due to lockdowns because of the pandemic, it was difficult to conduct focus group that would have added more data to the research. The number of participants involved in the study was limited. Some participants found difficulty in understanding some terms or in expressing their thoughts because the interview was conducted in English. Data retrieved from this research are not generalizable. In addition to that, no body language was taken into consideration since many participants refused to open the camera during the online interview.

Despite these limitations, the research presented evidence-driven recommendations

for schools, education policymakers, and those interested in providing sound education compatible with international trends and local realities during emergencies.

Chapter One: Introduction

Statement of the Problem

This study examines the assessment methods and practices used during closure because of the pandemic COVID-19 in the intermediate level in Lebanon from the perspectives of teachers. The idea of the study was stimulated by the need to inquire into assessment with a focus on the period between 2019 and 2022. During this time window, a series of unforeseen events have occurred affecting student learning in multiple ways that this study will chronicle to place ensuing results and analysis of assessment practices in appropriate context. The three waves of COVID-19 pandemic, the Beirut port blast on August 4, 2020, fresh national protests in Lebanon in October 2019, and the total financial collapse and economic dissolution have placed education at the forefront of crisis. School closure was not only due to COVID-19, but also due to protests, soaring gasoline prices curbing students' and teachers' transportation to schools. The string of crises has affected the retention of schoolteachers and administrative personnel thus causing a shortage in human resources to perform curricula duties. The Ministry of Education and Higher Education (MEHE) through the Center for Educational Research Development (CERD) has truncated study subjects in the curriculum to mitigate pressure on students. The MEHE sought to ensure continuation of education through: "broadcasting lectures," "deploying electronic platforms" or "distributing materials and exams to students" (Abouchedid, 2020).

After the spread of COVID-19 in Lebanon leading to total lockdowns, the MEHE has announced on March 25, 2020, the emergency plan for the educational sector to ensure educational continuation and salvage the academic year through what was dubbed as emergency remote teaching which included the following:

Circular No. 15 issued by the MEHE on March 17,2020, outlined three parallel tracks for reconnecting students on the curricula: (1) broadcasting lectures for grades 9 and 12 students as well as for those who do not have internet access; (2) deploying electronic platforms to ensure interactive communication among teachers and students in the directorates of the MEHE and the Lebanese University; (3) distributing materials and exams to students through school principals. Choosing the appropriate track was made at the discretion of the relevant school principal (MEHE, 2020a). Further, the MEHE invited volunteering schoolteachers from public and private schools to film lessons for broadcasting on TV targeting students slated for national examinations (MEHE, 2020b).

These modalities were adopted to cope with the pandemic and concomitant crises that might have caused ‘learning loss’ among students, increased access to learning gaps among students, caused social isolation, stress, and depression. It is worth noting that the pandemic was not the first cause for interrupting education in Lebanon. In fact, education in Lebanon was interrupted in 2005 after the assassination of the former Prime Minister Rafic Al Hariri and during the July War between Lebanon and Israel in 2006. Education was also interrupted during the October 17 protests that brought schooling to a complete halt.

Ministerial emergency tactics have narrowly focused on salvaging the academic year than on ensuring students’ equitable access to learning to all schools regardless of sector and region. The pandemic COVID-19 and the string of traumatic events in Lebanon have surfaced existing inequalities of access and divulged curricula problems.

It is worth mentioning as well that, Lebanon lacks a policy framework or guidelines

for teaching or assessing students through distance education. In addition to that, teaching students through distance education does not match the rules and regulations of MEHE in Lebanon.

This study is placed in the context of education amidst crises taking assessment as a key component for improving teaching and learning in the curriculum. The following section identifies the objectives, assumptions, and research questions on which this study is based on.

Objectives

The purpose of this study is to provide an analysis for assessments that were conducted in Lebanon in the intermediate level during school closure. It will analyze the current situation of education to aid professionals in creating a well-developed framework and policy for the future as the MEHE and CERD are currently exerting concerted efforts to develop a new national curriculum replacing the 1997 one. Thus, it is important to identify how teachers assess the students and what are their concerns during such situations to take them into consideration and overcome them in the future.

This study tends to analyze and present findings that will help in providing sufficient data to fill in the gaps caused by the closure. By this way educators, policymakers, and educational leaders will be able to create an emergency plan that could be used during any unforeseen situation, and review educational issues related to teaching, learning, and assessing. All this information could be used to modify or add effective measures on the current curriculum to help in creating a well-developed and structured national curriculum that includes an emergency plan to provide education to students even during inconvenient situations.

Assumptions

The assumptions of the study are:

- 1- Data gathered from assessments during such situations will provide background information for informing curriculum development in Lebanon about caveats and solutions during emergencies.
- 2- Evidence-driven analysis of teaching, learning, assessments during COVID-19 will help explore solutions to remedy “learning loss”.

Research questions

The research questions of the study are:

- How teachers of the intermediate level, cycle 4, in Lebanon assessed student learning during Emergency Remote Teaching (ERT)?
- How suitable were assessment modalities appropriate for students with learning difficulties?
- What pedagogical and policymaking implications can be suggested for assessment in Lebanon as the MEHE and CERD are developing a new curriculum?
- What are the latent factors behind learning loss other than the known impact of ERT?

Chapter five titled “Research Design and Operational Field Measures,” mapping table has been created aligning between the objectives, assumptions, and research questions. This mapping facilitated the process of interconnecting these three elements to form a solid base for the development of tools for data gathering.

This study is a qualitative one. Data are collected from semi-structured interviews and document analysis. Through semi-structured interviews, information was gathered from participants who are teachers at the intermediate level. Furthermore, to link the

findings of this research, content analysis was conducted on documents that are related to assessment policies in different schools in Lebanon.

In terms of structure, this study is divided into seven chapters in which each chapter discusses a certain area related to assessments during closure in Lebanon.

Chapter one sheds light on the essential elements tackled in this study such as statement of the problem, objectives, assumptions, and research questions.

Chapter two examines the literature and theoretical framework illustrating essential elements in assessment as derived from learning theories. Furthermore, this chapter tackles the three generations of curriculum utilized world-wide with examples.

Chapter three examines literature related to assessments, the three types of assessments in accordance with the curriculum used, and review of models used in the 21st century in countries from three different geographic regions selected based on their performance in international tests, Trends in Mathematics and Science Study (TIMSS) and Program for International Student Assessment (PISA).

Chapter four sheds light on the paradigm shift that happened in the field of education from face-to-face education to distance education which is represented in ERT and how assessments were taking place around the world.

Chapter five presents and discusses the research design and operational field measures used to conduct this research. It will analyze how qualitative research is used to tackle the issue of this research; the mapping table; and the two tools used for this research, semi-structured interviews, and document analysis.

Chapter six discusses the research findings yielded from fieldwork and sets out the study limitations.

Chapter seven discusses the implications of the study and sets out evidence-driven recommendations on assessment in Lebanese educational context.

Chapter Two: Theoretical Framework and Curricula

Introduction

This chapter reviews analytically the literature on student assessment in K-12 and highlight the 21st Century models in assessment as derived from three categories of countries (High, Medium, and Low) performing scores in the Organization for Economic Co-operation and Development's (OECD) Program for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) in 2018. Test scores retrieved from these two international tests are used to develop the educational system worldwide and to help countries in education policymaking (OECD, n.d.). The results retrieved from assessments are helpful in making sure that education took place and identifying the modifications that need to be implemented. Therefore, when retrieving effective results, educators, administrators, policymakers, leaders, and officials can benefit from them.

The analysis of assessment models and trends will be supplemented by theoretical literature forming an overarching framework for the study. The chapter will also focus on assessment of transversal competencies and skills, i.e., competencies across the curriculum, and assessment of specific competencies and skills for specific subjects. These types of assessments largely and overwhelmingly reflect the 21st century assessment of competencies. These competencies are chosen because they are gaining traction in the world and became mundane in curriculum development worldwide. And since education is an essential field in every country, it should adapt to the changes that are taking place worldwide without ignoring local realities and requirements. One such transversal competency is technology or digital literacy.

Due to technology, the workplace has been modified and the demands as well have changed.

Therefore, education must be modified as well to prepare the future generations for the real world. To fully understand the concept of assessment, this chapter will provide an overview on seven learning theories and definitions of terminologies that are related: competencies, skills, and abilities.

Learning Theories

This section defines seven learning theories that have influenced the way students are taught and assessed. These theories are behaviorism, cognitive theory, constructivism, social learning theory, and sociocultural learning theory. Bloom's Taxonomy is subsumed under behaviorism, and social-emotional learning under social learning.

Behaviorism Learning Theory

This section is going to discuss the first learning theory which is behaviorism, in addition to the work of the philosopher B.F. Skinner who was a behaviorist.

Behaviorism focuses on the influence of environmental stimuli on students' performance and behavior. It has nothing to do with anything internal; everything is gained from observing behaviors around. Therefore, this theory tends to focus on observable and measurable behaviors among students. We are born with a mind as a "blank slate" which we fill with knowledge via "interactions with the environment" (McLeod, 2020a). Thus, students are considered passive learners in which they observe how teachers are behaving and respond to stimuli. In other words, students will learn how to "respond" to certain "stimuli" in a right and quick way; therefore, in this case, repetition is needed so students can memorize how they should respond, as illustrated in Thorndike's Law of Effect theory.

The psychologist B.F. Skinner focuses on the idea of operant conditioning which focuses on the idea of positive or negative re-enforcers which help in reaching the needed results (WGU, 2020c). Hence, behaviorism helps teachers in choosing the best

method and timing for motivating students and helping them improve. So, students receive a reward when they respond correctly and get punished when they respond in a wrong way. Therefore, their answer will either be right or wrong. (Ibid). This theory does not focus on skills as much as it focuses on memorization; that is why when students do not reach the target, students must practice more and repeat the behavior until they reach the goal.

Cognitivism Learning Theory

This section discusses cognitive learning theory citing the leading work of the Swiss Psychologist, Jean Piaget.

Cognitivism learning theory has been developed by Plato and Descartes who focused on how people think is affected by a combination of external and internal factors. So, this theory focuses on the idea that “how we think, how we feel, and how we behave” are all interconnected to each other (WGU, 2020b). This idea could be represented in the following example: if you think that you are not good at mathematics, you will always say that you are not good at it. Therefore, you always feel unsatisfied during mathematics class and will have a deficient performance.

Consequently, every person has a certain way of processing information. Many things around us have an influence on this processing process: previous knowledge, thought, memory, motivation, reflection, and problem-solving skills.

The first psychologist who tackled the issue of the development of children’s cognitive development was Jean Piaget. The cognitive theory of Piaget is based on the idea of “biological maturation” that takes place step by step to reach the last level. Piaget has shown how students go through four distinct stages that are divided based on students’ age. He believes that childhood is a particularly important cycle in

students' education. Students tend to have an active role throughout these stages.

The four stages are:

- Sensorimotor stage (birth – 2 years): at this stage, infants discover things around them using their senses.
- Preoperational stage (2-7 years): at this stage, children start to use pictures to reflect on specific objects. Despite that, they still cannot think logically and need concrete terms to fully understand things.
- Concrete operational stage (7-11 years): at this stage, children start to think in an organized and logical way, yet still concrete.
- Formal operational stage (12 years and above): here abstract thinking is reached. Adolescents at this stage start thinking using reason about abstract topics such as philosophy, political and ethical issues. (Cherry & Gans, 2020) and (McLeod, 2020c).

As represented in all these stages, the main idea of this theory is learning by doing. Children must have hands-on activities to learn and discover the world around them. Therefore, each age group has specific ways of assessing based on what they can do (McLeod, 2020c). Therefore, when students can identify what they can do, they will be able to control how they think and learn. In this way students will gain skills like self-regulation, self-monitoring, problem-solving, and communication which will make them an active part in the learning process.

After discussing the cognitivism learning theory and the work of Jean Piaget in the learning process, the following section will discuss another learning theory which is constructivism.

Constructivism learning theory

Constructivism learning theory states that students learn by creating their own knowledge. Knowledge in this theory is not found within or absorbed from external factors, however it is built based on one's experiences. Therefore, the knowledge that students gain varies from one to another. In this case, the major element in this theory is interaction with everything around to start building knowledge. Interaction in this theory is not limited to environment and things around, but also related to the "social activity" that takes place between students and teachers and among students.

Consequently, constructing knowledge is based on sharing ideas and knowledge and negotiating (McLeod, 2019). So, when students communicate and observe new things, they tend to add the latest information to their previous experience to produce new knowledge, which means that students form the active element in the learning process. Therefore, teachers in this situation guide students to help them in constructing their own knowledge (WGU, 2020a), which is different from the traditional way of teaching which is based on lecturing.

The educational philosopher, John Dewey, believed that the process of learning is a social activity that has nothing to do with abstract concepts. Dewey's work focuses on the idea that students must engage in the real world through activities, creativity, and collaboration to demonstrate higher levels of knowledge. To make sure that learning will take place, learning should be connected to real-world experiences (Brau, 2018). In the same context, Vygotsky has added that "community plays a vital role in the process of making meaning" and that communication is an essential element in teaching (McLeod, 2019).

After discussing constructivism learning theory and the importance of engagement and communication in learning, the following section will tackle another learning

theory which is social learning theory.

Social learning theory

This section is going to discuss the fourth learning theory which is social learning theory that was developed by Albert Bandura.

Social learning theory is another learning theory that has shed light on the importance of observing, imitating, and encoding behavior that will be retained if rewarded.

Bandura has formed this theory as an alternative for the behaviorism theory; since he believed that the learning process should focus on observation rather than on memorization. Furthermore, Bandura focused on the idea that the blend between the cognitive factors and the surroundings helps in forming knowledge. Therefore, he considered that students should go through four stages to reach the required knowledge:

- Attention: the behavior that will be imitated should grab the attention of the students.
- Retention: this stage is essential because social learning theory does not happen immediately. Students should be able to remember the behavior to be able to imitate it.
- Reproduction: at this stage, the student tends to perform the behavior; however, the student should be aware if he/she can imitate the behavior.
- Motivation: this stage represents the potential that a student has. The more positive the reward is the more likely the behavior will be imitated (McLeod, 2016).

Social learning theory is based on the interaction between the person and social environment around them to develop the thinking process. Therefore, the assessments

in this case should be related to activities that integrate the students in an active participation in the real-world context and might include audios and visuals in a portfolio to present the activity achieved (James, 2006). In this case, creativity is needed to produce a variety of assessment alternatives to create a sort of alignment between the theory used for teaching and the assessment tool.

The way a student learns is affected by many factors, and the effect could be a positive one or a negative one. Interacting with people around, seeing the environment, observing behaviors, and listening to internal thoughts, all affect how students interpret knowledge.

After discussing the work of Albert Bandura, the social learning theory, the section that follows will discuss the sociocultural learning theory.

Sociocultural learning theory

The psychologist Lev Vygotsky developed the sociocultural theory.

Vygotsky believed that cognitive development takes place during the initial stages of childhood. Children's cognitive state starts developing through social interaction with people. Children tend to learn from people who are more skilled like older people, teachers or even from more skilled peers. Furthermore, Vygotsky considers that the process of interacting with people comes before cognitive development. (The Psychology Notes HQ, n.d.). So, children will start grasping knowledge from people and making sense of everything. Unlike other theories, Vygotsky considers that there are no stages that students should pass through to reach the needed knowledge.

What makes this theory unique is that it gives importance to culture in psychological development. Cultural elements do affect cognitive development. Elements like artifacts, traditions, language, sciences, arts, and many others (Verenikina, 2003) do

affect the interaction that would take place between the children and people around them. So, in this case culture elements will facilitate the process of interaction and will help children to start knowing more about the culture they belong to.

Vygotsky is most known for the concept of Zone of Proximal Development (ZPD) (McLeod, 2020b). This concept shows the difference between what a child can do independently and what he/she can only do with the help of others. He believes that the ZPD is the area where students need critical instructions that will help them in developing skills and use them to reach higher mental state (Ibid). In this way, students will be able to gain more skills that will help them in achieving more goals on their own.

After discussing the work of Vygotsky, the sociocultural learning theory and the Zone of Proximal Development, the following section will discuss Bloom's Taxonomy.

Bloom's Taxonomy

This section is going to discuss the sixth learning theory which is Bloom's Taxonomy that was developed by Benjamin Bloom.

In 1956, Benjamin Bloom produced Bloom's Taxonomy theory. The work of Bloom was considered as a "measurement tool" that facilitates the work of setting objectives in a unique way. Bloom's Taxonomy helps in choosing the goals, objectives, activities, and assessments in an organized and harmonized way. In this case, all chosen objectives should be measurable. On that account, it will become easier for teachers to choose the best assessment tool to evaluate the students (Krathwohl, 2002). Throughout this theoretical framework of learning, Bloom has identified three stages of learning: cognitive, affective, and psychomotor. The cognitive domain is further divided into six levels of categories represented in pyramid in Figure 1.

Figure 1: Bloom's Taxonomy

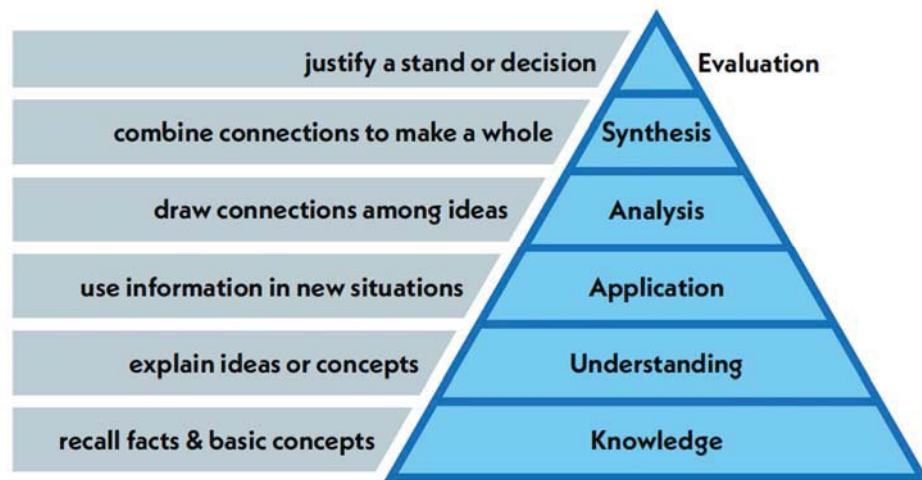


Figure1

(University of Arkansas, n.d.)

Through this pyramid, Bloom indicates that to reach learning on the higher levels the prerequisites of lower levels should be reached first (Krathwohl, 2002). This pyramid is divided in a way that starts with direct acquisition of knowledge, then moving upwards through more complicated tasks. The usage of theory in education is useful in several ways (Cullinane, 2009), i.e., used for organizing lessons or forming the assessment methods. For example, teachers use this theory to identify the objectives that they aim to reach, which helps in creating lesson plans. Furthermore, teachers will be guided in forming the assessments in a way that diverse levels of cognitive development will be assessed.

Along with the cognitive domain, there is the affective domain which is more related to the “feelings, motivation, attitudes, perceptions, and values” that students have towards what they were taught. This domain could be as simple as listening to others and being part of the discussions regarding what is being taught. This domain is also

divided into five categories showing the behaviors from least to most complex: receiving, responding, valuing, organization, and characterization (Ibid). Students should be able to value the knowledge that they have gained and be able to do something with it; otherwise, there is no benefit from being educated. Students should express their own thoughts as well regarding what is being taught.

In addition to that, there is the psychomotor domain which is related to physical actions and skills that are needed in certain subjects like in science while using the microscope or telescope. Bloom did not focus on this domain much, however, he has shed the light on its importance in the application of other domains, the cognitive and the affective that urged many researchers and philosophers to go further in research on this topic (Ibid). The psychomotor element is as important as other elements in the process of learning. This element helps students to demonstrate the knowledge that they have mastered and express their thoughts regarding the material they learned.

After discussing the theory of Benjamin Bloom and presenting his pyramid, the next section is going to tackle the last learning theory which is Social-emotional learning.

Social-emotional learning

Due to the changes happening in the world and the increased number of responsibilities, social-emotional learning is gaining more importance nowadays. This learning theory is based on the idea of learning how to use knowledge, skills, and attitudes to manage and interpret our feelings. It is about setting and reaching positive targets, showing empathy, maintaining, and forming positive and healthy relationships and producing liable choices (Hill, 2017). This is an essential issue to take into consideration while teaching students, because the emotional state of the students affects their academic performance in the classroom. In this way, students will be able to benefit from the knowledge they acquire at school to solve daily life issues and

manage their emotions.

