

A survey of teachers' perceptions of the use of alternative assessment strategies in the virtual classroom

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Teachers' Perception of Alternative Assessment Utilization in Virtual Classroom in Trinidad and Tobago

ABSTRACT

This cross-sectional survey research sought to investigate teachers' perceptions about the use of alternative assessment strategies in the virtual classroom. It also addressed the competencies and resources needed by teachers to undertake the assessment process successfully.

The population selected for this study was primary and secondary school teachers who were actively engaging students virtually during the years of the pandemic. Purposeful sampling was used to select the participants and the instrument used was a questionnaire comprising closed and open-ended items.

The findings revealed that teachers are aware of alternative assessment and they used several alternative assessment strategies to assess their students during the pandemic. However, concerns were expressed about the soundness of the assessment results. Teachers stated that while students appeared to be doing well it was discovered that many of them were receiving assistance from parents and other relatives. This skewed the assessment data and defeated the purpose of the assessment exercises.

Teachers recognize that they do not possess all of the competencies and resources needed to engage in the successful use of alternative assessment strategies. They suggested that workshops should be conducted to improve their competencies. Also, teacher training institutions should be guiding trainee teachers towards the development of competencies such as: the use of online platforms to conduct student assessment; collaboration with students and colleagues; the delivery of timely feedback and creativity.

In terms of resources, teachers stated that time should be allocated for them to plan and prepare alternative assessment exercises. In addition, planning rooms in schools should be made available; and online access to local and international library facilities.

This study leaves room for more research in the area of alternative assessment; also teachers should be encouraged to become active researchers, and to support and participate in the research activities of their colleagues.

Key words: Assessment, Alternative assessment, Classroom assessment, Formative assessment, Competencies, Virtual classroom

Comment [L2]: The abstract should be a single paragraph. Consisting of:

- i. The aim of the paper;
- ii. The research Design;
- iii. Population, Sample and Sampling technique;
- iv. The research instrumentation with the psychometric properties;
- v. Procedure for data collection;
- vi. Method of Data Analysis;
- vii. The Results/ findings of the study;
- viii. The main recommendations in precise, non- verbose form.

Comment [L3]: Reduce these Keywords to maximum of five.

1.0 INTRODUCTION:

The COVID-19 pandemic (the pandemic) shocked education systems worldwide, affecting where and how students learn, how they interact with teachers and peers, and how their learning is monitored and supported. (Luna-Bazaldua, Liberman & Levin, 2021, p. 1). The pandemic brought untold suffering and death on the human population of the world. In addition, all institutions were adversely affected, including all educational institutions, which were forced to close. Consequently, virtual teaching and learning replaced face-to-face instruction; teachers and students (over 1.5 billion) entered a virtual world for which few were prepared.

The virtual format was challenging for many teachers and they felt increasingly overwhelmed as they sought to adjust their modus operandi. (Parker & Alfaro, 2021, p. 13). The virtual classroom is an online teaching and learning experience where teachers and students can present course materials, engage and interact with other members of the virtual class, and where all students learn the same content in a similar way. This is a live, synchronous setting, e.g. via Zoom, MS Teams or Google Meet. Online work can also involve asynchronous activities that students can do on their own and at their own pace and time via Canvas and Blackboard. Some asynchronous materials include the viewing of pre-recorded work, a PDF (Portable Document Format), audio, recorded webinar or an e-learning course. (Kumar, Sarkar, Davis, Morphet, Maloney, Ilic & Palermo, 2021, p. 4).

Many teachers were overwhelmed because up to the start of the pandemic they were not the major drivers of change within the education system. In this new century society is located within the 4th Industrial Revolution, where society is driven by technology, data and the knowledge economy. It is a fusion of advances in artificial intelligence (AI), robotics, the Internet of things (IoT), genetic engineering, quantum computing and more. (McGinnis, 2020). However, despite this, schools continue to operate within a 19th century environment where pedagogy and student assessment have not seen major adjustments. The education system in the Caribbean has been described as a 19th century Industrial Age,

Comment [L4]: The introduction should be between 4 and 7 pages to encompass the Conceptual, Theoretical and the Empirical reviews of the study.

Should be concise and precise on the variables of the study.

No need of subheadings for the Introduction.

examination-driven education system that the British bequeathed to the countries of the region as part of their colonial legacy. In the 19th century, the point of the education system was to inculcate obedience in students, so that they could assume industrial jobs on a factory floor. These jobs are very few in the 21st century and their numbers continue to shrink. (George, 2016. p. 3). The world of the 21st century requires different skills, some of these skills which are valued are: creativity, communication, collaboration, problem solving, decision making, critical thinking and information literacy.