Social-emotional learning tends to focus on teaching students the knowledge to gain the skills needed to do the following:

- To produce solutions for problems and trespass challenges
- To control their emotions
- To know how to deal with others

Many years ago, these skills were only gained through experiences and trials. But today, these skills are being taught in schools in a way or another to facilitate the social and career life for students (Go Guardian, n.d.). The students of today are the parents, employers, employees, and teachers of tomorrow. Therefore, it is critical for them to learn the essential things in life to succeed in their future and fill in the gaps that were present years ago.

Implementing this type of learning theory in the classroom requires collaboration among the teachers, administrators, students, and their parents. There is not one fixed way to implement it, however, several strategies could be done to get closer to the students, like encouragements, playing games, teaching kindness through context... (Ibid). Through these measures, students will be empowered to express their thoughts and learn how to deal with their concerns and obstacles.

Summary

After going through the seven theories, this section is going to present a summary of the basic parts of each theory along with criticism regarding these theories.

All these theories influence the program used in education, the curricula content, and lesson development. And since there is an alignment between the curriculum and the

assessment, that will be discussed later in this paper, the assessment as well will be influenced by these theories. Moreover, they will influence the classroom management approaches as well as the relation between the teacher and the students. All these issues are meant to enhance the students' learning outcomes and performance as much as possible.

Each one of these theories has a certain view regarding the process of education and specifically in the models of learning. First theory, behaviorism, focuses on the idea of stimulus; learning takes place through a response to a certain stimulus that could be a reward or a punishment. Therefore, the learning process is based on observation. Skinner's theory emphasizes the idea of "replicating" specific behaviors. However, using this learning theory would limit the learners' abilities, way of thinking, and creativity. While using this theory, teachers for example could ask the students to act in a specific way and if they do, they will be rewarded, and if not, they will be punished.

On the other hand, cognitive theory focuses on current schemas that are results of previous experience. The mental process of each person, in this case, which is determined scientifically, plays a key role in the learning process. This theory indicates that internal and external factors do affect the learning process in each student. Therefore, Piaget has mentioned that the environment plays an essential role as well in education and focuses on biological maturation that always affects the learning process. Piaget viewed the education process as child-centered and described the learners as "independent meaning-makers." Teachers in this case are viewed as facilitators and only guide the process of the learners. Teachers tend to ease the improvement of students from a level to a higher one.

Moreover, constructivism theory views the process of learning as an active process by which knowledge is being constructed step by step according to previously gained knowledge and experiences. And one of the best ways to experience things and gain knowledge is through contact and communication with things and people around. Emphasizing this issue, John Dewey focused on the idea that social activities and getting into contact with the real world are essential elements in the learning process. In this case, the teachers' role is to produce creative methods to get students engaged in learning and pave the way for them to construct knowledge.

Social learning on the other hand focuses on developing thinking skills through observation and socialization. Albert Bandura believes that this is a combination of cognitive factors and the environment around. Many issues, internal or external, could affect students' performance and process of learning. Social emotional learning in this case is also taken into consideration. Bandura believes that students tend to go through a process of four stages to gain knowledge: attention, retention, reproduction, and motivation.

Furthermore, sociocultural learning theory is another theory that focuses on the importance of social factors. Society and culture have an impact on the knowledge gained. Lev Vygotsky mentioned that children tend to start learning from more skilled people around them. He also differentiated between what children can do on their own and things they can do with the assistance of others, through the Zone of Proximal Development. Also in this theory, it is the teachers' duty to form communication and interaction bonds between them and the students and among the students to reach the knowledge needed.

Bloom's Taxonomy is a different learning theory that holds the form of a hierarchy

that classifies the learning targets based on the level of complexity. This theory contains three different domains: cognitive, affective, and psychomotor. The cognitive domain includes the hierarchy which is divided into the following six levels starting from the bottom: knowledge, comprehension, application, analysis, synthesis, and evaluation. Bloom has also shed light on the emotional part in education through the affective domain. The affective domain contains the emotions and how people deal with their feelings, values, attitudes... The psychomotor domain is related to the physical movement and flexibility and how much students can perform certain tasks that are needed to gain knowledge. This theory also helps teachers in preparing lesson plans and forming assessment tools based on the division of the hierarchy.

Finally, social-emotional learning is the theory that focuses on the emotions that do affect students' performance and learning process. This theory tends to help students and enriches them with tools and methods to deal with their emotions. Students will learn how to overcome obstacles and set positive targets to reach. They will also be able to deal with the difficulties that they are facing and overcome them to gain the knowledge needed.

After going through all these seven theories, each theory contains unique elements that inform the teaching and learning processes in a way or another. However, there is no one theory that is perfect to be followed while teaching since each theory has a gap or negative issue. For example, while implementing behaviorism learning theory, punishment might get more importance than needed which will lead to a negative impact on students' view regarding school. And for example, behaviorism theory does not focus on essential skills in education like problem-solving thinking or decision making. It tends to limit the thinking of students to only one correct answer.

It is true that the cognitive theory is based on biological maturation and on internal things that affect the way of thinking, however, it does not take into consideration other issues that have a positive or a negative influence on the learning process. In addition to that, the stages that were developed by Piaget might not fit to all children; capabilities vary from one to another, and some children might be suffering from a certain difficulty or might be gifted, therefore these stages will change in these cases. Furthermore, constructivism learning theory does not have a structure or set plan in which a teacher could follow. In this case, personalized lessons could be provided for students, which is difficult to achieve due to the various levels that could be available. This issue might result in keeping some students behind.

The social learning theory that focuses on observing and imitating tends to limit students' creativity and expressing their thoughts. Students only have one mission to accomplish in this case which is to grasp what others are doing to memorize it and imitate them. And at certain times, it is difficult to imitate others due to a specific difficulty or obstacle that a student could have. On the other side, there is the sociocultural learning theory that also focuses on communication and interaction between teachers and students. Yet, this issue tends to be a negative one for students who face problems with communication. Some students might be shy or suffer from any disability or difficulty in communication. Speaking of emotions in this case, sociocultural theory does not take into consideration the emotions of students at all; an issue that has a significant impact on education.

Bloom's Taxonomy has combined three essential elements in education which are the cognitive, affective, and psychomotor. Bloom has shed light on the importance of the psychomotor element in demonstrating knowledge students have gained. In addition to that, he has dedicated a section for the affective domain which is related to

emotions which forms an integral part of education. However, Bloom's has focused more on the cognitive domain which is developed into a hierarchy that divides the objectives into six levels. Development, forming, organization, and achieving objectives were the focus in this theory.

Social-emotional learning aims to provide students with tools to overcome problems and be able to deal with them. However, sometimes this issue might affect students' privacy. The problem a student might suffer from might be related to family problems or family situations that are considered a very private issue to talk about. Moreover, sometimes while implementing this theory, the focus is shifted from academic performance to emotional issues. This might affect what must be taught.

Each theory has a negative issue in one way or another, therefore, I strongly believe that a combination of the positive issues from each theory would form an effective theory. Forming a holistic theory and implementing it to achieve the needed goals will be an effective step to apply. Due to the changing world, different things should be taken into consideration nowadays to meet the needs of the 21st century. Making students active learners, focusing on social components, taking into consideration what students can do on their own and where they need help, and focusing on social emotional issues are all essential today in education. Social emotional theory is particularly important nowadays, especially after the spread of COVID-19, the virus that has affected our daily life and has a negative impact on all students.

After going through the learning theories that help in shaping the learning and teaching processes, the following section will present definition of essential terminologies in this paper.

Definition of Terminologies:

To understand the concept of assessment, there are three terminologies that should be clarified and defined. Thus, this section will provide definitions for the following axial terminologies as they relate to this study: competency, skills, and ability. The reason behind this section is to form common grounds to start from. In this way, the following sections and processes presented in this paper will be better controlled and understood.

Competency

The term “competency,” as related to the field of education, has several definitions. This section will present some definitions that are all related to the numerous benefits of competencies in education. In general, students tend to gain various and numerous information and skills while learning. Competencies are about the ability that students gain from these skills and information to use them in a certain situation not necessary in a school context. The competencies are divided into two dimensions that are the Anglo-Saxon and the Francophone (Meshtar, 2010).

Regarding the Anglo-Saxon, the concept of competencies is not new in this dimension, in fact, Hamilton (1973) has found that competencies have been a part of education way since the 1960s in the United States. Researchers from the United States have mentioned that competencies are based on a variety of goals that are related to all academic subjects with no exceptions. Even in the Anglo-Saxon dimension, researchers have different definitions for competency, yet most agree that competency is a sum of knowledge, information, and trends that are retrieved from tasks required in the workplace (Meshtar, 2010). So, competencies are a combination of everything gained from education but not academic.

Regarding the Francophone, the concept of competency is based on the overlaps of

goals reached from different subjects. At the end of the learning process, the final goal aims to harmonize the variety of knowledge and skills gained from the entire academic year (Paquay, 2012). In this dimension, there is a clear differentiation between competency and application, i.e., the difference between what we should gain (competency) and what we should do (application). And from this idea two other concepts are being dealt with in this dimension, which are Linguistic Sign and Cognitive Psychology (Meshtar, 2010).

In the same context, many researchers, philosophers, and educational organizations have expressed their point of view regarding the concept of competencies. For instance, Jean-Marie de Ketele (1996) believes that competencies are a combination of abilities that should be used in certain situations to solve a specific problem. He also believes that it is essential to differentiate between the competency itself and the way of applying it (Meshtar, 2010). The European Union is one of the unions that gives high importance to competencies in the field of education. In this context, competency is defined as “the sum of skills needed to live in a contemporary knowledge society.” Competency here that is gained from “language, literacy, numeracy, and information and communication technologies” develops the learning activities in all subjects. The European Union considers that by gaining these competencies, students will succeed in their academic performance and their personal development. The European Parliament and Council has pointed out the eight key competencies that should be gained after the learning process: “communication in the mother tongue; communication in foreign languages; competencies in mathematics, science and technology; digital competence; learning to learn; interpersonal, intercultural and social competences, and civic competence; entrepreneurship; and cultural expression” (International Bureau of Education, n.d.b).

Likewise, students of today are going to be active members of the future. Through education students will be equipped with competencies that will help them act based on the knowledge they have gained, the method of thinking they acquired, and the ability they have. Some of the competencies that are considered key ones are: critical thinking, problem solving, communication, managing information, creativity, innovation, and many others (Alberta Education, 2016). All these competencies will help society by producing effective and active members in society.

Competencies can be divided into two parts: professional competencies and transversal competencies. Professional competencies are related to the abilities one must have to accomplish a certain mission in a specific profession. Whereas transversal competencies are not related to a specific profession, yet they are transferable across several disciplines and contexts of life and work. These types of competencies are cross-curricular since they could be acquired through training and any subject at school. In fact, the key element in teaching transversal competencies is communication (Whittemore, n.d.). Students must experience, observe, and demonstrate these competencies through practice to be able to acquire them.

Skills

The term “skills” as related to the field of education, has been present since several years ago and has evolved with time. This section will present some definitions showing the importance of skills in the field of education. In general, when teaching students, they tend to learn issues other than what is written in their books; yet they get the chance to enrich their knowledge with a variety of skills. Therefore, students will have that unique ability (Future Learn, n.d.).

The Anglo-Saxon dimension has given importance to skills in education since many years ago. Gaining knowledge and skills through learning has been considered an

essential step in developing oneself. They also thought of the idea of enhancing the entire community that can be achieved by developing the members of the community via skills needed (Oposinet, n.d.). Such skills could include communication, collaboration, problem solving, teamwork, and any other skills that could help in facilitating the work of the community members and help in dealing with issues in the community.

The vision and mission of Francophone education is to be part of developing Francophone culture and societies, by empowering students with the skills that are required to be part of these societies and match the 21st century requirements.

Francophone education aims to help students gain specific skills to integrate smoothly in their surroundings (Alberta Learning, 2015).

In research conducted by the UNESCO entitled “Futures of Education: Learning to Become, how should what we learn, how we learn, and where we learn change in the future?”, Shaules (2021) mentioned that one of the purposes of education is to provide students with a variety of skills. These skills are divided into two types: academic skills that are related to sciences, math, reading, and technology; and the other types of skills that help students later in dealing with real-life challenges. In addition to that, enriching students with such skills makes them active members in society and will increase their curiosity. The challenge nowadays in this case is to introduce students to the 21st century skills and let them experience it to acquire it to be able to use it in their daily life (Arvanitis, Bauer, Covarrugias et al., 2021).

There are two types of skills that could be taught at school: the hard skills that are related to technical knowledge, and the soft skills that are related to personal factors that form the personality. Students should be encountered with a variety of hard skills

that are related to several fields because each job requires a bunch of different skills (Indeed Editorial Team, 2020). However, the soft skills should not be forgotten or neglected. Research has shown that around 85% of success in the workplace is related to the soft skills that people have acquired (Arvanitis, Bauer, Covarrugias et al., 2021).

Ability

This section is going to provide a definition of the term “ability” and how it affects the education being transferred to the students. In addition to that, this section will shed light on “ability grouping” and students with disabilities.

Ability in this case is related to the students themselves. Ability is the potential that a student has. Students must obtain new knowledge and skills and to be able to use them effectively (International Bureau of Education, n.d.a). Students’ ability identifies how many resources that they could need to achieve a certain task. It is about how much a student can gain and generate new knowledge in a constructivist fashion.

Students in the same classroom do not have the same ability, i.e., students’ abilities vary from one student to another. Some students have a lower ability than other students, therefore, they will need more time to grasp the information being taught and will need more time to accomplish tasks. Some students have a medium ability; these students need to be motivated and urged to put some effort into fulfilling tasks. And some students have a high ability which means they can easily grasp and utilize the knowledge effectively (Promethean, 2017). In all cases, it is the teacher’s duty to identify the students’ abilities to be able to pinpoint their needs and take them into consideration while explaining lessons.

As an attempt to meet the needs of all the students, some teachers or even schools

follow the idea of ability grouping in the classroom. Ability grouping is a way of conducting differentiated education in the classroom. In this case, teachers divide students into groups based on students' abilities. After grouping the students, the teachers will be able to modify the teaching process based on students' needs and abilities (Loveless, 2013). Despite the benefits that this method provides to the process of teaching, this idea might have a negative impact on students because they were classified as low performers for example.

Usually, students are expected to attend school and learn despite the level of ability that they have; but in certain cases, students suffer while learning. It does not mean that such students cannot and will not learn; but in fact, it means that they learn but differently. Approximately 2.3 million students around the world are diagnosed with one of the specific learning disabilities. Some students might have a disability because of a genetic disorder or might have a disability because of an incidence that happened to them. These disabilities could affect the way students analyze issues, see things, or interpret things. Some examples are dyslexia, dyscalculia, dysgraphia, oral, or written language disorder... (LDA, n.d.).

Curriculum

Before tackling the issue of assessments in education, curriculum designs followed around the world should be taken into consideration. The process of teaching students is a result of preparations and a set of objectives and goals that should be reached. The curriculum combines all elements that should be used to teach students at all levels such as the academic content, lessons, subjects, skills, competencies...

The Three Generations of Curricula around the world:

Curricula around the world vary from country to another. Each curriculum has a specific focus point. Each country has created its own curriculum based on the

country's vision and needs. Since students will be shaped based on the method used in teaching them, the curriculum will help in organizing the goals to form the expected generation. Three generations of curricula will be presented in this section: the content-based, outcome-based, and competency-based.

I- Content-based curriculum:

The first design tackled in this section is the content-based curriculum. This design of curriculum has become increasingly popular as a method of enhancing linguistic ability. The essential focus in this design is the "content." The term "content" in this case has been defined in diverse ways by several researchers. Crandall and Tucker (1994) described it as an "academic subject matter." Whereas, Genesee (1994) has mentioned that it is not necessary for the "content" to be academic; however, it can be referring to any theme, topic, language, or non-language subject that students are interested in. In addition to that, Met (1999) has mentioned that "...content in content-based programs represents material that is cognitively engaging and demanding for the learner and is material that extends beyond the target language or target culture." In fact, by using this design, students are learning the basics and developing linguistic ability while learning a specific subject that could be a fact in science or even a biography of their favorite pop star. The implementation of this design needs preparation and creativity. Educators should be able to choose topics that students are interested in and a variety of sources to deal with different perspectives on that topic. Then students work in teams to do their own research using the assigned sources and then share with the other students. Using this method enriches students with general knowledge in addition to the objectives and goals that should be reached. Students will be engaged in the learning process in an independent and motivating way (Peachey, n.d.).

However, this method is mostly used in learning languages. Sometimes students or even parents think that teaching is not taking place since they want more focus on exercises and practices of using correct grammar forms and a variety of vocabulary words. In addition to that, implementing it in the classroom might require more time for preparation because it will be difficult to find topics or subjects that interest most students in the classroom (Ibid). Efforts in this case are needed to create a lesson plan that includes the academic objectives intertwined in the content of another subject. Furthermore, this subject should match the interest of most students in the classroom.

This type of curriculum adopted in several countries like Taiwan and used in schools and universities. It is implemented in university levels not only in English language courses, but also in subject courses such as Economics, Business English, and Psychology. The aim of this implementation is to enhance linguistic skills in several fields, i.e., enhancing the speaking, reading, listening, and writing in a specific language in a certain field (Heather Tseng, 2015).

II- Outcome-based curriculum:

The second curriculum design tackled in this section is the outcome-based curriculum. This design is not a new one, it has been used since the Middle Ages in Europe and has been developed and still used nowadays (Spady, 1994). The focus in this design is on specific, clear, and measurable outcomes. Some countries tend to focus more on specific subjects such as math, languages, or sciences, whereas other countries tend to focus more on competencies. All these depend on the country's political process that has a profound impact on all sectors including education. In this case, the focus is on the outcomes and not on the "input" like the timeframe, resources needed... Therefore, the curriculum would include all outcomes that should be reached. When these outcomes are reached, students will be promoted to another grade or higher

level (K12 Academics, n.d.).

While identifying the outcomes, educators must mention what students should be able to do with the knowledge they receive, for example: explain steps of a specific process or just recall the steps (Spady, 1994). The outcomes should be mentioned in a hierarchical order, to demonstrate the sequence that should be followed to reach the end. In this way, it will be easier to set the learning objectives of each lesson plan and to form the assessments to reach effective data (QTII, n.d.). This would make a link to the theory of Bloom's Taxonomy that helps in identifying the outcomes and classifying them in a hierarchical order.

In outcome-based curriculum, the results are viewed at the "end" after the learning process. So, students should be given the opportunity to demonstrate what they have learned, and the assessment form should match the outcomes that are previously mentioned in the curriculum (Spady, 1994).

For instance, in Canada, in Saskatchewan Rivers Public School Division outcome-based curriculum is being used nowadays. As an attempt to help in matching the needs of the "quickly changing, highly interactive world," they decided to shift to another design of curriculum. In this case, the outcomes are set based on the worlds' needs. In addition to that, when students do not have the ability or struggle in reaching the goal, the teacher will keep on aiding and guiding them to fulfil the task. In addition to that, teachers and students tend to work together to achieve their goals. In fact, teachers are encouraged to always give specific feedback that will guide the students to the right path (paNow, 2016).

III- Competency-based curriculum:
Another design of curriculum that will be presented in this section is the competency-

based curriculum. This design is somehow a contemporary one that is being used to put the focus on the competencies that are needed in real-life (Juraschka, 2021). In this case, when abilities, knowledge, and skills are being identified based on the future career, competency-based curriculum will help in preparing these students for the workplace. Students will start acquiring these competencies at initial stages to master them in their future (Jasnani, 2021). Seeing that the focus here is on competencies, students should demonstrate what they learned via application. And the application in this case will be based on the competency type that is being taught (Juraschka, 2021). So, the process of forming this design of curriculum, is based on identifying the competencies that are important to teach; chunking them into themes; teaching the students these competencies through activities, and then assessing the students (Jasnani, 2021). All these steps and many others are needed to implement such curriculum in an effective way since competencies cannot be taught like academic issues and cannot be assessed easily in a test, for example.

Speaking of competency types, Juraschka (2021) mentioned that education must focus on measurable competencies that have a significant impact on acquiring life skills. These competencies include “communication, creative thinking, critical thinking, social responsibility, positive personal and cultural identity, and personal awareness and responsibility” (Ibid). In addition to that, students and parents should be aware of three things before the teaching process takes place: the issues that they should learn, how proficiency is identified, and the method that will be used for assessment (Jasnani, 2021).

This design is a student centered one that provides “personalized learning” to each student in the classroom; therefore, equity takes place as well by which each student receives education based on his/her own abilities and needs. In addition to that, it is

considered “personalized” since each student will be building on their previous knowledge. However, educators should carefully choose the assessing method since competencies are assessed through application; creative and meaningful assessments are needed (Juraschka, 2021).

The following chapter discusses the literature review related to assessments and types of assessing students’ performance, samples of assessing competencies and the effect of ERT in education.

Chapter Three: Assessment Overview and Emergency Remote Teaching

This chapter discusses the three generations of assessment that will be discussed in a separate section in this chapter: assessment by content, assessment by objectives, and assessment by competencies; revealing the strengths and weaknesses of each. In this context, it is assumed that assessments being as diagnostic, formative, and summative must be led by the nature of the curriculum as teaching by content, by objectives, by competencies or a combination of these.

Assessments:

This section discusses essential issues related to assessments. A definition of assessment will be provided by mentioning the cycle of assessment in addition to the three purposes of assessments in the field of education and the alignment between the curriculum being implemented in the school with the assessments that will be conducted. Moreover, this section will present the relation between assessments and the three generations of curricula that have been mentioned previously in the paper.

When speaking about assessments worldwide, there are three major branches of assessments that are present: international assessments, national assessments, and classroom assessments. Each branch aims to assess a specific issue for a certain purpose. Countries participate in international assessments, such as PISA, PIRLS, and TIMSS, to pinpoint the strength points and identify the weak points that are found in their educational system to produce the modifications needed. The national assessments are usually conducted at the end of the academic level depending on the educational system of a given country for streaming students to either academic paths or vocational ones based on achievement. The classroom assessments take place in the classroom to assess whether students have reached the learning outcomes that were meant to be reached (Lyman, 1998). The focus in this paper will be on classroom assessments that determine whether a student will move on to a higher

level or whether the student will continue the professional path towards higher education or vocational and technical education.

Classroom assessments consist of three types: diagnostic, formative, and summative assessments. Adding to them another type of assessment which is self-evaluation that forms a part of the formative assessment. Self-evaluation is being implemented in several countries such as in Finland and Singapore. This type of assessment helps students in gaining skills to evaluate their work and monitor their progress in education.

The main elements of assessments in general are:

- Inclusion: assessments should include all aspects of development, i.e.: cognitive, emotional and skills. In addition to that, assessment should include all levels of goals and objectives.
- Continuity: assessments should take place on a regular basis to be able to identify the strengths and weaknesses of the teaching and learning process. This way strengths could be strengthened even more, and weaknesses could be dealt with.
- Variety in assessment tools: a variety of assessment tools should be used according to the objectives that have been identified and according to the available capabilities.
- Alignment with the objectives: assessments should be chosen based on the objectives that were set according to the focus of the implemented curriculum.
- Good organization and accuracy: assessments should be accurate and well-organized to be effective.

- Economical: assessment tools should not cost much and at the same time reach the desired goal.

As an example, for the usage of assessment this section is going to present an overview of the educational system of Finland with the usage of assessments in it. In 2016 a curriculum reform was conducted in which several issues have been modified or changed in the previous curriculum. Schools, after this reform, were urged to consider the changes happening in the world and in the workplace. Therefore, changes were made on the learning level to enhance the contact between the teachers and students through “active involvement of pupils, meaningfulness, joy of learning, and school cultures.” Assessment in Finland is viewed as a tool that helps in enhancing the learning process. The Finnish National Agency for Education provides performance standards for assessment at the end of the sixth grade and the final assessment in the ninth grade. In addition to that, teachers tend to enrich students with the skills needed for peer-assessment and self-assessment. Moreover, students are taught how to benefit from the feedback given to them and how to give constructive feedback during self and peer assessment (Finnish National Board of Education, 2016). This reform was not conducted out of nowhere, yet, Finland has participated in several international assessments that helped them in identifying the weak points to work on them. Finland has been from the top-ranking countries in TIMSS, PIRLS, and PISA, and despite that, they were able to identify some weak points like the lack of joy while learning which affected students’ performance (Ministry of Education and Culture, 2012). That is why in the reform, educators have suggested the idea of boosting “the joy of learning.”

Assessments are not formed out of nowhere; however, they form an integral part of the curriculum being followed. Assessment is an essential part and the key

measurement facility in education. It is the tool used to gather qualitative and/or quantitative data to check whether goals and objectives of the curriculum have been reached or not (ResourcEd, n.d.). Marchese (1987) defined assessment as “the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development.” (Curb, n.d.). However, the aim of data retrieved from assessment is not limited to “improving students learning and development,” it could provide benefits on several levels in education. Assessments could also emphasize the surrounding environment, the school itself, teachers’ performance, or the entire educational system (Djoub, 2016). The process of assessing is not an easy task that could be implemented within a step and once at a time. However, it is a cycle that should be done step by step to fully benefit from it.

A- Cycle of assessment:

This section is going to present the cycle of assessment that should be followed to use the data retrieved in an efficient and effective way. Various tools and methods are used to assess students. Assessments are used to answer several questions regarding the learning and teaching processes. No one assessment method is perfect since there is no one method that could answer all questions (Mikre, n.d.). Questions like: did the students learn what was meant to be learned? Are the teachers choosing the best instruction methods? To what limit do the teaching methods match students’ need (University of Wisconsin-Whitewater, n.d.)? So, the process of assessing students is a cycle that shows how to assess students effectively in four distinct stages.

According to Missouri State (2021), there are four stages in the assessing cycle:

1- *Defining and clearly planning the learning outcomes* (Missouri State, 2021):

Before choosing the assessment tool and what will be done with the results, the teacher must set the objectives, learning outcomes, and the goals that are required to be reached at the end of the teaching process. To be able to assess students later, the teacher should identify the knowledge, skills, attitudes, abilities, and values that should be acquired by the students (Ibid). Most of the time these elements are retrieved from the content of the curriculum.

2- Choosing the best assessing tool and method (Ibid):

After identifying what needs to be assessed, the method of assessment will be easily identified. Not all assessments are tests; therefore, teachers should have several ways to assess the students' knowledge in a particular field or subject (The California State University, 2007).

3- Interpreting the data gathered from the assessments (Missouri State, 2021):

From the results gathered after assessing the students, the teacher can find out if the students have learned or not. It is particularly important to check if teaching is taking place and whether students are really grasping the information that teachers are transferring to them or not (University of Wisconsin-Whitewater, n.d.). Therefore, students should be given the right space and suitable tool to demonstrate the knowledge, skills, and ability that they have acquired, if they acquired any (Groepel, n.d.).

4- Making modifications and improvements (Missouri State, 2021):

If data were gathered and nothing changes after that, then it is useless to assess the students and waste time on this process (Ibid). After detecting where the students stand in the learning process, the teachers should make the modifications needed to

improve the teaching process that will improve the learning process as well for all students. The idea of improvement could be as big as improving the curriculum and the education system or related to daily routine such as lesson plan, teaching strategies, and meeting the students' needs (University of Wisconsin-Whitewater, n.d.).

This cycle tends to serve as a guideline for educators to know how to implement assessments in an effective way step by step. Once this cycle is followed correctly, it could be used no matter what the purpose of assessment is.

B- The three purposes of assessments:

This section provides a general overview of the three purposes of assessments. The purpose behind the assessment that is going to take place affects the method of forming and planning for the assessment and how the data is going to be used. The purposes behind the assessments in the classroom are divided into three purposes which are mentioned below in the table:

Table 1: The three purposes of assessments

Assessment for learning	Assessment as learning	Assessment of learning
<p>*Takes place during the teaching process.</p> <p>*By utilizing various tools and instructions, teachers will be able to gather information regarding the learning process.</p>	<p>*Takes place during the teaching process.</p> <p>*Based on self and peer assessment, which helps students to learn more about themselves.</p> <p>*It tends to increase the sense</p>	<p>*Takes place after the learning cycle, at the end of a unit, semester, or term.</p> <p>*Teachers use this type of assessment to provide judgements based on the students' performance.</p>

<p>*This way teachers will be able to choose the best teaching strategies and identify the following steps in the teaching process.</p> <p>*A method to provide direct and effective feedback to the students, which motivates students to work on the right track, leading to improvement.</p>	<p>of responsibility that leads to boosting growth and development among the students.</p> <p>*A student driven process that is guided by the teachers.</p> <p>*It urges students to explore the information that is related to curricular outcomes.</p> <p>*Students get the chance to monitor their own work and assess their performance.</p>	<p>*The result of this assessment provides an indication of whether the outcomes and standards were reached.</p> <p>*The results of such assessments tend to affect the students' future, education, and career.</p>
---	--	--

(Assessment of, for and as Learning, n.d.), (Education Standards Authority, n.d.) and (Saskatchewan Reads, 2010).

However, this is not the only factor that affects the method or design of the assessment. In fact, the major goal behind the curriculum being followed has a major impact and influence on the assessments.

C- Role of assessments in education reform:

When using a variety forms and types of assessments while teaching, valuable data will be retrieved. This data will help in identifying key issues and/or help in changing issues in the way students are being taught. Therefore, when utilizing assessment as an essential factor in the instructional process, the benefits of assessments will be limitless. This section is going to present how assessments could help in reforming education in the learning and teaching process and in reforming the curriculum.

I- Role of assessments in learning and teaching process:

Each student is unique; each student learns in a unique way. Each classroom is filled with various learning methods that teachers must meet to make sure that each student has reached the learning outcomes. Therefore, when applying assessments effectively, teachers will be able to know how the students learn (Groepl, n.d.). Furthermore, while paying attention to the learning styles, teachers will be able as well to shed light on any learning difficulty students are suffering from. When doing so, the teacher will be able to facilitate the learning process and try to meet the needs of all students (Mikre, n.d.).

Moreover, assessments help teachers in getting to know their students more. From the results retrieved, teachers will be able to find out which student is struggling and where (Martinez, 2014). Thus, the results can pinpoint the strengths and weaknesses of each student; in this way gaps in the learning and teaching processes will be identified (Khattari et al., 1995). Through this step, and based on the information gathered, teachers will be able to build upon it to plan for future lessons and methods, to fill in the gaps identified (Martinez, 2014). Identifying the weaknesses and strengths is not enough unless further steps are taken to make the changes and track the records to ensure that effective changes and improvements have taken place. Furthermore, by assessing students regularly, results will be recorded to make sure that improvement is taking place and that students are on the right track (Parameswaran, 2019).

Students should not only receive knowledge, but also show what they know and what they can do with the gained knowledge. Therefore, assessments could be the tool used to give students the needed space to demonstrate knowledge, skills, abilities, attitudes, and values. Students will be able to demonstrate their knowledge through various

tools that are used as assessments (Groepl, n.d.). Therefore, by using a variety of tools and methods to assess students, students will have plenty of space to show what they have grasped during the teaching method.

One of the targets of assessing students is to make improvements in the field of education; and one of the ways to do so is to enhance the teaching process that will lead to better student performance (Amro, 2012). After knowing the students more, teachers will create an overview regarding students in the classroom which will help in planning improvements in teaching process. Now that the teacher has identified the needs of the students and knows where they are struggling, new teaching strategies, and methods should be used to match the needs (Guskey, 2003).

By assessing students, teachers will be able to create lesson plans based on the knowledge that students have gained and the issues that students missed. However, it is not only related to the students; teachers are also being assessed in this case to check whether they can form lesson plans that are meant to facilitate the learning process for the students (STU Online, 2018).

II- Role of assessments in curricula reform:

Many countries around the world give importance to the process of reforming and evaluating the curriculum to make sure that it is relevant to the students. Countries tend to reform the curriculum due to challenges being faced and changes happening in our world. And since our world is changing, the requirements, objectives, and goals are changing as well; that is why we cannot teach students of today what was taught to students years ago. Sometimes the targets of the current curriculum are not being achieved, therefore, changes must take place (Gouedard et Pont, 2020). In this case, assessments provide qualitative data and beneficial information to identify the parts that should be modified and enhanced (IPL, n.d.). Changes in the curriculum could be

related to the teaching methods used, pedagogies, content, objectives, lessons, and other parts that are all used to enhance the teaching process and students' performance. They can also relate to the performance of teachers and the type of governance the school adopts.

After making the changes and modifications that are meant to be done, again assessments play a key role in monitoring the implementation of the new curriculum (Ried, 2011). However, the assessments at this stage should match the updated content and objectives of the new curriculum. Then assessments' results will be used to make sure that changes and modifications are being implemented in the expected way and that improvements have taken place. In addition to that and based on these results, educators and educational leaders might decide on further modifications or be satisfied by the results reached. (Gouedard et Pont, 2020).

Yet, sometimes countries pay attention as well to the international tests such as PISA, TIMSS, SAT, IELTS and many others that are used either to pave the way for further education for students or for ranking the countries based on the results. For this reason, countries might decide to eliminate some of the content or add to the current content to match the requirements of such tests. Consequently, the curriculum will focus on subjects or themes that are most needed to pass the tests with a good ranking (Ibid) and (Klenowski et Carter, 2016).

Speaking of these international tests, ministries of education all around the world rely on the results of TIMSS and PIRLS, for example, for educational improvements. That is why much research is done to analyze the results to make the needed enhancements (Mullis et Martin, 2012). According to Chestnut Hill (2020), two thirds of countries participating in TIMSS have changed, modified, or updated their curriculum to match

the subjects and topics that are tackled in TIMSS. In this regard, more importance and more time were dedicated to Sciences and Math subjects. In addition to that, educators started to concentrate more on certain skills while teaching such as problem solving and other 21st century skills that are increasingly required these days (Hayward, 2020). Retrieved results from such assessments could help as well low performing countries. Such countries could benefit from the experiences of high performing countries to improve their performance. In addition to that, high performing countries could identify the weak points in low performing countries and try as much as they can to avoid it.

Alignment between curriculum and assessment:

This section is going to present the assessments that are being used based on the curriculum design that is being implemented. Three assessments will be presented in this section based on the three generations of curricula that were mentioned previously in this paper. Assessments are not formed or done in isolation; for an assessment to be effective, it should be related to the curriculum. Despite the method chosen for assessing, what is being taught and how it is being taught should be taken into consideration (Groep1, n.d.). In other words, what the curriculum focuses on should be the target of assessments, i.e., if the curriculum focuses on the outcomes, then the assessments should be used to make sure that the outcomes have been reached.

The three types of assessments

Therefore, in section three, assessments will be discussed and are content-based assessments, outcomes-based assessments, and the competency-based assessments.

I- Content-based assessments:

Since content-based curriculum focuses on content and language, then the content-based assessment will focus on the same issues. This type of assessment assesses two

major elements which are the knowledge related to the content taught and the linguistic development in the language used. Students must be able to use their knowledge and higher order thinking to solve content-based problems. For example, this type of assessment was used in India to assess students in the MA level. In this way, students were assessed based on the content knowledge they have gained and the level of language proficiency in English. They had a month to work on a specific project in which they had to read, gather data, and write their own writing regarding a specific issue. Then they will be assessed on the information presented and the way of using the language while writing (Mukhoodyay, 2011).

The most critical issue regarding the assessment tool being used is to make sure that it could pave the way to gather efficient data. When being assessed using the content-based assessment, students will have the needed space to be flexible to use the knowledge they gained using proper vocabulary and grammar. Whereas they might feel confused while preparing for assessment, whether to focus on the content or the language itself. In addition to that, a combination of skills is required to perform well in the assessment; this point could be a positive one for students who already have these skills; however, it will be a negative one for the ones who lack these skills. Students will have to combine issues from different topics, summarizing, and retrieving the main ideas and might require teamwork and collaboration skills. Furthermore, some students might not have the ability to focus on two different elements and their performance might be affected because of that (Rhalmi, 2009).

II- Outcome-based assessment:

Assessments in this case should be well structured to provide effective data regarding the specific outcomes that were previously mentioned in the curriculum. Knowing that these outcomes have been set from least to most complex and are expected to be

reached. The process of outcome-based assessment starts by clearly describing what students should be able to do after learning. Then form the assessment structure that will serve as evidence that students have grasped that outcome. Since the target is to reach that goal, teachers are encouraged in this case to always provide feedback to students during the process of teaching to keep students on the right track and reach the final goal (James, 2019). Several forms of assessments could be used in this case, for instance, Farook et al. (2006) have revealed that two methods could be used for outcomes-based assessments: “the standard-referenced assessment and student portfolios.” Yet the most critical issue is that issues asked in the assessment should go along with the outcomes previously mentioned in the curriculum (Ibid).

The assessment process does not end here; grading should take place. In outcomes-based grading is different than the traditional grading system. Grades in this case are calculated based on outcomes. Points will be divided based on outcomes achieved. For example, outcome 1 could be 5% whereas outcome 2 is 10% out of the total grade (James, 2019).

Despite the tool that will be used to assess students, the focus will be on the outcomes of the curriculum. This focus will have several impacts on the learning and teaching process. For instance, students will know what is required from them to do, thus they will learn more accurately and put their efforts in the needed place. A step that will lead to developments and improvements in students’ level. But some students have a certain difficulty or disability that limits their performance and ability; therefore, not all students will be able to perform well in such assessments. Since outcomes are identified and teachers keep on monitoring students’ work through formative assessments, less weaknesses and deficient performance would be detected. However, this type could limit the space a teacher has and will limit what students could gain

from the entire process. Students will be studying just to reach that outcome in the assessment, rather than studying for development and improvement. This type of assessment is specialized with the grading system that is transparent and not biased. It also facilitates the process of teachers to identify which outcomes have been reached and where the difficulties that students are facing are (Ibid) (Farook et al., 2006).

III- Competency-based assessment:

Assessments in general have several forms and designs, yet not all serve all curricula designs. Competency-based curriculum requires creative and personalized methods to conduct effective assessments and prove the level of mastery in the targeted subject. Juraschka (2021), believes that there are three types of assessments that could serve the needs of the competency-based curriculum, which are:

- Formative assessment: which paves the way for teachers to pinpoint the needs of students and modify the coming lessons based on that.
- Authentic assessment: encouraging students to use their knowledge in real world circumstances. In this way, students will be assessed regarding the skills that are needed in the future.
- Digital assessment: technology here is used as well in classroom as an assessment tool that makes the process easier and more creative (Ibid).

In addition to these types of assessments, many philosophers and educators add to them the summative and self-assessment methods that could also serve the requirements of the competency-based curriculum (Jasnani, 2021). While assessing students who are studying based on the competency-based curriculum, assessments should take place in a continuous process. Providing students with effective feedback at the right time paves the way to reduce inequalities and weak performing students. In fact, assessment tools related to competency-based are various and should be

chosen based on the competencies that are being taught (Clotida, 2021). For example, the teacher could implement assessments as “interviews, case studies, assessment center, questionnaires, tests...” and monitor how students could behave.

By applying this type of assessment, students will have the ability to experience how things really happen in the real world or in the workplace. Students will be able to evaluate their own performance and would receive feedback from the teachers for enhancement. What is special about this type of assessment is that usually students who do not perform well will receive feedback, learn from their mistakes, and get the chance to be assessed another time (Fedena, 2019).

In addition to that, students will be able to reflect on their work along with the feedback given to them; this will motivate students to work more and will urge them to continuously progress. However, unmotivated students might delay their efforts which will lead to procrastination. In this method of teaching time is not a major thing to take into consideration, each student has the chance to learn based on their own pace. Yet this issue might have a negative impact on unmotivated students and on students who do not fit this style of assessments (Brouse, 2020).

21st Century Competencies that are being assessed and how?

One branch of the competencies that is essential nowadays in all fields and especially in the field of education is 21st century competencies. Everything around us is changing; therefore, to catch up with the changes, 21st century competencies are needed. This section is going to present the 21st century competencies, how they are important to be integrated in education and how to assess them.

According to Andreas Schleicher from OECD, in the past, education was related to teaching the students contemporary issues; however due to the changing mysterious

world, students should be enriched with 21st century competencies nowadays. These competencies would help the students to know themselves more, get engaged in the process of learning and socialize with each other.

As mentioned in the Ministry of Education in Singapore and Australia, competencies could be divided into the following: cognitive, emotional, social, and technological. Underneath these divisions there are several competencies that are needed increasingly during the 21st century.