Virtual learning became necessary to support learning continuity during the pandemic, but simply making content available to students is not enough. It is important to know whether, and how students are in fact learning from the remote resources. Student assessment, just like instruction could not be put on hold until the end of the pandemic. Assessing students is the only way to identify where students need support, and to plan actions to address learning needs or gaps. (Luna-Bazaldua, et al, 2021, p. 1).

Prior to the lockdown occasioned by the pandemic, school children in Trinidad and Tobago were taught in a typical classroom setting with in-person, face-to-face activities, and minimal class time spent on digital devices (DD) during the school day. However, the pandemic and lockdown measures led to an increase in the use of DD for various purposes, including virtual learning. This sudden change in learning, work and communication during the pandemic became the new normal and people needed to modify how they lived and worked. (Schieman et al, 2021, cited by Ekemiri, Esinne, Kamalodeen, Pierre, Lalla, Amiebenomo, Van Staden, Zered, Ekemiri, Agho and Osuagwu, 2022).

Before the pandemic, the government of Trinidad and Tobago (the government) had policies in place to equip all secondary schools with the necessary equipment for modern education. One part of the policy was to give each secondary school fifty laptops to use within the school premises. Only urban schools received laptops as the distribution was incomplete by the time schools were closed in March 2020. Once schools were closed, students and teachers were unable to access the laptops although virtual teaching and learning became the

norm during the early months of the pandemic. (Doller, Nyarange and Campbell, 2020).

In response to the closure of schools and the introduction of virtual classes, the government launched the School Learning Management System (SLMS). Because of the pandemic the programme was rushed and there were technical difficulties and crashes after its launch. It is to be noted that the SLMS programme did not help those students who lacked devices and had no Internet access. (Doller, et al, 2020).

The government recognized that the resources needed to participate in virtual schooling were inaccessible to about 60,000 thousand students. The Ministry of Education provided most teachers with laptops, but was unable to resolve the accessibility issue for poorer students. The Roman Catholic Board of Education stepped in during 2020, partnering with the Telecommunications Services of Trinidad and Tobago (TSTT) to bring Internet connectivity to almost 2000 students. (The Borgen Project, 2021).

The education system in Trinidad and Tobago comprises government/state, denominational (church) and privately owned schools at all levels of the education system. There are five stages: childhood care/kindergarten (3-4 years); primary (5 – 11 years); secondary (12 – 17 years); post-secondary (vocational) and tertiary levels. The country is divided into eight educational districts, each headed by a School Supervisor III (SS III) assisted by SS IIs responsible for secondary schools; and SS Is responsible for primary schools. All educational policies and mandates emanate from the Ministry of Education, the central authority that runs the public education system. (Brown, Bristol, DeFour-Babb and Conrad, 2013, p. 3).

Compulsory education in Trinidad and Tobago is from age 5 to 11 years. The academic year begins in September and ends in July for primary to post-secondary education. (UNESCO, 2020, p. 1). Trinidad and Tobago has universal ECCE, primary and secondary education and access to heavily subsidized tertiary education, including vocational education. (Kalloo, Mitchell & Kamalodeen, 2020, 2020, p. 453).

The following examinations are done by students in Trinidad and Tobago: The Secondary Examination Assessment (SEA) a standardized national placement and exit examination done by standard 5 primary school students. Two regional examinations, the Caribbean Secondary Examination Certificate (CSEC); and the Caribbean Advanced Proficiency Examination (CAPE), these examinations are done by form 5 (grade 9) and form 6 (grade 11) secondary school students. CSEC and CAPE are standardized exit examinations which certify students for employment and entrance to tertiary institutions. (Kalloo et al, 2020, p. 452).

SEA, CSEC and CAPE are high stakes examinations and classroom instruction is focused on preparing students for these examinations; they are also mandatory examinations required by the education system. These examinations are considered high stakes because the results carry serious consequences for the test takers. In addition, the outcomes are used to make decisions about promotion, admissions, graduation and accountability. Accountability is seen as an obligation of educators to accept responsibility for students' performance on high-stakes assessment. (Jones & Ennes, 2021, p. 2; Hurst, 2012, p. 3).

The test-driven education system used in the Caribbean is unlikely to create students who demonstrate the 21st century skills which are required by employers, and for life. This is so because the present system values those teachers who can produce large numbers of students who can respond accurately to content-driven examination questions. These teachers get students to pass examinations by teaching them how to write the types of questions that are presented on the various examinations. (George, 2016, p. 3). In this type of classroom environment one wonders what level of learning is taking place, and what type of human being is being prepared to take his/her adult place in Trinidad and Tobago society.