An essential branch in the 21st century competencies is Emotional Intelligence Competency. It is a combination of several abilities and competencies that aid students in controlling their feelings, judge the feelings of others, and influence others' opinions. This type of competency enriches students with great productivity and high performance. Another competency that is related to emotional intelligence is Social Emotional Learning (SEL) which is about using and enhancing social and emotional skills. It has significant importance in the field of education since it facilitates confronting challenges. And it has gained more importance after the spread of COVID-19 that has led to many changes in the world and led to the creation of The Core Districts in California. The Core focuses on four-social emotional competencies: "growth mindset, self-efficacy, self-management, and social awareness."

Critical thinking competency is the ability that one would acquire to analyze the capabilities and behaviors to be able to address a certain problem; and to interpret factors controlling it via analyzing evidence that is found to reach a suitable solution. This competency comes along with other competencies such as the problem-solving competency that is about identifying problems, learning various methods to help in solving problems, providing several solutions, evaluating the solutions, and the

execution of these solutions.

Another branch is the social competencies that combine a variety of competencies that are important in the communication process among people. In this way the person will be capable of standing out through ideas being proposed in an appropriate way and content. In this case, cooperation and participation competencies are essential elements in teamwork despite the differences among the team members. Teamwork is becoming increasingly needed among the essential things in life. Working in teams requires competencies as well to reach the common goal.

Technology has invaded our world, and students of today should be enriched with Modern Technology Competency since it is a necessity. Nowadays to be successful, it is not enough at all just to know how to read and write; yet digital literacy is essential as well. Along with digital literacy, creativity is important due to the various changes taking place in the world because of the inventions and creations (Krachman, et al., 2016).

After going through a sample of the current needed competencies, the following section is going to present samples on teaching methods and assessment tools that could help in teaching and assessing competencies.

How to teach and assess competencies

This section is going to present teaching methods that could be used to boost and enhance the learning process of competencies among students. And since the teaching method affects the assessment method and tool, assessment methods that could help in assessing competencies will also be provided in this section.

Teaching methods

This section is going to present five teaching methods that aim to enhance students'

competencies. Students, therefore, should learn and experience how to use and apply knowledge, skills, and competencies gained during learning. Table 2, presents the teaching methods that can support developing competencies along with activity samples with the competencies that are boosted:

Table 2: Teaching methods for competencies

Teaching method	Discussion	Activity samples	Competencies that will be boosted
Authentic learning	<p>It is about paving the way for students to “explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the learner” (Educators Insights, Teaching Strategies, 2021).</p> <p>This method of teaching tends to relate education to real life issues.</p> <p>It is a student-led method of teaching that aims to enrich students with</p>	<p>Ask students to run a lemonade stand.</p> <p>Use open-ended questions.</p>	<p>Problem-solving</p> <p>Thinking deeply</p> <p>High order thinking</p>

	essential skills.		
Inquiry based	<p>Students in this method play the role of retrieving the needed information through exploring, posing questions, and sharing ideas (Team XQ, 2020).</p> <p>Students will be able to construct knowledge through experiences, explorations, and interactions.</p>	<p>Small-group discussions.</p> <p>Students asking questions regarding the topic.</p> <p>Observation of information through certain references.</p>	<p>Critical thinking</p> <p>Communication skills</p> <p>Cognitive skills</p> <p>Curiosity</p> <p>Teamwork</p>
Problem-based	<p>This method uses real-world problems to teach students the concepts that they should learn (The Hun School of Princeton, 2020).</p> <p>In this way, by learning the subject content and the facts, students will be dealing with a real-world problem to solve.</p>	<p>While teaching about recycling, ask students to give solutions for the excess of waste they have in their village.</p> <p>While learning about energy, ask students to find solutions regarding the shortage of electricity people are having in Lebanon.</p>	<p>Problem-solving</p> <p>Critical thinking</p> <p>Collaboration</p> <p>Teamwork</p> <p>Lifelong learning</p> <p>Creativity</p>

Project-based	<p>This method is a student-centered method that provides the space for students to work for an extended time on a specific issue or problem (Unified Classroom, 2021).</p> <p>The problem or issue that students will be working on, will be related to the real-world. Students will be introduced to real-world issues and be able to deal with them.</p>	<p>While learning about animal habitats, students will visit the zoo and get the chance to interview zoologists and do the research needed to create their own animals' habitat plans.</p> <p>Plan for a garden with specific requirements and objectives.</p>	<p>21st century skills</p> <p>Inquiry</p> <p>Reflection</p> <p>Situation analysis</p> <p>Creativity and innovation</p> <p>Personal growth</p>
Flipped learning	<p>This method focuses on the idea of flipping the traditional teaching method. Students in this case get to go through the material and documents related to the subject matter before learning it at school. In the classroom, they will be using all the</p>	<p>Assigning a variety of material for students to read and videos to watch about creating a circuit, then in the classroom the students will have all the material needed to create the circuit.</p>	<p>Leadership</p> <p>Public speaking</p>

	information they went through to do the activities needed (Graziano, n.d.).		
--	---	--	--

After going through the samples that could help in teaching the competencies to students in the classroom, assessments should be tackled as well. Assessments should match the requirements of competencies to be assessed. Therefore, the following section is going to present assessment samples.

Assessment samples

This section explores three assessment tools that could serve as assessment tools to assess competencies. Teachers in this case must observe how students can utilize and apply these competencies. No matter what assessment method or tool is being used to assess competencies, yet assessments should take place on a regular basis to monitor how did it affect the students’ performance.

The most used assessment tool is the test. It could serve as one of the tools to assess competencies, however, the competencies that could be assessed using this tool are limited. Therefore, alternative assessment tools and creative tools are needed to assess as much as competencies, skills, knowledge, and abilities as possible, Table 3, presents the three assessment methods with assessment samples and the competencies that will be assessed.

Table 3: Assessment tools for assessing competencies

Assessment tool	Discussion	Assessment Sample	Competencies assessed
-----------------	------------	-------------------	-----------------------

Robotics	<p>The idea of robotics is starting to increasingly integrate in education. Using it as a teaching method or assessment method. It provides a variety of skills and competencies. It aims to put hands-on activities and shift some abstract ideas to concrete ones (Mautushi, 2021). It is an innovative way to assess students regarding the content of a certain subject in addition to skills and competencies. It is an entertaining method that boosts several skills such as socializing, communication, problem-solving and many others.</p>	<p>Using robotics to assess Physics concepts.</p> <p>Using robotics to assess English language.</p>	<p>Fine motor skills</p> <p>Creativity</p> <p>Teamwork</p> <p>Problem-solving</p> <p>Management skills</p> <p>21st century skills</p> <p>Technology literacy</p> <p>Social skills</p>
Alternative assessments	<p>Any method or measurement tool that paves the way to students to demonstrate their knowledge and accomplish</p>	<p>Creating a portfolio or digital portfolio</p> <p>Creating diorama</p>	<p>Creativity</p> <p>Innovation</p> <p>Leadership</p>

	<p>required tasks (Form Plus, 2021). It provides tools different from the traditional tool, tests, to assess students. At the same time, using this method to assess students helps in meeting the needs and limited abilities of specific students.</p>	<p>Doing presentations</p> <p>Take home-assessments</p> <p>Open-book assessments</p> <p>Mind maps</p> <p>Reports</p> <p>Interviews</p>	<p>Management skills</p> <p>Cognitive skills</p> <p>Oral and written communication skills</p>
Authentic assessments	<p>Authentic assessments are assessments that are related to the real-world. Teachers in this case tend to assess how well students are performing in real-life situations (Indiana University Bloomington, n.d.); how well students can use the knowledge and skills gained effectively.</p>	<p>Conducting an experiment.</p> <p>Create a business company for a specific objective.</p> <p>A role play for a history event.</p>	<p>Creativity</p> <p>Cognitive skills</p> <p>Personal growth</p> <p>21st century skills</p>

Assessments in different countries:

This section is going to present assessments methods used in several countries derived from three categories of countries (high, medium, and low) that have participated in PISA 2018. The countries chosen for this section were chosen randomly and are: Singapore, Australia, and Thailand. The assessments that will be tackled will focus on

the methods being used in these countries to assess transversal competencies that are being taught at schools.

A- In Singapore:

Singapore is one of the top-ranking countries in International Assessments. In 2018, Singapore has ranked the second in PISA. The education system in Singapore is divided into four levels: preschool, primary, secondary, and post-secondary. Students at these levels were assessed regularly at school and through national exams; they were ranked based on the grades that they have achieved. However, recently, the Ministry of Education Singapore has made a shift from the focus on assessing students and ranking them, to the focus on enhancing the learning development of students. In the primary level for example, the curriculum followed is based on three major elements: subject-based learning, knowledge skills, and character development (Ministry of Education Singapore, n.d.). So, students are learning what should be learned in each subject such as mathematics, languages, and music, to mention but a few along with knowledge and skills that are taught through the subjects and projects. In addition to that, character development is given highly importance that is achieved through activities and interaction with each other.

The Ministry of Education believes that due to the rapid changes occurring in the world foremost among which is “technological advancements,” students in Singapore should be well equipped and well prepared to face all these changes. Therefore, along with the subjects being taught through the curriculum, the Ministry has set the 21st century competencies and the social-emotional competencies that should be taught as well. The core values listed are respect, responsibility, resilience, integrity, care, and harmony. Along with the social-emotional competencies that include self-awareness, self-management, responsible decision-making, social awareness, and relationship

management (Ministry of Education Singapore, 2021). All these competencies are important in shaping students' attitudes in their own society and of course in their academic performance.

When assessing students, it is essential as well to consider competencies and skills since they are forming a part of the curriculum. Therefore, teachers must make sure that students are learning them. Competencies and skills in Singapore are being assessed in the context of other subjects. Teamwork will be monitored for collaboration and communication, portfolios for creativity, self-assessments, rubrics, and many other tools are used to reach effective results of assessments (Ministry of Education, Singapore, n.d.). Using creative and innovative assessment tools would help teachers in making sure that students are performing well academically and reaching goals regarding the needed competencies, skills, and knowledge.

B- In Australia:

Australia tends to participate in international assessments and is one of the middle ranking countries in PISA. The educational system in Australia is divided into four levels: primary school, secondary school, senior secondary school, and tertiary education. Despite the level being tackled, students are being assessed frequently. The Australian National Curriculum does not only focus on subject matter, but also pays attention on a variety of skills and competencies that are considered major ones. The educational system in Australia aims to provide students with the needed education and skills to be effective in the workplace and active in the society. Therefore, the Australian Curriculum includes the following:

- “Eight key learning areas—English, Mathematics, Science, Humanities and Social Sciences, Health and Physical Education, Languages, Technologies, and the Arts,”

- “Seven general capabilities—literacy, numeracy, information and communication technology capability, critical and creative thinking, personal and social capability, intercultural understanding, and ethical understanding,”
- “Three cross-curriculum priorities—sustainability, Asia and Australia's engagement with Asia, and Aboriginal and Torres Strait Islander histories and cultures.” (Australian Government, Department of Education, Skills and Employment, n.d.)

All previously mentioned skills and competencies are being taught to students through the context of certain subject matter. Students learn how to use specific skills and competencies through the activities that teachers create to apply in the classroom. For example, to enhance the critical thinking among the students, teachers could ask students to analyze specific issues and then explain it to their classmates.

When it comes to assessments, students are being assessed in the classroom regularly to make sure that goals are being reached and that students are acquiring the skills and competencies bit by bit. In addition to that, some students are chosen to participate in domestic assessments such as NAPLAN (National Assessment Program – Literacy and Numeracy), NAP-CC (NAP – Civics and Citizenship) and others; and in international assessments such as PISA and TIMSS. Schools participate in such assessments to measure students’ performance across the country and internationally, to identify the modifications needed, and to check Australia’s performance regarding to major learning areas (Ibid).

C- In Thailand:

Another country that participates in international assessments is Thailand. Many efforts have been put to create a well-developed educational system, yet Thailand has been one of the poor performing countries in PISA. Formal education in Thailand is

divided into two levels the basic and higher education. The basic education is divided into three levels: primary education, lower secondary, and the upper secondary education (Ministry of Education Thailand, 2017). Basic education in Thailand holds the following major subjects in the National Curriculum which are “Thai language, mathematics, science, social studies, religion and culture, health and physical education, arts, careers and technology, and foreign languages.” In addition to these subjects, teaching other skills is important as well. Teaching skills such as thinking skills and moral development should be part of the learning and teaching processes. As an attempt in improving the educational system in Thailand, the Ministry of education has implemented a transformation in education in which moral and ethical values are enhanced in the context of other subjects. One of the measures taken was to train teachers on using a variety of teaching methods that help in developing enriching skills for students (Ministry of Education, 2008). For example, teachers could be trained on using authentic learning methods, problem-based or project-based methods to boost cognitive skills and others in all students in the classroom.

Unfortunately, years ago the educational system in Thailand did not encourage creativity and individuality among students. In fact, changes were needed to be done in to enhance specific skills among students which are: “good physical and mental health; intellect; knowledge; morality; integrity, and the desire of the individual to live in harmony with other people.” The first step taken to start these changes is to shift from teacher-centered lectures to student-centered lectures (Saowapon et al., n.d.). By shifting to student-centered lectures, teachers will start using methods and techniques that aim to boost the usage of competencies, skills, and knowledge.

Therefore, students will be enriched with a variety of skills, knowledge, attitudes, and values to acquire competencies that will help them later in their future and their work.

The competencies that are aimed to be reached are divided into five parts: self-management, team and collaboration, communication, active citizenship, and higher order thinking (Sangbuaphuen, 2020).

The idea is not only to change the teaching methods, but also about assessing students by using a suitable method to match the new teaching methods. Project-based assessments were used to assess competencies. Teachers in this case will be the facilitator in the learning process and monitor students to make sure that they are on the right track. This assessment method will pave the way for a cycle that is divided into steps: a) planning and setting the goals for their work, b) creating and choosing the best technique to present their work, c) reflecting on their work and evaluating it, and finally d) publishing and presenting their work. In this case teachers will be there monitoring the entire process to make sure students have acquired certain competencies such as communication and teamwork and will evaluate the final work for other competencies like problem-solving skills (Soparat et al., 2015).

D- In Lebanon:

Since this research will focus on findings of education in Lebanon, this section is going to present an overview on the Lebanese education system and the issue of integrating competencies to the national curriculum.

Traditional educational methods no longer match the needs of the market today as UNESCO (2018) describes it there is a “mismatch” between what students are currently learning at schools and what is required from them in the workplace. The job market nowadays has added to the technical skills a list of life skills and competencies that are of highly importance. This issue urged the UNESCO in Lebanon to work on the following parts: “promotion of Life and Work Skills for youth; entrepreneurship education; and strengthening public-private partnerships in

Lebanon.” Two major pillars are needed to reach the basic skills: the principal learning tools (i.e., numeracy, literacy, and problem-solving), and major learning content (i.e., skills, values, knowledge, and attitude). By teaching these skills, an increase will be detected in youth employment and in their productivity, which will lead to an enhancement in the economic situation in the country (WARD, 2018).

According to CRDP, a shift must take place in education from focusing on the amount of information and knowledge memorized to the application of them. Students must be independent in the learning process and be ready for daily life challenges. Usually, these skills are learned since childhood, yet they should be developed through education in schools. By teaching the students a variety of competencies, they will be taught how to act in certain situations in real life. In addition to that, they help in building and developing students cognitively, emotionally, and socially.

Competencies taught are divided among the subjects to be delivered to students. For example, in language, communication skills whether orally or written can be integrated into learning.

While doing so, there are four things to be taken into consideration:

- Difference in students’ capabilities
- Finding appropriate solutions based on the difficulties
- Detecting the learning difficulties
- Giving students opportunities for learning

It is essential to assess whether the competencies are acquired or not. Therefore, teachers should assess specific behaviors through observation. Teachers should create specific situations from real-life and monitor how students would behave in this case.

Moreover, the grading system here should not only include a number representing

how good or how bad the student performed. However, teachers should provide remarks and feedback to students for enhancements (Ghazaleh, 2018).

Despite the efforts put in this field and the current situation in the educational field, Lebanon has been performing poorly in PISA. In fact, Lebanon has been participating in PISA since 2015, however it has been performing poorly. Students in Lebanon have scored lower than the average among OECD countries. One of the issues that affected the performance is the socio-economic situation of the students. In fact, students who come from a better socio-economic situation have scored better than others with 103 points in reading. In addition to that, 2% of advantaged students have ranked from the top performers in reading as well (Avvisati et al., 2018). Another factor that affected the scores is the “school profile and location.” Students from private schools have reached higher scores than students from public schools. Furthermore, students from schools located in rural areas have outperformed students who come from schools located in urban areas. (World Bank Group Education, 2018).

Education now in Lebanon

Since education is used as a tool to redress the economic problems in the country, some modifications were meant to happen in education. This section is going to present an overview of the current situation in Lebanon in addition to the modifications that were meant to happen in assessments and the issue of assessing competencies.

The Lebanese Educational Context

Lebanon is currently passing through the “world’s most humanitarian crises in decades.” Internal and external problems have been affecting the situation in Lebanon on all levels like economic, political, and education. Starting with the political

disruptions that Lebanon has been passing through since several years and had a negative impact on all sectors. Moreover, Lebanon has become a host land for millions of Syrian and Palestinian refugees which has added a burden on the Lebanese community. In addition to that, the spread of COVID-19, which forced the nations to implement total lockdown for a certain period, has deteriorated the economy. Adding to the list, the explosion of Beirut's port that happened more than a year ago has made everything worse. All these have negatively affected the economic situation of thousands of families and even lead to the emigration of hundreds or even thousands of people. As an attempt to fix the situation or at least minimize the damage that has happened, students should be well educated and equipped with the needed skills and competencies to get along with what is happening and use their knowledge to enhance the future. That is why the Ministry of Education has announced the Decision 374/M/2019 that has to do with Technical and Vocational Education and Training. "This decree approved descriptors for the 6 levels under the headings knowledge, skills, competencies, life skills, digital skills and languages" that are needed nowadays in the market and that will increase the possibility of employment (European Training Foundation, 2021).

In this context, the MEHE has already announced several recommendations for teachers to implement when assessing the presence of competencies among the students. Many educators, teachers and, instructors have respected and kept in mind the standards set by the Ministry for assessing students, especially through the national exams at the end of grade nine and at the end of grade twelve. However, the assessment method that is referred to in the Ministry of Education is the written test. Unfortunately, most of the assessments focused on how much students have memorized rather than interpreting and analyzing. CRDP has provided a list of

recommendations to be followed for assessing competencies in several subjects.

No matter what changes take place, all actions should abide by the content of the National Curriculum. The major changes that should take place are the type of questions being asked. While setting the questions, the questions asked should match what was taught in the classroom and how it was taught. An alignment should take place between the questions and the teaching method that was used; otherwise, the results retrieved will not be reliable. Questions should be clear, specific, straight to the point, and contain measurable verbs. Instead of asking students to define a concept or recall certain rules students should be asked to choose the best definition or to utilize that concept in a specific situation. So, questions chosen should require certain competencies in addition to the academic objective that should be met. In addition to that, questions should be asked in a way that will urge students to use a combination of skills, competencies, and knowledge to answer. Several forms of questions could be used such as multiple-choice questions, true/false and correct the error, matching...

When changes take place in the assessment methods, grading will change as well. Usually, students used to gain grades based on the information that they were able to remember during the test. However, in this case the grades should be divided among the number of ideas that will be presented in the answer (CRDP, n.d.). In this way students will be able as well to identify what are the issues that they know and what they do not know. Thus, students will be able to expand their answer and present everything they know about what is being asked.

Curriculum used in Lebanon

Lebanon currently uses the curriculum that was created in 1997 and has not been officially updated since then. This curriculum contains several problems and gaps

such as the following:

- Only lectures used as teaching methods,
- Level of interaction between students and their teachers is based on superiority,
- Lack of technology, knowing that there are schools in Lebanon do not even have computers on campus,
- Mismatch between what students are learning in school and what is required from them in the workplace,
- Lack of online teaching alternatives since education is limited to face-to-face lecture, and
- Unfair assessment of the students' skills since assessments are based on paper and pencil tests which focus on memorization. In addition to that, some teachers focus only on assessing skills that are assessed in the Lebanese Official Examinations.

Efforts are being put together to create a new curriculum, yet there are political disputes over the characteristics of the learner in the suggested curriculum. In addition to that, the fifth edition of the curriculum framework is still a point of political debate as well.

Education around the world

This section is going to tackle how education takes place around the world through face-to-face education. Most educational institutions around the world have been implementing face-to-face education at all levels. This way of teaching is based on the physical presence of both teachers and students in the classroom, for a specific time according to a preplanned schedule. This method of teaching depends on specific factors such as, but not limited to, lectures, labs, experiments, teamwork, hands-on

activities... The basis of these factors is related to communication between teachers and students and among students themselves (Iowa State University, n.d.). Through communication, students will be equipped with a variety of formal and informal resources that enhance their social and academic performance. In addition to that, teachers will be able to provide students with the needed support and feedback on the spot.

Discussions could take place while explaining a specific topic in the classroom, during which the teacher leads the discussion and ensures that students are participating in it; in an attempt of conducting “an active learning environment,” in which students can hear, see, and even touch sometimes what are they learning. Furthermore, students will be able to receive and express thoughts through body language as well (Ibid). Yet this type of education is not being considered the effective method of teaching because “lecturing” is efficient; however, it is an effective one since teachers and students have become experienced in using face-to-face education through specific pedagogies.

While using this type of education, students are being assessed on the spot in the classroom through quizzes, exams, or any other alternative. In this case, teachers will be able to monitor students’ performance while being assessed and make sure that no cheating is taking place. These two issues are essential but not present in all teaching methods.

The following section will tackle the incidence that has affected the field of education all around the world and made an unprecedented shift in the method of teaching students.

Chapter Four: Education During Closure

This chapter will discuss how the spread of COVID-19 affected our life and specifically the field of education and how it led to a paradigm shift tackling the phenomenon of Emergency Remote Teaching.

COVID-19, the widespread pandemic, has affected our lives worldwide in enormous ways. What makes this pandemic dangerous is that it spreads easily from person to person, its symptoms are like flu symptoms, and might not be detected directly after being infected (UCI Health, 2020). Simple measures are required to prevent or at least minimize the spread of this pandemic; however, these simple measures have totally changed our daily life actions (WHO, 2021). Social distancing is one of the key precautionary measures, and this measure has affected the way we communicate, work, buy, teach, and learn. Everything has shifted from face-to-face interaction into virtual presence due to the lockdown that was forced in every country (Cleveland Clinic, 2020). This tremendous change has affected the economy, politics, societies, and most importantly education.

One of the measures taken worldwide, schools have closed to reduce as much as possible direct contact among people (UNESCO, n.d.a). Yet not all countries suffering from the spread of COVID-19 have closed all schools. Some countries decided to keep the primary schools open like in Iceland, and in Sweden, primary and lower secondary schools did not close, while the upper secondary shifted to distance learning (Schleicher, 2020). It is true that this measure was effective in a certain way, however, it has affected the field of education in several ways. Until today, after more than a year since COVID-19 first spread, around half of the students worldwide are still affected because of this closure (UNESCO, n.d.a). According to UNESCO: Global monitoring of school closures, 177,208,409 learners are affected due to

lockdown.

This is an unprecedented situation and there is no clue till when it will last, therefore it was crucial to create methods and means to deliver education to students amid this situation. As an attempt to ensure educational continuation using the best mode of education delivery, Emergency Remote Teaching (ERT) has been implemented. ERT is a temporary transition in the method of delivering education to students. It is the paradigm shift that took place in education in which face-to-face education has been replaced by education in the virtual world using various means (UoPeople, n.d.).

The following section will discuss ERT and mention the negative and positive sides of it.

Emergency Remote Teaching (ERT):

This section identifies and discusses Emergency Remote Teaching and how it has affected the quality of education being transferred to students. Furthermore, this section will present the negative and positive sides of this method of teaching.

Virtual education is not something new and is not only limited to online learning. This method of transferring education has started way since 1968 when University of Alberta in Canada provided online courses; and since then, this method has evolved due to technology and is being used during emergency situations (Achieve Virtual Real Indiana Educators, 2020). However, the steps taken during that time were totally planned and well organized; unlike today. To reach an effective ERT a plan with a timeframe between six to nine months is needed. Yet the current situation today is exceptional. As an attempt to overcome this paradigm shift, several means are being used to transfer knowledge from teachers to students. ERT is not limited and is not an alternative naming for online learning; yet ERT includes any method of teaching that

is not face-to-face education (Hodges et al., 2020). Means that are being used nowadays to teach students are TV specialized channels, radio, online platforms, and applications such as Blackboard, Zoom, Teams, and many others (UNESCO, n.d.b). In addition to these means, some countries did take into consideration that not all students will have access to such facilities, therefore, they have provided instructional printed packages for the students that include all needed information (Alam & Tiwari, 2020). In this context, for example in Botswana, NGOs did work in collaboration with the government to reach as much possible of the students. They used two strategies to provide support to students: sending SMS with the needed information and a 20-minute phone call with the text messages to provide further support (Bhula & Floretta, 2020).

Negative and positive sides of ERT:

The implementation of ERT was an attempt to provide in one way or another a continuation of education for students at all levels during the closure. Yet, this solution has provided several challenges and opportunities as well to both teachers and students. The challenges and opportunities vary depending on several issues such as: how much developed the country is, did the school use previously any form of remote teaching, the pedagogy and teaching method used before the closure, the socioeconomic situation of the country, if the country was previously suffering from other crisis, and many other.

From one side, it is true that ERT has provided the chance for educators to keep on transferring education to students; though, not all students are able to receive equal education like all students. This issue has increased the level of inequalities among students, leading to an increase in the gap among the different classes in society (Ozer

et al., 2020). In this case, the economic situation of the family plays a key role in the accessibility of education; the better the economic situation is, the better access to education. The economic situation determines how much access they will have to resources like the Internet at an acceptable speed, a separate device for the student, TV, or a radio. In addition to that, students with a good economic situation usually have support in using technology to facilitate the process of learning (Ferri et al., 2020). What about families that are formed from more than one child and cannot afford a separate device for each child? What about children who must follow up their lessons on two different channels on TV at the same time? Some countries, like Colombia and Jamaica, did take these issues into consideration and tried to solve them by sending printed documents in packages to students containing all information regarding what they should learn (Alam and Tiwari, 2020).

During crisis, the most affected children are usually the vulnerable ones. These children are refugees, immigrants, extremely poor, homeless... (Ozer et al., 2020); and they usually live in rural and populated areas that lack the presence of electricity all day long and lack internet with acceptable speed and bandwidth. These issues affect the quality of education that students are receiving and affect the number of hours that students would spend studying. Without forgetting that many countries around the world do not have electricity all the time all over the country and not only in rural areas (Ferri et al., 2020).

When talking about a method of teaching, the means and tools are not the only factors affecting this method, however, teachers play a key role as well in this situation. Teachers' role in this case is critical. They also suffer from electricity and internet issues in addition to other issues that are important in transferring knowledge to students. Two-thirds of teachers participating in ERT have expressed that they lack

the skills that are needed to choose the suitable pedagogy and modify the lesson plans to match ERT. In addition to that, when using technology, not all teachers have the digital literacy that is required to transfer quality education to students (Alam & Tiwari, 2020). Teachers cannot control everything and modify issues to move along with the needs of this paradigm shift. Teachers need workshops, trainings, and guidelines to abide by and work depending on it to minimize obstacles as much as possible and meet students' needs to reach as much as possible the objectives and goals (Ferri et al., 2020).

Teachers also suffer in this situation when dealing with students with learning difficulties. These students are also considered from vulnerable students during crisis. In this regard, Parents Together Action Foundation has conducted a survey in the United States proving how the Remote Learning system being used today is failing in reaching "our most vulnerable students." This survey has shown that this crisis has exacerbated the challenges of students with learning difficulties that are making them fall further behind. Before the shift to ERT, students with difficulties were receiving support from various organizations and institutions, however, nowadays there are 39% of students with learning difficulties who are receiving no support at all (Parents Together Action, 2020).

On the other side, despite the difficulties that the educational field is suffering from due to the spread of COVID-19, ERT has paved the way to at least provide an alternative to continue teaching students with what is available. ERT has provided means and tools to keep communication with students in any form. Even while using some forms, students can still communicate with each other to fulfill a teamwork activity or project (Ferri et al., 2020). With technology, students will be able to be more creative and more innovative in submitting their work and in their engagement

in the process of learning (Alam & Tiwari, 2020). In this same content, teachers have the chance to create content for young students that is more creative and attractive than what is in their books. The content could include audios, visuals, and videos that will help young learners in learning new things. Even for students in higher grades, teachers will be able to make things more realistic to students (Sharma, 2020). This is where technology tends to develop various enriching skills that boost education such as critical thinking, problem solving skills, 21st century skills, and many others (Alam & Tiwari, 2020).

ERT provides tools and means to students that contain unlimited amount of information that enriches students' academic performance and knowledge. Unlike what used to happen in face-to-face education, where teachers usually stick to the content of the books. With the various and numerous resources available online, students can “upgrade their knowledge” and enhance their mental ability, skills, and values. Through this as well, research conducted will be fruitful and full of efficient information from reliable sources (Sharma, 2020).

In addition to that, some students have suffered during face-to-face education because they were not able to follow up with the teacher to take notes or to process the added information in their mind. Yet while using ERT, some tools provide the opportunity of recording the lesson and replaying it several times, that will help students in grasping the information well. Moreover, some students did not feel comfortable speaking in the classroom because they felt shy or afraid of what they would say. This problem is somehow eliminated; students tend to feel more comfortable speaking behind the screens and asking questions (Ibid).

Assessments during COVID-19

The process of assessment has been affected as well because of the closure. Each

country has taken the decision in this regard based on what it sees is most suitable for their students and the educational system. According to Bazaldua et al. (2020a), there are three options that were implemented:

- Eliminating the assessments:

Some countries decided to eliminate the exams, especially the ones at the end of the year, pretending that this will not have profound consequences. Countries such as Norway and India have canceled the final exams for certain grades and move students to the higher grade in the coming year. In addition to that, some standardized tests such as the SAT in the United States, have been canceled several times, the issue that has affected the requirements and admissions to universities.

- Rescheduling the assessments:

Other countries have found that eliminating assessments will have negative impact on the process of education yet did not want to make any modifications in the format and maintaining students' safety at the same time. That is why assessments were postponed. Countries like Ireland and some schools in Africa have delayed the assessments for some months.

- Conducting assessments with different formats:

Other countries have decided to conduct assessments in the planned way, and to do so while respecting the precautions of COVID-19, modifications will be made on the assessments' format to match the ERT method. In this situation, many countries around the world like the UK and USA have conducted online assessments; whereas other countries like in Germany have made assessments in

person with strict precautions and measures (Ibid).

In this regard, there is no right option to be chosen; it depends on the situation of the country, the school, the alternative options, and the assessment policies in the country. Despite the option chosen, conducting assessment especially during such situations is important and essential. No matter how long the closure will be, one day schools will reopen. And to have a smooth and easy return, schools should keep a record of students' progress. As mentioned before, assessments help teachers in forming the lesson plans and instructional process; here assessments are essential in showing what students can do. Leaders, educators, policymakers, and other stakeholders should use the data gathered from these assessments to form the most suitable policy that will be used in the process of recovery and reopening of schools. Schools cannot reopen as if nothing happened; students will come back to school with different knowledge levels based on what they were able to grasp from ERT (Bazaldua, 2020b).

Conclusion:

After analyzing the literature review, it has been confirmed to me how much the educational field gets affected by any event that happens in the country or even worldwide. In fact, the socioeconomic situation of the entire country and the families that students come from do affect students' performance and the quality of education that they receive. That was proven in PISA 2018 when students from better economic situation performed better than the others. In addition to that, the political situation in a country affects how smoothly education is taking place and has a significant impact on the content of the curriculum. Countries that aim to make a change in the society, community, or economic situation, tend to start from the educational field to shape the future generation based on the country's goals.

To implement these changes, certain modifications or enhancements should happen in

the curriculum being implemented in the schools. Therefore, as mentioned previously in the paper, the curriculum could be based on content, outcomes, or competencies; and this depends on the goal the country aims to reach. However, nowadays in the 21st century, competencies are needed more than before. The world is changing and what is required from the future generation is not like what was required yesterday. Issues taught at schools should match the needs of the workplace. And after the spread of technology in every dimension in the world, 21st century skills along with other competencies, skills, and knowledge are required. Students should understand that what is there in the curriculum is there to facilitate their lives in the future, to help them create their career, and to be effective workers and active citizens in society. The curricula that focus on outcomes tend to form students who act the same during any situation. They are all trained and have been practicing how to behave according to the stimulus. In this way, the generation will have an extremely low percentage of creativity or other personal skills which are major components for several competencies.

Assessment is not an easy task to do. It requires many steps and procedures and should be related to several factors such as the curriculum, teaching method used, students' capabilities... However, all efforts will go down the drain if no changes happen after conducting the assessments and retrieving the results. Changes will take place for the benefit of students; students should be urged to put all their efforts to learn, meet their needs, reach learning objectives, enrich themselves with a variety of skills, abilities, knowledge, and competencies, and overcome their weaknesses or obstacles.

It was interesting seeing how curriculum and assessments are two elements that are interconnected and cannot be separated from each other. The type of curriculum does

affect the methods, techniques, and types of assessments that should be done. And at the same time, assessments by themselves evaluate the curriculum being implemented. Gaps, weaknesses, and even strong points in the curriculum will be identified; and based on those issues improvements could take place on several levels.

Another factor that should not be forgotten in this process is the teacher. Teachers should function as the facilitator of the learning process. They should be well trained and aware of the curriculum content and the assessment types that match the curriculum. Teachers should be trained to be able to use a variety of assessment types and techniques to be able to receive constructive results. From here, teachers should be able to improve teaching methods, construct with creative teaching methods, or make any changes that will improve students' performance.

Each type of assessment has its own way of retrieving specific data that will help in identifying specific issues. However, it was interesting to see how formative assessment plays a key role in most of the assessments that were previously mentioned in this paper. Despite the curriculum types being used (i.e., content-based, objective-based, or competency-based), teachers are always encouraged to keep on using the formative assessment technique to make sure that students are on the right track. In fact, teachers will be able to identify the weak points and work on it on the spot. In this way, teachers would guarantee a higher percentage of students will reach the objectives. Since students' abilities vary, teachers also must be able to deal with students with learning difficulties or disabilities. Through assessments, teachers will be able to identify students who are struggling and take the procedures that are needed to help students learn.

Unfortunately, worldwide incidence has affected each and everything we do in our

daily life because of the spread of a virus. COVID-19 has restricted our activities and education was one of them. A shift has been implemented from face-to-face education to emergency remote teaching to minimize as much as possible the interaction between people. This shift has affected the methods of teaching and assessing students all over the world.

Therefore, my research is about assessing students, especially nowadays while using ERT. The literature tackled in this research has served as a reference to help on focusing on the types of curriculum used around the world, the assessment techniques used based on the curriculum, to what extent is assessment important and effective in the field of education, the importance of the presence of transversal competencies in education, the role of formative assessment in this case and how all these could help in assessing students in Lebanon in the intermediate level who are preparing for the national exams that will determine their pathway in the upper grades.

Chapter Five: The Research Design of the Study

Introduction

The previous chapters discussed and presented seven philosophies in the field of education, the three generations of curricula around the world, the three assessments that are aligned with these curricula, and how competencies are being assessed. In addition, ERT was discussed regarding how it affected the field of education around the world and in Lebanon.

This chapter discusses the methodology of the study. A qualitative methodology will be used to gather the data by contacting participants to get answers and responses regarding the issue tackled using their own lenses and conduct document analysis for tackling the issue of assessments in Lebanon. Qualitative research was used to facilitate the process of addressing educational issues by providing tools to describe what is happening in the field of education while assessing students during distance education. In addition, this chapter outlines the steps taken to gather data to answer the research questions; it is composed of the following sections: research design, data collection, participants, and procedure.

Research design

The design for this research is qualitative. By using this methodology, researchers will be able to offer an interpretation for a certain phenomenon that presents a story and not the cause and effect of it as in quantitative research. In the same token, Merriam and Tisdell (2009, p. 5) have described the qualitative research as an attempt of “uncovering the meaning of phenomenon.” Researchers in this case are interested in involving participants in the research and how they interpret their experience in a specific phenomenon or situation. The aim of this research is to “uncover” and retrieve data from participants who were in direct contact with the phenomenon that happened. In this way, participants will be able to express themselves and provide the

researcher with unique information.

Patton (1985) described qualitative research as work done to interpret situations within a certain context. In this way, the researcher is not doing the work to predict actions in the future; however, the researcher is trying to gather information to interpret the nature of the situation being studied. Participants in this case will provide the researcher with details of their understandings, their lives, experiences, and meanings that will lead to uncovering a situation, assessments in the case of this research.

Student assessments provide researchers with subjective knowledge about students' performance while leading to unique data that reveals much information regarding several issues in education. To give meaning to the results retrieved from assessments, researchers must analyze, interpret, organize, synthesize, and compare the results to other specific data. Based on these findings, researchers will be able to come to conclusions and fill in the gaps to identify problems and obstacles to be prevented and solved (Illinois State University, n.d.). Consequently, researchers will be able to describe the issue being tackled.

Assessment data are being used worldwide for the unique information that it provides. While educating students, many questions will be raised to make sure that effective education has taken place. Questions like will the student be able to use what he/she has learned in the future to communicate and to overcome problems? And many other questions that are asked by parents, teachers, and administrators to detect whether education took place or not. To detect this issue, assessments are conducted, and results should be analyzed to reach the answers. Due to the importance of assessment data, many countries around the world, such as Finland, France, Germany, and many

others, tend to participate in TIMSS and PISA to benefit from assessment data analysis and make the modifications needed.

TIMSS and PIRLS are not the only international surveys and tests that tackle education. However, most of the international surveys tend to focus on the curriculum content through surveys which consider assessments a source of unique type of data. TIMSS and PIRLS do focus on the curriculum content in addition to the knowledge and skills that students should be able to apply. In this case assessments are reported based on “level of performance on scales of achievement” in each subject being assessed. Then based on that, the scales will be described and analyzed to determine the student’s level of competence and how well the student was able to use the needed skills and knowledge (OECD, 1999).

Tools in Qualitative Research

To conduct qualitative research, several tools could be used to gather data such as interviews, questionnaires, document analysis, and observation (Merriam and Tisdell, 2009). All these tools could help in obtaining distinct types of data that will lead to a clear interpretation and analysis of the situation dealt with.

Each tool mentioned above, i.e.: interviews, questionnaire, document analysis and observation, has its strengths and limitations that are presented in the following:

Interviews:

Interview is one of the most used tools to gather data in qualitative research. It is based on a structured conversation between an interviewer and an interviewee(s) tackling a certain issue. The interview conducted could be structured, semi-structured or unstructured (Fauvelle, 2020), we could also add to these focus groups and open-ended interviews.

This tool has strengths and limitations that are mentioned below.

Strengths:

- Researchers will be able to gather data regarding participants' opinions, emotions, thoughts, and feelings.
- Participant's body language could be observed.
- Clarification can take place on the spot to clarify either the interviewer's question or the interviewee's point of view.

Limitations:

- The process of conducting interviews is time consuming.
- In structured interview, the research will be limited to the answers to the chosen questions and will not be able to receive clarification.
- In unstructured interviews, data might not be reliable since questions might vary from participant to another. In addition to that, interviews will lack structure and might lead to biased interviewees.
- In semi-structured interviews, flexibility in asking the questions might lead to unreliable data and comparing answers will be difficult (Hobson & Townsend, 2010).

Questionnaire:

A research tool that includes a series of questions to be answered by respondents. It could be used in qualitative and quantitative research; it depends on the type of questions posed and how the data is used. Open-ended questions could lead to data that will be analyzed and discussed in qualitative research. Whereas questionnaires including questions and multiple-choice questions will be presented in charts, graphs,

and, percentages in quantitative research.

This research tool has strengths and limitations, here are some:

Strengths:

- Conducting questionnaires does not cost much and does not need much time.
- Questionnaires provide a higher level of objectivity since answers are retrieved directly from respondents.

Limitations:

- Respondents could fill in the questionnaires random answers just to finish quickly.
- Researchers will not be able to receive clarifications on the answers of respondents.
- Researchers might manipulate the findings (BRM, n.d.).

Document analysis:

Usually, document analysis is used as a means of triangulation in research. This process takes place when the researcher reflects on and evaluates primary and secondary documents. Data in this case should be interpreted to present meaning and create codes for the issue being tackled in the research. Documents analyzed could be texts, previous research, images, or statistics (Bowen, 2009).