The Caribbean Examination Council (CXC) has taken the initiative and is in the process of reviewing the suite of examinations which they offer. CXC is also benchmarking all of their products – from syllabuses to examinations – against international best practices to ensure global competitiveness. CXC is

attempting to develop international partnerships that will help leapfrog CXC into the next level. (Jules, 2015, p. 12).

At the level of the Caribbean Community (CARICOM) the need for educational reform has been recognized. The CARICOM Council for Human and Social Development (COHSOD) has been tasked with drafting a Regional Strategic Action Plan to present a harmonized approach to educational reform in CARICOM. COHSOD has to develop an Education Human Resource Development 2030 strategy. The intent of the Plan is to ensure that the systems operating at all levels – national, sub-regional and regional – are developing the skills graduates need to function effectively in a 21st century, economy and society. (George, 2016, p. 1). In Trinidad and Tobago, the onus is on the government and other stakeholders to change the way in which classroom assessment is done so that our students are not left behind.

CXC and CARICOM recognize the need for a change in assessment practices. Therefore, it is imperative that individual Caribbean countries improve on the assessment techniques that teachers use at the classroom level. Assessment should be transformed from a mere measure of short-term learning to a crucial component of the teaching and learning process. In this proposed system of assessment learning becomes personalized and students are encouraged to adopt a mindset focused on discovery and engagement, rather than on grades and test scores. (Whitman and Hardiman, 2014, p. 36). Alternative assessment strategies may well be the medium through which these goals can be achieved.

1.2 Statement of the Problem

This study seeks to investigate teachers' perceptions about the use of alternative assessment strategies in the virtual classroom; and the competencies needed to undertake this task successfully. Assessment is an integral part of the teaching and learning process and teachers should possess the necessary competencies that would enable them to effectively deal with student assessment

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There have been overutilization of paper-pencil test in the classroom which has brought boredom to instructional processes.....

Let see the problem that led to your investigations.

Equally, refer to what has already been accomplished in research to tackle the problem.,

Then, identify what is yet to be effectively researched into that creates a gap or lacuna for the present study.

generally, and the use of alternative assessment strategies. This is imperative especially in the virtual teaching environment to which teachers may be required to return at any time; added to this, teachers are expected to teach and assess 21st century skills.

1.3 Research Objectives

The goals of this study are to elicit from teachers:

1. Whether or not alternative assessment strategies were used in the virtual classroom during the pandemic years.
2. The competencies required to effectively design and administer alternative assessment strategies
3. The resources and support which are needed to make teachers effective assessment practitioners in the virtual classroom.

1.4 Student Assessment

The importance of student assessment cannot be overemphasized and this is supported by research.(Shepard, Hammerness, Darling-Hammond, Rust, Snowden, Gordon, Gutierrez& Pacheco, 2005, in Darling-Hammond and Branford, 2005, p. 275; Guskey, 2003, p. 7). The assessment of student learning is “the process of gathering and evaluating information on what students know, understand and can do in order to make an informed decision about the next step in the educational process. (Liberman, Levin & Luna-Bazaldua, 2020, p. 1). Assessment (monitoring student learning) is part of a triad, which works together symbiotically; it involves the curriculum (content that students learn); and learning and teaching. (Hill & Barber, 2014, p. 11).It can be said that student assessment is a systematic process, and its purpose is to improve teaching and learning, and to provide information to improve student learning, the teacher’s delivery of instruction, and to provide policymakers with the data necessary to make informed decisions.

During the pandemic, many teachers found themselves in the position of having to figure out how to adapt assessments to the new virtual environment. This task could not be avoided because once instruction moved to a virtual environment, so too did assessment. (Close, 2021, p. 2). Despite the continued presence of the pandemic, teachers needed to determine what students have or have not learned. Assessment data were still needed to drive instructional decision-making and accelerate learning. The value of these data is as important as ever, considering stakeholders do not really know how effective remote instruction has been. (Laitusis, 2020, p. 1).

In the presence of the pandemic and the virtual learning environment, parents, educators, administrators, and policymakers required more information about how students are doing and being served, not less. These data were expected to capture multiple aspects of student well-being, including, social-emotional needs, engagement, and conditions for learning so that families and policymakers can be responsive to the needs of all students. These data can only be acquired through the assessment process and cannot be lost or delayed. (Jimenez, 2020, p. 1; and Burgess & Sievertsen, 2020, p. 1).