This tool as well has its own strengths and limitations as follows:

Strengths:

- Researchers will be able to manage and choose the documents that suit the research being conducted more.

- Researchers in this case will obtain data in a variety of forms.
- Information retrieved in this case is reliable because documents used for analysis are stable.
- Some information presented in documents can no longer be observed.

Limitations:

- Some documents might be incomplete or could only provide a limited amount of useful information.
- Some documents might include gaps in the data provided or the author might be biased, which might lead to negative results in analysis (Triad 3, 2016).

Observation:

Observation is one of the most used research tools in social and human sciences research. While using this tool, the researcher observes a certain situation and records the findings. In this way the researcher will be able to monitor social, economic, and cultural issues that will be useful for data gathering.

This tool as well has strengths and limitations as follows:

Strengths:

- Researchers will have direct access to information by observing the desired situation.
- Because of that direct access, trusted data will be retrieved.
- Researchers will be able to monitor attitudes and behaviors of people during specific events or situations.

Limitations:

- People might act differently when they know that they are being observed.
- Time consuming.
- Data gathered are limited to the environment in which observation takes place (ICNDBM, 2019).

After going through a variety of tools that could be used in research, the following section is going to present the research questions and assumptions of this research.

Research Questions

As mentioned in the introduction, this section presents the research questions that are being tackled in this research. The research questions are:

- How teachers of intermediate level in Lebanon dealt with assessments during ERT?
- Why did teachers of intermediate level use these specific techniques and not others during ERT?
- How suitable were these techniques for students with learning difficulties?
- What are the latent factors behind learning loss other than the known impact of ERT?

Assumptions

This section presents the assumptions that are being tackled in this research.

Assessing students even during ERT will provide essential milestones in setting background information for ameliorating the curriculum in the future. In addition to that, data gathered from assessments during such situations will facilitate the process of finding solutions to remedy learning loss caused from school closure. Furthermore, data gathered in this study will provide information in setting an emergency plan for the educational sector to be implemented during such inconvenient situations. And when it comes to teaching and assessing students during closure, this study helps in

choosing appropriate pedagogies to serve students and facilitate the work of teachers.

Data Collection

Data in this research were collected through semi-structured interviews that were conducted online and document analysis. The aim of this research is to receive data derived from participants who have been in direct contact with this situation. Using these tools, the data retrieved will contain feelings, thoughts, experiences, attitudes, and perceptions of participants. The open-ended questions mentioned in the semi-structured interview will lead to unique information that will be analyzed and interpreted to be used in this study. The purpose behind using this tool is to exchange ideas and information with the participants to gather information about assessments being used during closure. The aim of this research is not only to identify the assessments being used, but also to reach additional information regarding opportunities, obstacles, restrictions, and many others. Therefore, by using the semi-structured interview rich data will be retrieved since participants will be able to express their thoughts and freely describe their concerns regarding assessments during closure.

In addition to the interview, document analysis was used for this research. In this way, several types of data could be chosen to be interpreted and analyzed. The combination of data retrieved from document analysis leads to unique and beneficial information that will help in the issue being tackled; in this case everything related to assessing students.

Participants

Participants in this research were teachers of grades 8 and 9 because these classes, particularly the first leaving national exam, channels students to the four academic strands, or to the Vocational Education and Training strand. In addition, there is a

high drop-out rate in grade 8, a matter that invites speculation into this phenomenon in Lebanon's educational system. Teachers from the intermediate were contacted privately for conducting interviews online through "Teams."

Twenty participants from private and public schools have been interviewed to gather information from them. Participants are teachers from intermediate level teaching the following subjects: English, Arabic, French, Biology, Chemistry, Physics, Math, History, Geography, and Civics. The schools in which they teach are in the following areas in Lebanon: Beirut, South, Zahle, Keserwan, Mount Lebanon, Tripoli, and Zgharta. The minority of participants have a teaching diploma, and very few have received training related to assessments. In addition to that, most of them have another occupation like tutoring or teachers in after schools.

This research gathered data only from teachers because they are the active element in the teaching process. They are the ones who transfer the content of the curriculum into action. Teachers are the ones who are aware of all the needs of their students. Thus, teachers play a key role in choosing teaching methods or assessing methods. That is why, this research aimed to shed light on how teachers reacted towards this unprecedented shift in education.

Procedure

This study was conducted through several steps to reach the results. The first step taken in this research was reviewing the literature related to the issue being tackled and putting together all available synthesized findings. Then a meeting was conducted between the researcher and the advisor to agree on the methodology that will be used throughout the study. After agreeing on the "Qualitative research," the researcher and advisor found that the best way to find the needed information was by conducting semi-structured interviews and document analysis on documents that include

assessment policy from different schools.

Before setting the questions of the interview and conducting the document analysis, a mapping table was created linking among assumptions, research questions, and the open-ended questions that will be asked during the interview.

Mapping table

To keep a connection between the research questions and assumptions with the questions asked in the interview and data gathered from the document analysis; mapping table was created.

The following tables include the process of the mapping table conducted:

Table 4: Mapping table (a)

Research questions	Assumptions
<p>How teachers of the intermediate level, cycle 4, in Lebanon assessed student learning during Emergency Remote Teaching (ERT)?</p> <p>How suitable were assessment modalities appropriate for students with learning difficulties?</p> <p>What pedagogical and policymaking implications can be suggested for assessment in Lebanon as the MEHE and CERD are developing a new curriculum?</p> <p>What are the latent factors behind learning</p>	<p>Data gathered from assessments during such situations will provide background information for informing curriculum development in Lebanon about caveats and solutions during emergencies.</p> <p>Evidence-driven analysis of teaching, learning, assessments during COVID-19 will help explore solutions to remedy “learning loss”.</p>

loss other than the known impact of ERT?	
--	--

Table 5: Mapping table (b)

	Factors in education affected by ERT						
Issues in Lebanon's education during closure	Students' performance	Readiness for national exams	Improvements in education	Competencies, skills, and abilities	Alternative assessments	Use of technology	National Curriculum
Access to quality education	X	X	X			X	X
Teaching methods	X	X		X		X	X
Assessing methods	X		X	X		X	
Formative assessments	X	X	X	X	X	X	X
Position of MEHE		X	X			X	X

Semi-structured interview

The semi-structured interview included open-ended questions that helped in answering the research questions. Since the target of this research will be achieved through qualitative research by focusing on thoughts, experiences, and concepts that could be retrieved from direct contact with participants. Qualitative research in this case will help in uncovering data from the perspective of the participants who are in direct contact with the issue tackled. After forming the mapping table, the open-ended questions asked in the semi-structured interview were created.

This section presents the semi-structured interview that was conducted as a tool to gather data for this research. Semi-structured interview was chosen for this research to

gather unique information directly from the participants and make a connection between the researcher and the participants. Participants who were contacted for the interview are teachers of the intermediate level from public and private schools. The interview was conducted online to keep social distancing as much as possible due to the spread of COVID-19 and because the participants who participated in this interview are in different areas around Lebanon. Before starting the interview, the participants will be aware of the content of the research and the reason behind it and will be informed that their participation will be anonymous and no personal information will be shared with a third party.

The semi-structured interview conducted for this research contained eight open-ended questions that created a form of guideline for the interviewer during the interview.

This step was conducted to facilitate the process of the interview and to keep the information accurate and related to the topic. The interview was divided into two sections, the first to gather background information about the participants and the second one to ask the open-ended questions. The following section presents the formed interview schedule.

Interview Schedule: Assessing Intermediate Level Students in Lebanon During School Closure

Background Information:

Type of school(s):

Area:

Number of years teaching:

Subject(s) you teach:

Additional duties to teaching:

Teaching diploma:

Trained to form assessments:

Type of assessments used:

Questions

- 1- How did you assess your students during closure?
- 2- Explain your perception of:
 - *Assessment tools:*
 - *Assessment methods:*
- 3- What assessing tools and methods have you used during the lockdowns?
- 4- Were these tools and methods different from the ones used before closure? If yes, how?
- 5- Using these methods, were you able to assess students' academic performance or did they form any obstacles?
- 6- Explain your perception of the following according to the subject you teach:
 - *Competence:*
 - *Competency:*
 - *Skills:*

Were you able to assess competence, competency and/or skills during closure? If yes, how?

- 7- Kindly state the percentage of assessment types being used:

Formative Assessments:

Summative Assessments:

Explain reasons:

- 8- The Ministry of Education and Higher Education is currently forming a new curriculum. In your opinion, what are the changes that should be considered in “assessments”?

Document analysis

This section presents the document analysis that tackled six documents. These documents include the assessment policy in six schools in the following governorates in Lebanon: Beirut, Mount Lebanon, North Lebanon, and South Lebanon. This section presents assessment rational and purpose in each school, in addition to how much these documents have included the keywords tackled in this paper.

The keywords that will be searched for in these documents are formative assessment, summative assessment, alternative assessments (portfolio, projects, reports, peer assessment, self-assessment), competencies, skills, abilities, teaching, learning, students' achievement, and any information mentioned regarding students with special needs or with learning difficulties.

School A:

School A views assessment as a tool for gathering, analyzing, and reporting data related to the students' performance. Distinct types of assessments are implemented to gather different data regarding students' understanding, knowledge, attitudes, skills, performance in a real world setting, and competence. After assessing students, a variety of measures is used to gain unique and effective data. Measures that are used are grades, reporting, scores, and narratives. These data are used to help teachers in making choices regarding teaching practices. In addition to that, they are interpreted according to statistics, rubrics, and benchmarks to ensure improvements.

Moreover, data gained from assessments are used for:

- Matching students' progress to the expectations of the school
- Reviewing the curriculum used and the instructional process
- Controlling the retentions and promotions

Both types of assessments should be implemented in the school: formative assessments and summative assessments. And the form of assessments is not limited to tests only, however, a variety of methods and tools are being used, such as: checklists, projects, portfolios, models, reports, and many others.

The availability of keywords in the assessment policy document of School A:

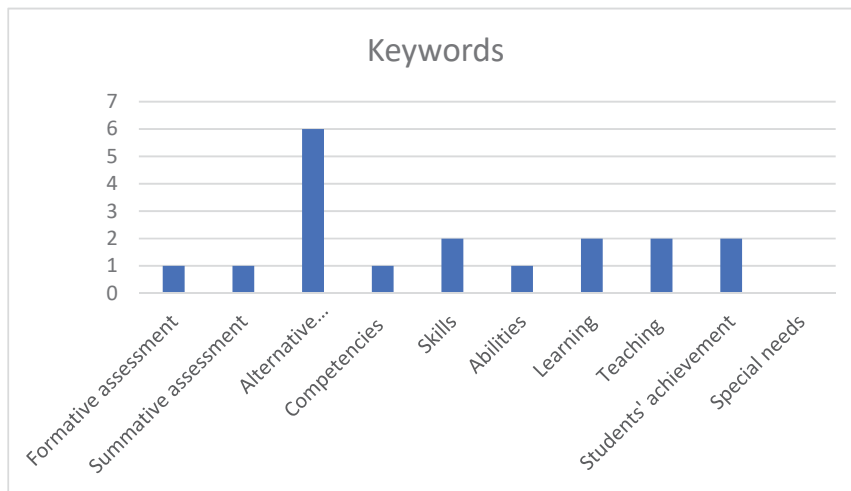


Chart 1 : School A data

School B:

School B has drafted a detailed assessment policy that guides teachers in forming and conducting assessments throughout the academic year. This school believes that all teachers, parents, students, and administrators, should be involved in the assessing process to make sure students have achieved progress. The main purpose behind gathering data through assessments is to evaluate the program being used at the school based on how much the students have achieved with respect to the learning outcomes. Based on the findings from assessments, the school will be able to create a

well-developed strategic plan to improve. Furthermore, the school tends to assess students to improve their learning and support them in academic achievements.

School B uses several types of assessments to gather several types of data. Diagnostic assessments are used to check the students' levels, formative assessments are conducted during the lessons, and summative assessments are conducted after finishing the lesson. While assessing the students, teachers use different techniques such as tests, peer assessment, portfolio, and many others. In addition to that, student's abilities, learning profiles, and interests are all taken into consideration during assessments. Students do not only receive a grade after assessment, but also, they receive feedback from the teacher on their work.

The availability of keywords in the assessment policy document of School B:

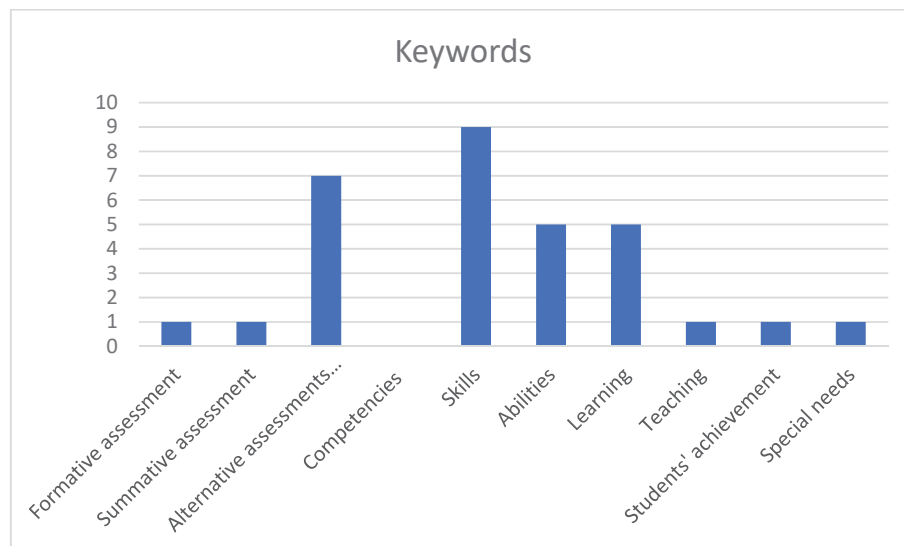


Chart 2: School B data

School C

Assessments form an integral part of the school's system, especially in the teaching and learning processes. It also forms an essential element in the strategic plan of the school. Assessments gain that much importance in School C since it is a way to

inform parents that teaching and learning have taken place.

School C uses assessments as well as a tool that would guide students in:

- Understanding concepts
- Acquiring knowledge
- Mastering skills and developing attitudes
- Taking responsible actions

Teachers were asked to use different methods and tools for assessing students and for measuring students' performance. Data retrieved in School C is used to enhance the teaching process and strengthen the learning process to ensure improvement.

Assessment policy in this school is being reviewed along with the curriculum revision.

Students with special education needs are being taken into consideration in School C since this school is committed to providing education to all students regardless of their potential and abilities. Therefore, special education is provided to them along with continuous meetings between parents and teachers.

The availability of keywords in the assessment policy document of School C:

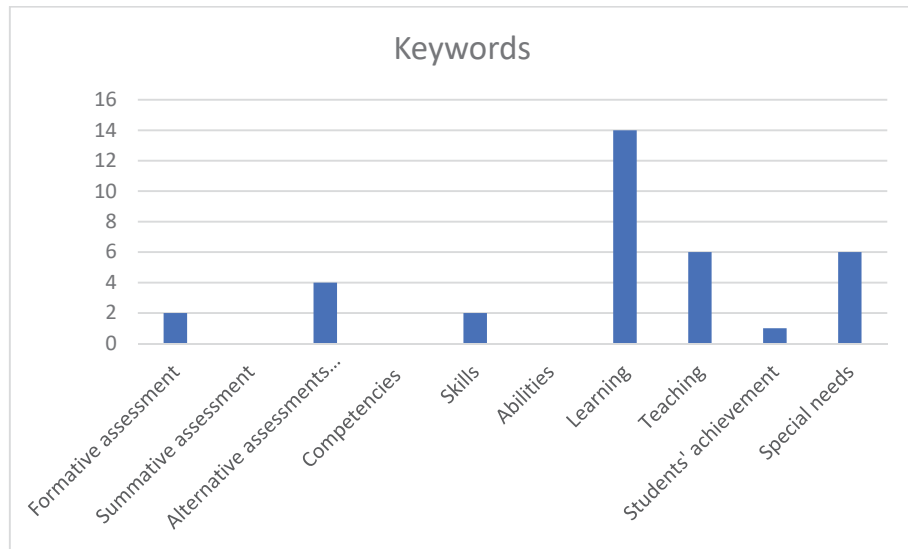


Chart 3: School C data

School D

School D conducts constant evaluation of students. In this way, students will be able to deal with pressure, organize their time, focus, and concentrate more for longer period. Furthermore, feedback could lead to follow-up and monitoring which will help in filling the gaps. Teachers in this case will be able to identify the weaknesses, find solutions, and follow-up to make sure that all gaps are being filled and everything is under control.

The availability of keywords in the assessment policy document of School D:

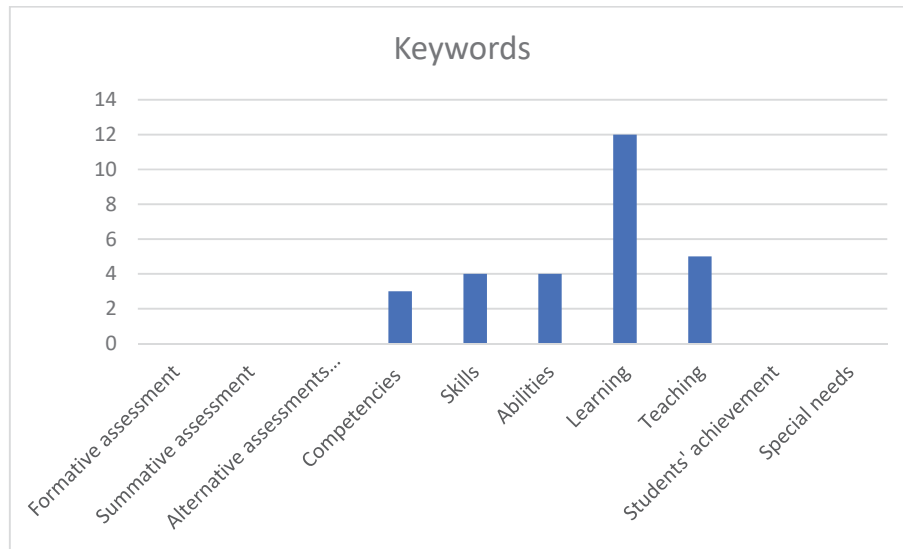


Chart 4: School D data

School E

School E is committed to providing quality education to all students and to guarantee that assessments are conducted to assess their performance to ensure that education has taken place. Diverse types of assessments are being conducted continuously and on a regular basis to inform students and their parents about the progress. Data retrieved from assessments will provide guidelines for teachers and administrators for making decisions regarding the teaching and learning process. The process of evaluating learners' performance will help in conducting improvements and development in the educational system of the school and will indicate what students know and what they can do.

School E divides the objectives of assessments into the following:

- Assessment for learning by which teachers use qualitative and quantitative tools to assess several issues other than students' performance, such as teaching process, plan, and curricula. In this case, teachers will be able to

reflect on their work and students will be able to reflect on the way they are learning.

- Assessment of learning by which students' performance is being measured based on the learning outcomes of each course. Keeping in mind, that these learning outcomes are all related to the school's mission.

The availability of keywords in the assessment policy document of School E:

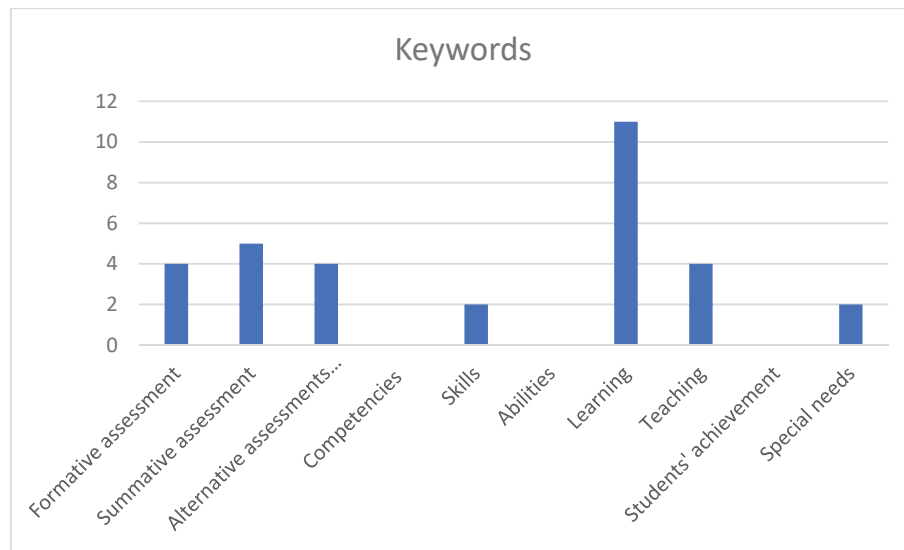


Chart 5: School E data

School F

School F views assessment as a tool to measure the efficiency of the teaching process and to evaluate students' performance to help students who are falling behind. The main purposes of assessing students are the following:

- Identify weaknesses that students have
- Monitor the work and progress of the students
- Collect data about students
- Assess the effectiveness of methodologies being used while teaching students

School F has set an assessment plan to keep track of students' performance; the plan

consists of the following: screening assessments, progress monitoring test or what is known as formative assessment, summative assessment, and outcome assessments or what is known as final exam.

The availability of keywords in the assessment policy document of School F:

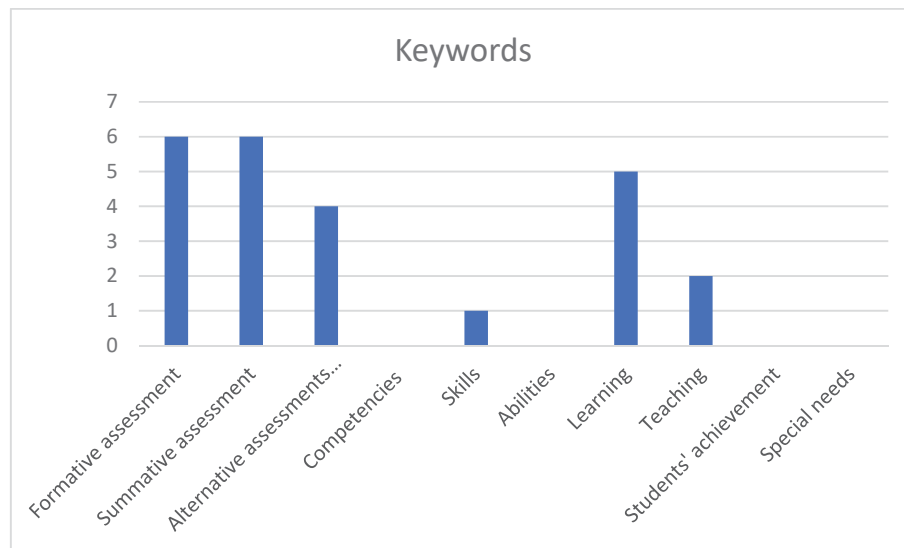


Chart 6: School F data

After conducting the document analysis and gathering information through the semi-structured interview, data will be analyzed and interconnected to each other to reach the final data in this research. Therefore, all information gathered are presented in the following section.

Chapter Six: Findings and Discussion

This chapter examines the findings of data retrieved from the semi-structured interview. Through this semi-structured interview, the participants were able to express their thoughts regarding this unprecedented situation and shared their experience with the researcher. After conducting the interviews, data were written and clustered under common themes. Data analysis helped in dividing the data into different themes and each theme had several evidence from the participants. The following sections in this chapter will include the findings and a discussion in this concern, followed by the limitations of this research.

Assessment tools and assessment methods:

When talking about the assessment tools and methods, some teachers were not able to express the difference between both, yet they insisted on the idea of assessing students using a variety of techniques according to the objectives and outcomes of lessons being taught and the schools in general. One of the participants grabbed my attention by saying “I cannot express the difference between both. They are both interrelated, and they both help in making sure that students have learned what I want them to learn.” Other participants have clearly differentiated between both like this response “As for assessment tools they are techniques used to measure a student’s academic abilities and skills. Whereas assessment methods are ways of providing evidence that students' knowledge and learning match the aims of a course.”

And when asked about assessments being used during closure, the replies were divided into two several categories: keeping the old traditional way of assessing students or going to a more creative way by using alternative assessment ideas. The following table includes some examples mentioned by some participants.

Table 6: Assessment examples during closure

Traditional way of assessing students	Alternative assessment ideas
<ul style="list-style-type: none"> - quizzes, essays, projects, and reports. <p>All were presented online.</p> <ul style="list-style-type: none"> - distributing tests to parents through the school principal and gathering it back for grading - recitation through online platforms - online tests, quizzes, and exams 	<ul style="list-style-type: none"> - grading a variety of activities, exercises, or work - problem-based exercises - presentations - analytical discussions - written class work along with certain projects delivered as a power point presentation according to a set rubric which was compiled as a student portfolio - multiple choice questions - group work activities

The difference between tools and methods used before closure and during closure

Most teachers agreed that assessments done during closure might be like assessments before closure as in content, but different in the medium in which it is being conducted. Assessing students during closure has increased the concern in cheating, “students had diverse ways of cheating during exams, tests or even while doing their assignments. Even when students were receiving a hardcopy of exams to fulfill, they still had the chance to cheat.” Not having the onsite setup for assessing students leads

to an inaccuracy in assessing students' academic performance. Plagiarism was an issue that was mentioned by several teachers. Many students have searched for answers online and simply copy and paste it on their assignment or assessment. This was discovered by teachers when they see unexpected answers from some students or by seeing the same exact answer from different students.

Assessing students' academic performance during closure

All teachers mentioned that they did not stop assessing students during closure and did not even think about that. However, assessments were conducted with less credibility because of the reasons mentioned previously regarding cheating. This formed an obstacle for teachers to identify the gaps that students are having to work on them. That is why many teachers depended more on the work that was done live online or presentations. Furthermore, some teachers have mentioned here that students with learning difficulties were not having the needed support in this situation due to the limitations that were present. Teachers might be able to follow up with such students, but some students needed a different tool to present the knowledge that they have gained.

In addition to these reasons, many teachers expressed their dissatisfaction from assessments during closure because they were not able to fully assess the needed skills and abilities in the subjects they teach. In this case, the opinions were divided based on the subjects being taught, to what extent the teacher was creative in forming the assessment and how much the school itself was flexible in this concern.

What was interesting in this question, that many teachers mentioned that they have also focused on asking questions or doing some activities live online to make sure that students are grasping the needed information, which is a form of formative

assessment. Despite that, all teachers have given a higher percentage for summative assessments as shown in the following section.

A couple of teachers mentioned the idea of providing feedback to students during closure rather than giving them grades only, however, they preferred not to do so because it takes a lot of time, and they are not used to that issue. In addition to that, they mentioned that even students are not used to that, and they might not even take it into consideration.

Assessing competencies, abilities, and skills

Participants in this question have mentioned different definitions for each of these keywords depending on the subject that they teach. For example, a biology teacher has defined them as the following:

Ability: “having the specific knowledge and prerequisites to understand the biology course”

Competency: “students’ capacity to assimilate and apply knowledge demonstrating their learning”

Skills: “ability or technique acquired from the course.”

The difference in the subjects being taught was also reflected in the answers to the question whether they were able to assess competency, skills, and abilities during closure. Teachers teaching language subjects, i.e., English, Arabic and French were able to better assess these issues during closure more than science teachers. This is because of the nature of the subject they are teaching. Science subjects and math require the application of theories and concepts that require hands-on activities that were difficult to apply during closure and distance education. One of the Chemistry

teachers has explained in detail his concern in this issue as following “Examinations provided some insight on the proficiency in competencies and highlighted any gaps in competence. Analytical skills were tackled using case studies that students needed to assimilate a conclusion from their previous knowledge. Certain lab skills were hindered as the students did not have the chance to work hands on in the school premises.” Language teachers were able to assess students more easily through writing exercises and oral presentations. But they always mentioned their concern regarding applications that could correct their writing before submitting their work. The French teacher mentioned “instead of depending on themselves while writing, students used online applications to correct their writing from spelling or grammatical mistakes. They even used online platforms to search for ideas to write about as well.” We cannot ignore the fact that our national curriculum does not focus on these three elements, however teachers still must assess them as a requirement for the subjects that they are teaching.

Formative assessment versus summative assessment

When discussing the issue of formative and summative assessments, all teachers gave a higher percentage for the usage of summative assessments with respect to the formative assessment. Most of the answers were 40% for formative assessments and 60% for summative assessments. Yet, all teachers mentioned the importance of formative assessments for teachers and students. The reason behind this was because the school rules and regulations regarding assessments give more importance to the results of the summative assessments as evidence that education took place. One of the participants mentioned the reason as following: “Administered by the school, but if it gets back to me, I prefer focusing more on the formative ones.”

In this case, it was interesting to see how many schools in the document analysis have mentioned in their assessment policy the importance of using a variety of assessments, yet the focus is always on the summative assessments which is usually conducted as written exams with traditional questions.

The development of a new curriculum

Moving forward to the participants' opinion regarding the development of a new curriculum, from one side, many teachers expressed their satisfaction towards this step and mentioned several ideas and modifications that could be implemented to form a well-developed curriculum that matches the country's politics and policy and 21st century education. Some of these ideas were mostly related to the integration of technology into education and to the types of questions that were asked during the tests and exams. Teachers mentioned the importance of minimizing the concept of memorization in education and focusing more on analytical issues and critical thinking. Teachers of science subjects mentioned the importance of "integrating trending concepts in education to attract the interest of this new generation" and to prepare this generation for future careers. Some mentioned integrating "robotics" as an activity or assessment tool in physics for example. And some mentioned that robotics should be taught as a subject on its own due to its benefits.

On the other hand, a few teachers expressed their satisfaction with the current curriculum and the focus on written tests and memorization. They were satisfied with it because they have been teaching it for years and got used to the content and the way to assess the students. It was concluded that they do not want to put efforts in the future to make a change in the content or the assessing method.

Limitation of this research

Some limitations were encountered while working on this research and should be taken into consideration. The number of participants interviewed was small, knowing that if more participants were interviewed data gathered will be more enriched. Participants had different language backgrounds and the researcher preferred to conduct the interview in English. Some of the participants had difficulty in expressing their opinions and sharing their experience in English. That is why translation was conducted at some point. In addition to that, because of that as well discussions during the interview had to go out of the subject to explain a certain term during the interview for the participants. That is why interviews required more time.

The data retrieved from this research are not generalizable due to the nature of data gathered from qualitative research; yet did not preclude the researcher from making common sense discussions and alignment between data gathered from literature review and data gathered from the interview. In addition to that, since interviews were conducted online not all participants agreed to open the camera, therefore, no body language was detected. Knowing that, body language adds a lot to data gathered regarding the participants.

Chapter Seven: Conclusion and Recommendations

Certain incidences in life could lead to unexpected changes in various fields in the world and education is no exception to that. Lebanon's education system is in shambles despite all incidences obstacles people are suffering from, various crises, spread of pandemic and the almost non-existing infrastructure. Until today, we still use the curriculum that was formed in 1997 and contains many issues that do not match the 21st century education anymore. The updates and modifications should be done in both written curriculum and hidden curriculum. Education is a key factor in developing any society, therefore, the hidden curriculum that enriches students with academic, social, and cultural values and messages should be taken into consideration. In Lebanon, the hidden curriculum is limited and restricted to specific issues based on the politics that is present in this country. For example, issues related to history cannot be discussed in a classroom, but students should only memorize it and mention it as it is in the test. The hidden curriculum should be used to develop a better society and enhance the situation in the country. But unfortunately, in Lebanon everything happening is affecting the educational sector and the steps taken to update the curriculum.

And when it comes to teachers teaching in schools, training and professional development are nearly absent in public schools. Furthermore, the piecemeal initiatives for teacher development are not sustainable, fragmented, occasional, and are implemented mostly in private schools. Education is based on three elements: curriculum, teachers, and students; therefore, if any updates happen in the curriculum, teachers should be trained to be able to implement it in the proper way.

Assessments form an essential keystone in both the process of teaching and the process of learning. This research aimed to shed light on assessments amid closure to

provide sufficient information for further research to form a well-structured plan for Emergency Remote Teaching that could be implemented during such situations.

Qualitative research was conducted by implementing document analysis and semi-structured interviews with teachers in the intermediate level in Lebanese schools.

Intermediate level in Lebanon is essential since at the end of grade 9 students undergo the national exams and the results of that will draw the path of the students' future.

Teachers have presented several ways by which they have assessed students' academic performance during closure, yet all teachers insisted on the presence of cheating. And due to that, teachers will not be able to really detect whether students have learned and acquired the needed knowledge and skills in the subject they are teaching. That is why many students could be left behind and learning loss will be obvious later. In the same token, students with learning difficulties were taken into consideration because they need extra support and help which were difficult to provide during distance education. These are issues to take into consideration to maintain a smooth come back to school and make sure that all students receive the needed support.

To make changes in the assessments being conducted in the school, regardless of the grades, changes should be made in the curriculum. Teachers have presented great ideas to add to the national curriculum. For example, adding new subjects related to technology and robotics, adjusting the content of some subjects to match the 21st century needs and grab students' attention, and utilizing different strategies to assess students and not to focus on grading students only.

Lebanon is one of the poor performing countries in international assessments such as PISA and TIMSS. These assessments do not focus on memorization but focus on

other skills like analyzation, discussion, and many others. Thus, doing modifications in assessments in Lebanon should take place not only because closure took place, but also to enhance Lebanon's participation in international assessments and enrich students with various skills.

Recommendations backed up by evidence resulting from the study

It was interesting to see how schools focus on the results of assessments and analyze the results in diverse ways to benefit from them. Yet, most of the interviewed participants have not attended any sort of training related to assessments. Therefore, schools should invest more in training their teachers in using a variety of new and modern assessing methods and tools, keeping in mind the presence of students with learning difficulties. In this way teachers will be equipped with skills to assess students in many ways and using different means.

Lebanon lacks a well-developed emergency plan in the educational field to be implemented during any sort of crisis or closure. Therefore, all officials and concerned members should start in creating a plan to minimize as much as possible the effects of any incidence on the educational field and students.

In addition to that, concerns regarding cheating during assessments are always there. Therefore, this issue should be taken into consideration to be dealt with when teaching students in schools or even during distance education.

Recommendations that are not backed up by evidence

When talking about training teachers, it is not only about training teachers on assessing students. Teachers should be trained in using creative and various teaching methods and in dealing with students in a distinct way. Teachers should change how

students perceive assessments. Students tend to fear assessment and cheat because they are afraid of getting bad grades. Therefore, teachers should help in changing this idea and teach students how to learn from their mistakes. In this case, teachers should be creating independent learners who should be thinking outside the box by thinking differently and analyzing issues. Thus, schools and teachers should be clear in the philosophy of assessments before adopting a specific model for assessing students' performance.

In addition to that, hiring teachers in schools should not happen randomly. Sometimes teachers are being assigned randomly in Lebanon without having a teaching diploma or trainings. This is happening because of the domination of politics in Lebanon and the use of sectarian powers to hire people in certain positions. Therefore, a clear rule should be constructed and implemented setting all the regulations needed to hire teachers in the right position. Teachers should be qualified with various skills and competencies to teach effectively the students.

References

- Abouchedid, (2020), Rethinking Education Post COVID-19: Are Schools Equipped for this Change of Format? In the Peace Building in Lebanon, *Daily Star*, December, Issue n° 26. Retrieved from <https://www.salamkalam.com/articles/education/516/rethinking-education-post-COVID-19-are-schools-euq/en>
- Achieve Virtual Real Indiana Educators (2020), Infographic: Evolution of Virtual Education. Retrieved from <https://achievetrual.org/blog/online-high-school/infographic-evolution-of-virtual-education/>
- Alam, A., and Tiwari, P., (2020), Putting the ‘learning’ back in remote learning. Retrieved from <https://www.unicef.org/globalinsight/reports/putting-learning-back-remote-learning>
- Alberta Education, (2016), Competencies Overview. Retrieved from <https://education.alberta.ca/media/3115408/competencies-overview-may-17.pdf>
- Alberta Learning, (2015), Affirming Francophone Education. Retrieved from <https://open.alberta.ca/dataset/56f70d7e-0baf-46fc-8496-ac2b364a4a24/resource/55ccc9d7-c358-4214-ae2-1b12865d500d/download/affirming-francophone-education.pdf>
- Amro, S., (2012), Assessment. Retrieved from https://www.slideshare.net/busuper/what-is-assessment-15356195?next_slideshow=1
- Arvanitis, E., Bauer, M., Covarrugias, B., et al, (2021), Future of Education: Learning to Become. Retrieved from <https://en.unesco.org/futuresofeducation/sites/default/files/2021-04/UNESCO%20Report%20SIETAR%20Switzerland%20Focus%20Group%20%2012.4.21.pdf>

Assessment of, for and as Learning (n.d.). retrieved from

https://curriculum.gov.mt/en/Assessment/Assessment-of-Learning/Documents/assessment_of_for_as_learning.pdf

Australian Government, Department of Education, Skills, and Employment, (n.d.), Australian Curriculum. Retrieved from <https://www.dese.gov.au/australian-curriculum>

Avvisati, F., Echazarra, P., Givord, P. & Schwabe, M., (2018), Programme for International Students Assessment (PISA) Results From PISA 2018. Retrieved from https://www.oecd.org/pisa/publications/PISA2018_CN_LBN.pdf

Bazaldua, D., Harnisch, M., Levin, V., & Liberman, J. (2020a), High-stakes school exams during COVID-19 (Coronavirus): What is the best approach? Retrieved from <https://blogs.worldbank.org/education/high-stakes-school-exams-during-COVID-19-coronavirus-what-best-approach>

Bazaldua, D., Levin, V., & Liberman J., (2020b), Learning in the time of COVID-19: the role of learning assessment in reopening schools. Retrieved from <https://blogs.worldbank.org/education/learning-time-COVID-19-role-learning-assessment-reopening-schools>

Bhula, R. & Floretta, J. (2020), A Better Education for All During – and After – the COVID-19 Pandemic. Retrieved from https://ssir.org/articles/entry/a_better_education_for_all_during_and_after_the_covid_19_pandemic#

Bowen, G., (2009), Document Analysis as a Qualitative Research Method. Retrieved from https://www.researchgate.net/publication/240807798_Document_Analysis_as_a_Qualitative_Research_Method

- Brau, B. (2018), Constructivism. Retrieved from <https://edtechbooks.org/studentguide/constructivism#:~:text=Dewey%20emphasizes%20inquiry%20and%20the,to%20serve%20as%20a%20facilitator>
- BRM, (n.d.), Questionnaires. Retrieved from <https://research-methodology.net/research-methods/survey-method/questionnaires-2/>
- Brouse, K., (2020), Competency-Based Assessment: What it is and its Benefits. Retrieved from <https://www.graduateprogram.org/2020/04/competency-based-assessment-what-it-is-and-its-benefits/>
- Cherry, K., & Gans, S., (2020), The 4 Stages of Cognitive Development. Retrieved from <https://www.verywellmind.com/piagets-stages-of-cognitive-development-2795457>
- Cleveland Clinic (2020), Here's How the Coronavirus Pandemic Has Changed Our Lives. Retrieved from <https://health.clevelandclinic.org/heres-how-the-coronavirus-pandemic-has-changed-our-lives/>
- Clotilda, M., (2021), 10 things you need to know about competency-based assessments. Retrieved from <https://www.creatrixcampus.com/blog/10-things-you-need-know-about-competency-based-assessments>
- CRDP, (n.d.), Namozaj Limaayeer Al-Ekhtibarat wa Al-Emtihanat, [Standard Model for Tests and Exams]. Retrieved from <https://www.crdp.org/magazine-details1/674/1043/1041>
- Cullinane, A., (2009), Bloom's Taxonomy and its Use in Classroom Assessment. Retrieved from <https://gimmenotes.co.za/wp-content/uploads/2018/12/MicrosoftWord-ACullinaneResource13Final.pdf>

- Curb, M., (n.d.), Assessment Terms and Definitions. Retrieved from <https://www.csun.edu/mike-curb-arts-media-communication/assessment-terms-and-definitions>
- Djoub, Z., (2016), Teachers' Portfolios: A Reflective Tool towards Professional Development. Retrieved from <https://www.igi-global.com/chapter/teachers-portfolios/146299>
- Education Insights, Teaching Strategies, (2021), What is Authentic Learning and How Do I Use it? Retrieved from <https://www.onatlas.com/blog/what-is-authentic-learning-and-how-do-i-use-it>
- Education Standards Authority, (n.d.), Assessment for, as and of Learning. Retrieved from <https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/understanding-the-curriculum/assessment/approaches>
- European Training Foundation (2021), National Qualifications Framework – Lebanon. Retrieved from <https://www.etf.europa.eu/sites/default/files/2021-07/lebanon.pdf>
- Farook, O., Sekhar, C., Agrawal, J., Bouktache, E., Ahmed, A. & Zahraee, M., (2006), Outcome Based Education and Assessment. Retrieved from <https://peer.asee.org>
- Fauvelle, L., (2020), Qualitative Research: 3 types of interview. Retrieved from <https://www.intotheminds.com/blog/en/qualitative-research-3-types-of-interview/>
- Fedena, (2019), Competency-Based Learning: Pros & Cons. Retrieved from <https://fedena.com/blog/2019/09/competency-based-learning-pros-cons.html>
- Ferri, F., Grifoni, P., & Guzzo, T., (2020). Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. Retrieved from