It is to be noted that in the past an assessment was generally synonymous with a test. Today this is no longer true. (ProProfs, 2022, p. 1). "Assessment" is also not synonymous with the terms "measurement" or "evaluation". The word "test", is the narrowest of the terms and it comprises the presentation of a standard set of questions to be answered; based on the answers given, a numerical measure is arrived at to indicate a characteristic of the person taking the test. A test answers the question "how well" does an individual perform in comparison with others or in comparison with a domain or performance task; students are given the exact procedures for administering and scoring. (Mehrens & Lehmann, 1984, p. 5).

Testing is any technique that involves systematically observing and scoring elicited responses of a person or object under some level of standardization. (Markus and Borsboom, 2013, p. 2, cited by Brown, 2019, p. 1).

“Measurement” is the process of obtaining a numerical description of the degree to which an individual possesses a particular characteristic. Measurement answers the question “how much”, “how often” or “how well”, by providing scores, ranks or ratings for a series of characteristics, and measurement is done quantitatively. (Gronlund, 1985, p. 5). Testing is formal and often standardized and is one type of measurement tool. (Mehrenset al, 1984, p. 5).

“Evaluation”, a much older term than assessment, has embedded within it the word “value”; it indicates processes for determining the merit, value or worth of some product, process, program, personnel, etc. (Brown, 2019, p. 1). “Evaluation” is the systematic process of collecting, analyzing and interpreting information to determine the extent to which pupils are achieving instructional objectives. It answers the question “how good”. (Gronlund, 1985, p. 5). “Evaluation” can be done quantitatively or qualitatively to determine the value or worth of something. Researchers have advised that people are not measured or evaluated, but the characteristics or properties of people are measured or evaluated, however, people can be assessed. (Mehrens et al, 1984, p. 5). An evaluation is about showing the shortfalls and is judgmental, while an assessment is about providing feedback and it is positive.

Even though an assessment is being conducted in the virtual environment and an alternative modality is being used, the assessment must be of good quality: it must meet the standards of validity and reliability, and it should present the following characteristics:

- ✓ Content should be simple, clear, easily understood and in line with the syllabus and the topic taught.
- ✓ The exercise should have a measurable outcome, i.e., there should not be any flaws with respect to the content.
- ✓ The exercise should grasp students’ interest, be objective, creative and not boring to students. (Singh, 2019).

In addressing student assessment, it needs to be recognized that the classroom is the place where assessment is most valuable. Classroom assessment

is one of the most powerful weapons in a teacher's arsenal. (Marzano, 2006, p. 2). It refers to the ongoing assessment that takes place during the instructional process in an attempt to improve teaching and learning; and activities are designed or selected by teachers. (Rodrigues, 2020, p. 2). Teachers are also able to identify what they taught and what they need to do to improve instruction. (Naim, Rami, Talib, Uysuf&Tungyak, 2016, p. 69). This type of classroom assessment is formative in nature (assessment **FOR** and **AS** learning).

Formative assessment can be described as: a cycle of instruction, and immediate data-gathering to collect feedback that helps the teacher readjust instruction, and the sharing of that feedback so students themselves are engaged in the learning process. (Sawchuk, 2011, p. 1). It is to be noted that summative assessment (assessment **OF** learning) is also done at the classroom level. It occurs at the end of instruction and provides a summary of accomplishment. The end of term final examination is a classic example of summative assessment. (Woolfolk, 2013, p. 549). However, the strength of classroom assessment lies in its formative component which is geared towards the promotion and improvement of learning and achievement, and is integrated into the teaching-learning process. (Black & Wiliam, 1998 b; Moss & Brookhart, 2009, cited by Brown et al, 2013, p. 2). It is within this environment that the use of alternative assessment strategies can be invaluable to teachers and by extension of benefit to students.

Virtual learning has broadened the possibilities of assessment because it gives the teacher a wide variety of tools which can be used to help students interact with material in new and exciting ways. (Norman, 2016, p. 1). Because of the pandemic, teachers were unable to use the normal paper-and-pencil/pen pop quizzes which were done in the physical classrooms. Online polls, discussion boards and chat boxes became the new mainstays of formative assessment in virtual classrooms. These are examples of alternative assessments, and have been described as quick pulse checks which help teachers make sure that students are grasping key concepts. (Fleming, 2020, p. 1).