<https://www.mdpi.com/2075-4698/10/4/86/htm>

Finnish National Board of Education, (2016), New national core curriculum for basic education: focus on school culture and integrative approach. Retrieved from <https://www.oph.fi/sites/default/files/documents/new-national-core-curriculum-for-basic-education.pdf>

Form Plus, (2021), Alternative Assessment: Definition, Types, Examples & Strategies. Retrieved from <https://www.formpl.us/blog/alternative-assessment>

Future Learn, (n.d.), Definition of Knowledge, Skills and Abilities (KSAs). Retrieved from <https://www.futurelearn.com/info/courses/training-development-work/0/steps/88517>

Ghazaleh, B., (2018) Taqweem Al-Motaallem fi Menhaj 1997 [Student Assessment in Curriculum of 1997]. Retrieved from [1_brenda-evaluationنحو استراتيجیة تقویم.pdf](#)

Go Guardian, (n.d.), What is Social-Emotional Learning? Retrieved from <https://medium.com/inspired-ideas-prek-12/5-guiding-principles-of-social-emotional-learning-2f9fb554edad>

Gouedard, P. and Pont, B. (2020), Curriculum Reform: A Literature Review to Support Effective Implementation. Retrieved from [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WK/P\(2020\)27&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WK/P(2020)27&docLanguage=En)

Graziano, S., (n.d.), Incorporating Constructivist Learning in Flipped Classrooms. Retrieved from <https://study.com/academy/lesson/incorporating-constructivist-learning-in-flipped-classrooms.html>

Groepl, J., (n.d.), Role of Assessment in Teaching & Learning. Retrieved from

<https://www.theclassroom.com/role-assessment-teaching-learning-6586784.html>

Guskey, T, (2003), How Classroom Assessments Improve Learning. Retrieved from

https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1008&context=edp_facpub

Hayward, E. (2020), Nations refine mathematics and science education to keep pace with a

changing world. Retrieved from [https://www.eurekaalert.org/pub_releases/2020-11/bc-](https://www.eurekaalert.org/pub_releases/2020-11/bc-nrm111720.php)

[nrm111720.php](https://www.eurekaalert.org/pub_releases/2020-11/bc-nrm111720.php)

Heather Tseng, C., (2015), Implementation and Perspectives of a Content-Based Instruction

Course in an EFL Context. Retrieved from [https://www.eajournals.org/wp-](https://www.eajournals.org/wp-content/uploads/Implementation-and-Perspectives-of-a-Content-Based-Instruction-Course-in-an-EFL-Context1.pdf)

[content/uploads/Implementation-and-Perspectives-of-a-Content-Based-Instruction-](https://www.eajournals.org/wp-content/uploads/Implementation-and-Perspectives-of-a-Content-Based-Instruction-Course-in-an-EFL-Context1.pdf)

[Course-in-an-EFL-Context1.pdf](https://www.eajournals.org/wp-content/uploads/Implementation-and-Perspectives-of-a-Content-Based-Instruction-Course-in-an-EFL-Context1.pdf)

Hill, M., (2017), 5 Guiding Principles of Social and Emotional Learning. Retrieved from

[https://medium.com/inspired-ideas-prek-12/5-guiding-principles-of-social-emotional-](https://medium.com/inspired-ideas-prek-12/5-guiding-principles-of-social-emotional-learning-2f9fb554edad)

[learning-2f9fb554edad](https://medium.com/inspired-ideas-prek-12/5-guiding-principles-of-social-emotional-learning-2f9fb554edad)

Hobson, A. & Townsend, A, (2010), Interviewing as Education Research Method(s).

Retrieved from

[https://www.researchgate.net/publication/287991930_Interviewing_as_Educational_R](https://www.researchgate.net/publication/287991930_Interviewing_as_Educational_Research_Methods)

[esearch_Methods](https://www.researchgate.net/publication/287991930_Interviewing_as_Educational_Research_Methods)

Hodges et al. (2020), The Difference Between Emergency Remote Teaching and Online

Learning. Retrieved from [https://er.educause.edu/articles/2020/3/the-difference-](https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning)

[between-emergency-remote-teaching-and-online-learning](https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning)

ICNDBM, (2019). Research Tools 1: Observation. Retrieved from

<https://icndbm.cikd.ca/research-tools-1-observation/>

Illinois State University, (n.d.), Analyzing Assessment Data. Retrieved from
<https://nbc.illinoisstate.edu/downloads/C4%20Resource%203.7%20Analyzing%20Assessment%20Data.pdf>

Indeed Editorial Team, (2020), Hard Skills vs. Soft Skills. Retrieved from
<https://www.indeed.com/career-advice/resumes-cover-letters/hard-skills-vs-soft-skills>

Indiana University Bloomington, (n.d.), Authentic Assessment. Retrieved from
<https://citl.indiana.edu/teaching-resources/assessing-student-learning/authentic-assessment/index.html>

International Bureau of Education, (n.d.a), Ability. Retrieved from
<http://www.ibe.unesco.org/en/glossary-curriculum-terminology/a/ability>

International Bureau of Education, (n.d.b), Key competences/competencies or skills.
Retrieved from <http://www.ibe.unesco.org/en/glossary-curriculum-terminology/k/key-competencescompetencies-or-skills>

Iowa State University (n.d.), Traditional (Face-to-Face) Teaching. Retrieved from
<https://www.celt.iastate.edu/teaching/teaching-format/traditional-face-to-face/>

IPL, (n.d.), The Importance of Assessment in the Teaching Learning Process. Retrieved from
<https://www.ipl.org/essay/The-Importance-Of-Assessment-In-The-Teaching-PK8C6S36CE8R>

James, M., (2006), Assessment, Teaching and Theories of Learning. Retrieved from
https://www.researchgate.net/publication/271964452_Assessment_Teaching_and_Theories_of_Learning

James, W., (2019), Outcomes-based Assessment. Retrieved from

<https://words.usask.ca/gmcte/2019/11/19/outcomes-based-assessment/>

Jasnani, P., (2021), A Comprehensive 7-Step Process to Design a Competency-Based Curriculum. Retrieved from <https://www.hurix.com/process-to-design-a-competency-based-curriculum/>

Juraschka, R., (2021), Competency Based Education: What is it, And How Your School Can Use it. Retrieved from <https://www.prodigygame.com/main-en/blog/competency-based-education/>

Khattri, N., Kane, M., & Reeve, A. (1995), Research Report / How Performance Assessments Affect Teaching and Learning. Retrieved from <http://www.ascd.org/publications/educational-leadership/nov95/vol53/num03/-How-Performance-Assessments-Affect-Teaching-and-Learning.aspx>

Klenowski, V. et Carter, M. (2016), Curriculum Reform in Assessment and Accountability Contexts. Retrieved from https://www.researchgate.net/publication/289157856_Curriculum_Reform_in_Assessment_and_Accountability_Contexts

Krachman, S. B., Arnold, R., & Larocca, R. (2016). Expanding the definition of student success: A case study of the CORE Districts. Retrieved from <https://www.transformingeducation.org/wp-content/uploads/2017/04/TransformingEducationCaseStudyFINAL1.pdf>

Krathwohl, D., (2002), A Revision of Bloom's Taxonomy: An Overview. Retrieved from <https://www.depauw.edu/files/resources/krathwohl.pdf>

K12 Academics, (n.d.), What is Outcome-based education? Retrieved from <https://www.k12academics.com/education-reform/outcome-based-education/what-obe>

LDA, (n.d.), Your chances of knowing someone with learning disabilities are very good. Did you know? Retrieved from <https://ldaamerica.org/support/new-to-ld/>

Loveless, T., (2013), Ability Grouping, Tracking, and How Schools Work. Retrieved from <https://www.brookings.edu/research/ability-grouping-tracking-and-how-schools-work/>

Lyman, H. B. (1998). Test scores and what they mean (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Martinez, L., (2014), 3 Steps to Increase Students' Self-Awareness: Identifying Strengths and Challenges. Retrieved from <https://loreamartinez.com/2014/03/02/3-steps-to-increase-students-self-awareness-identifying-strengths-and-challenges/>

Mautushi, P., (2021), Robotics in School Education | Use and Importance. Retrieved from <https://www.orchidsinternationalschool.com/blog/child-learning/robotics-in-school-education-use-and-importance/>

McLeod, S., (2016), Albert Bandura's Social Learning Theory. Retrieved from <https://www.simplypsychology.org/bandura.html>

McLeod, S., (2020a), Behaviorist Approach. Retrieved from <https://www.simplypsychology.org/behaviorism.html#sum>

McLeod, S., (2019), Constructivism as a theory for teaching and learning. Retrieved from <https://www.simplypsychology.org/constructivism.html>

McLeod, S., (2020b), Lev Vygotsky's Sociocultural Theory. Retrieved from <https://www.simplypsychology.org/vygotsky.html>

McLeod, S., (2020c), Piaget's Theory and Stages of Cognitive Development. Retrieved from

<https://www.simplypsychology.org/piaget.html>

MEHE, (2020a), Circular 15. Retrieved from

<https://www.mehe.gov.lb/ar/LegislationsRegulations/All/Details?LegislationRegulationId=1012>

MEHE, (2020b), Circular 16. Retrieved from

<https://www.mehe.gov.lb/ar/LegislationsRegulations/All/Details?LegislationRegulationId=1010>

Meshtar, H., (2010), Al-Khalfiyah Al-Nathariyah Li Pedagojya Al-Kifayat, Al Madrasah Al-Jazaeriyah Ay Namothaj? [Theoretical Background of Competency Pedagogy – The Algerian School Belongs to Which Model?]. retrieved from <https://dspace.univ-ouargla.dz/jspui/bitstream/123456789/7102/1/P0401.pdf>

Met, M., (1999), Content-Based Instruction: Defining Terms, Making Decisions. Retrieved from <https://carla.umn.edu/cobaltt/modules/principles/decisions.html>

Merriam, S., & Tisdell, E., (2009), *Qualitative Research*, (Four Edition)

Mikre, F., (n.d.), The Roles of Assessment in Curriculum Practice and Enhancement of Learning. Retrieved from [file:///C:/Users/rasha/Downloads/65376-Article%20Text-129785-1-10-20110413%20\(1\).pdf](file:///C:/Users/rasha/Downloads/65376-Article%20Text-129785-1-10-20110413%20(1).pdf)

Ministry of Education, (2008), Towards a Learning Society in Thailand. Retrieved from <http://www.bic.moe.go.th/images/stories/book/ed-eng-series/intro-ed08.pdf>

Ministry of Education and Culture, (2012), Student performance in Finland at international top level. Retrieved from <https://minedu.fi/en/-/suomalaisten-oppilaiden-kouluosaaminen-on-kansainvalista-karkea>

- Ministry of Education, Singapore, (n.d.), Overview of primary school curriculum. Retrieved from <https://www.moe.gov.sg/primary/curriculum/overview>
- Ministry of Education, Singapore, (2021), 21st Century Competencies. Retrieved from <https://www.moe.gov.sg/education-in-sg/21st-century-competencies>
- Ministry of Education, Thailand, (2017), Thai Education in Brief. Retrieved from <http://www.en.moe.go.th/enMoe2017/index.php/policy-and-plan/thai-education-in-brief>
- Missouri State, (2021), The Assessment Process. Retrieved from <https://www.missouristate.edu/assessment/the-assessment-process.htm>
- Mukhopadyay, L., (2011), Developing a Content Assessment Instrument: Testing Implications. Retrieved from https://www.academia.edu/839638/Developing_Content_Based_Assessment_A_Project
- Mullis, I. and Martin, M., (2012), Using TIMSS and PIRLS to improve teaching and learning. Retrieved from <https://journals.openedition.org/ree/5835>
- NCEE, National Center on Education and the Economy (n.d.), Singapore. Retrieved from <https://ncee.org/country/singapore/>
- OECD, (1999), Measuring Student Knowledge and Skills. Retrieved from <https://www.oecd.org/education/school/programmeforinternationalstudentassessment/pisa/33693997.pdf>
- OECD, (n.d.), PISA 2018 results. Retrieved from <https://www.oecd.org/pisa/publications/pisa-2018-results.htm>

- Oposinet, (n.d.), Topic 65 – The Educational system in the Anglo-Saxon World. Retrieved from <https://www.oposinet.com/temario-de-ingles-secundaria/temario-2-ingles-secundaria/topic-65-the-educational-system-in-the-anglo-saxon-world/>
- Ozer, M., Suna, H.E., Celik, Z & Askar, P., (2020), The Impact COVID-19 School Closures on Educational Inequalities. Retrieved from <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/pt/covidwho-1068017>
- paNow, (2016), Outcome Based Learning Explained! Retrieved from <https://panow.com/2016/04/26/outcome-based-learning-explained/>
- Paquay, L., (2012), Continuité et Avancées dans la Recherche sur la Formation des Enseignants. Les cahiers de recherche du Girsef, N°90, Louvain-la-Neuve, mai 2012.
- Parameswaran, P., (2019), Improve student performance by identifying weaknesses. Retrieved from <https://megaexams.com/improve-student-performance-identifying-weaknesses/>
- Parents Together Action, (2020), ParentsTogether Survey Reveals Remote Learning is Failing Our Most Vulnerable Students. Retrieved from <https://parentstogetheraction.org/2020/05/27/parentstogether-survey-reveals-remote-learning-is-failing-our-most-vulnerable-students-2/>
- Patton, M. Q. (1985.). Quality in qualitative research: Methodological principles and recent developments. Invited address to Division J of the American Educational Research Association, Chicago.
- Peachey, N., (n.d.), Content-based instruction. Retrieved from <https://www.teachingenglish.org.uk/article/content-based-instruction>

- Promethean, (2017), Classroom differentiation: ability, readiness, and interest. Retrieved from <https://resourced.prometheanworld.com/differentiation-ability-readiness-interest/>
- QTII, (n.d.), Defining the WHAT: Objectives for Effective Teaching. Retrieved from <http://qtii.org/ObjBasPTA.htm>
- ResourceEd, (n.d.), A complete look at assessment in education. Retrieved from <https://resourced.prometheanworld.com/assessment-in-education/>
- Rhalmi,M., (2009), Content Based Instruction. Retrieved from <https://www.myenglishpages.com/blog/contentbased-instruction/>
- Ried, D. (2011), A Model for Curricular Quality Assessment and Improvement. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3279014/>
- Sa, M.J. & Serpa, S., (2018), Transversal Competences: Their Importance and Learning Process by Higher Education Students. Retrieved from https://pdfs.semanticscholar.org/9086/c9350db71edabaf16541c6e9ec94997d6a47.pdf?_ga=2.244996869.1653769124.1629452696-435026298.1627074686
- Saowapon, C., Laohajaratsaeng, T., Thammajinda, R., and Singharajwarapan S., (n.d.), Education Reform and E-Learning in Thailand. Retrieved from <https://www.oecd.org/education/skills-beyond-school/2428376.pdf>
- Sangbuaphuen, R., (2020), Towards a Competency-based Thai Basic Education Curriculum: A Conceptual Framework. Retrieved from https://neqmap.bangkok.unesco.org/wp-content/uploads/2020/09/PPT-Rattana_Basic-Education-Presentation-on-CBC.pdf
- Saskatchewan Reads, (2010), Assessment For, As, Of Learning. Retrieved from

<https://saskatchewanreads.wordpress.com/assessment-for-as-of-learning/>

Schleicher, A., (2020), The Impact of COVID-19 on Education, Insights From Education At a Glance 2020. Retrieved from <https://www.oecd.org/education/the-impact-of-COVID-19-on-education-insights-education-at-a-glance-2020.pdf>

Sharma, R., (2020), Online Learning and it's Positive and Negative Impact in Higher Education During COVID-19. Retrieved from https://eprajournals.com/jpanel/upload/850pm_32.EPRA%20JOURNALS-5163.pdf

Soparat, S., Arnold, S.R., & Klaysom, S. (2015). The development of Thai learners' key competencies by project-based learning using ICT. International Journal of Research in Education and Science (IJRES), 1(1), 11-22. Retrieved from <https://files.eric.ed.gov/fulltext/ED548501.pdf>

Spady, W., (1994), Outcome-Based Education. Retrieved from <https://files.eric.ed.gov/fulltext/ED380910.pdf>

STU Online, (2018), Importance of Educational Measurement, Assessment and Evaluation. Retrieved from <https://online.stu.edu/articles/education/educational-measurement-assessment-evaluation.aspx>

Team XQ, (2020), What is Inquiry-Based Learning? (IBL). Retrieved from <https://xqsuperschool.org/rethinktogether/what-is-inquiry-based-learning-ibl/>

The California State University, (2007), Choosing appropriate assessments. Retrieved from <https://cdip.merlot.org/facultyteaching/Choosingappropriateassessment.html>

The Hun School of Princeton, (2020), What is Problem-Based Learning? Retrieved from <https://www.hunschool.org/resources/problem-based-learning>

The Psychology Notes HQ, (n.d.), Lev Vygotsky's Sociocultural Theory of Cognitive Development. Retrieved from <https://www.psychologynoteshq.com/vygotsky-theory/>

Triad 3, (2016), An Introduction to Document Analysis. Retrieved from <https://lled500.trubox.ca/2016/244>

UCI Health (2020), Why is COVID-19 so dangerous?. Retrieved from <https://www.ucihealth.org/blog/2020/04/why-is-covid19-so-dangerous>

UNESCO (n.d.a), Education: From disruption to recovery. Retrieved from <https://en.unesco.org/covid19/educationresponse>

UNESCO (n.d.b), Measuring global education goals: How TIMSS helps. Retrieved from https://www.iea.nl/sites/default/files/2020-12/EN_IEA%20UNESCO%20Joint-report_TIMSS%202019-final.pdf

Unified Classroom, (2021), Project-Based Learning: Benefits, Examples, and Resources. Retrieved from <https://www.powerschool.com/resources/blog/project-based-learning-benefits-examples-and-resources/>

University of Arkansas, (n.d.), Bloom's Taxonomy for Effective Learning. Retrieved from <https://success.uark.edu/get-help/student-resources/blooms.php>

University of Wisconsin-Whitewater, (n.d.), Why do we assess? Retrieved from <https://www.uww.edu/Documents/acadaff/AssessmentDay/AcadAssessSummary11.20.pdf>

UoPeople (n.d.), Emergency Remote Teaching Vs. Online Learning: A Comparison. Retrieved from <https://www.uopeople.edu/blog/emergency-remote-teaching-vs-online-learning/>

- Verenikina, I., (2003), Vygotsky's Socio-Cultural Theory and the Zone of Proximal Development. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=&httpsredir=1&article=4207&context=sspapers>
- WARD, (2018), Reviewing Life and Work Skills for Youth in Lebanon. Retrieved from https://en.unesco.org/sites/default/files/lebanon_1.pdf
- WGU, (2020a), Five Educational Learning Theories. Retrieved from <https://www.wgu.edu/blog/five-educational-learning-theories2005.html>
- WGU, (2020b), What is Cognitive Learning? Retrieved from <https://www.wgu.edu/blog/what-is-cognitive-learning2003.html>
- WGU, (2020c), What is The Behavioral Learning Theory? Retrieved from <https://www.wgu.edu/blog/what-behavioral-learning-theory2005.html#close>
- Whittemore, S.T., (n.d.), Transversal Competencies Essential for Future Proofing the Workforce. Retrieved from <https://www.cornerstoneondemand.com/sites/default/files/partner/asset/files/skills-transversal-skills-future-proof.pdf>
- WHO (2021), Coronavirus disease (COVID-19) advice for the public. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public#:~:text=If%20COVID%2D19%20is%20spreading,Do%20it%20all>
- World Bank Group Education (2018), Lebanon PISA 2018. Retrieved from <https://thedocs.worldbank.org/en/doc/435071580399593024-0280022020/original/LEBANONPISABrief20>