1.5 Alternative Assessment

Alternative assessment has been around since the 1990s. It started off being used as a means for educational reform due to the increasing awareness of the influence of testing on curriculum and instruction. (Dietel et al, 1991, cited by Dikli, 2003, p. 15). Alternative assessment largely emerged in response to the perceived inadequacies of more traditional forms of assessment; and especially to shortcomings when applied to learners with special needs. However, the potential usefulness of alternative assessment in incorporating the various intelligences, and preferred learning styles of all learners, was soon recognized. (Al-Mahrooqi & Denman, 2018, p. 1). It presents a direct examination of significant tasks that are relevant to life outside of school. This direct assessment of students is not new, and one variety of direct assessment is oral examinations which date back to the time of Socrates. (Worthen, 1993, p. 444).

Other terms used synonymously with alternative assessment are: performance assessment; authentic assessment (Wiggins, 1989); direct assessment, constructive assessment; and embedded assessment (Wilson & Sloane, 2000). (Tan, 2012, p. 1). This researcher perceives alternative assessment as an independent construct or approach to assessment which utilizes the use of authentic tasks to determine how students apply what they have learnt or knowledge acquired to certain performance activities. So the concepts of “authentic” and “performance” can be seen as characteristics of alternative assessment strategies and should not be used synonymously with the term alternative assessment. In this study alternative assessment will be used to describe new and varied forms of assessment used by teachers.

Alternative assessment is concerned with determining a student’s level of proficiency in a subject, as opposed to the student’s level of knowledge. The student is required to perform meaningful tasks that reflect a clear understanding of the teaching and learning objectives. Alternative assessment forces students to wear their thinking hats and creatively apply their knowledge to solve a problem. (Formplus, 2021, p. 1). Alternative assessment examines what students can and cannot do; it is an assessment of performance where students are asked to perform

real-world (authentic) tasks that demonstrate meaningful application of essential knowledge and skills. These tasks include project work, portfolios, writing an article for a newsletter or newspaper, performing a dance or drama, designing a digital artifact, creating a poster, debates and oral presentations. These authentic tasks tend to make students motivated as they are given the opportunity to perceive the relevance of the tasks to the real world. Students consider it meaningful learning. (Billah, 2018, p. 2). Therefore, just changing the format of a test does not constitute alternative assessment. (Stobart&Gipps, 2010).

Some other examples of alternative assessment final products are: reflective journals, songs, a literary digest or illustrated book report; a family tree, an interview, a pamphlet, poems, and puppet shows. Other strategies include: crossword puzzles; illustrated stories, magazines; a collage, poster or monologue; comic strips, photo essays, skits, video presentations or games; computer simulations, mobiles and dioramas. Open-ended questions, exhibits, demonstrations, hands-on-execution of experiments, computer simulations and portfolios are all alternatives to the traditional pen/pencil/ and paper tests. (Dikli, 2003, p. 14).

One of the most central tenets in the practical application of alternative assessment strategies is that each student should be assessed in a variety of different ways and should have multiple opportunities to demonstrate learning in various modes. (Butler, 1997, p. 6; Litchfield & Dempsey, 2013, p. 444; and Pope, 2019, p. 1). To rely too heavily on one and only one instance of a particular type of assessment unfairly disadvantages some students, while unfairly advantaging others. To more fully capture the complexity of a student's learning, multiple ways of viewing a student's performance on many occasions over an extended period of time are crucial. (Butler, 1997, p. 6). By using different alternative assessments students participate in an assessment process where they can "fail forward", their mistakes or failures can lead to breakthroughs, understanding and student growth. (Whitman et al, 2014, p. 41).

Alternative assessment ensures that students participate in their learning experience, they tend to spend more time-on-task, and therefore, learn, retain and

transfer more course content. Students are more engaged and have a greater interest in the material being taught because they are involved in creating their own products/responses. Also, students can exhibit their learning in creative and unique ways. (Litchfield & Dempsey, 2013, p. 443).

A central assumption of alternative assessment is that learning assessments, including those done by teachers, classmates, or the students themselves, should provide feedback to learners so that they have an opportunity to learn from their assessments. Assessment should serve the learning process rather than simply evaluating it. (Butler, 1997, p. 7). In addition, the criteria that the students are required to fulfill are made public and known in advance (this occurs when rubrics are formulated by teachers in collaboration with students). By letting students know what is expected of them in clear terms before students begin work, and by providing feedback at various stages of the learning process, students benefit from ongoing assessment rather than summative or end-stage assessment. (Butler, 1997, p. 6). In alternative assessment the role of the teacher changes, the teacher is no longer repository of knowledge, but a facilitator of learning. (Butler, 1997, p. 10).

Despite the need for alternative assessment to be used and its value, there is some skepticism among researchers. It is felt that alternative assessment involves completely new procedures which are untried and not supported by research. Also, there are no rigorous approaches to test construction, implementation and decision-making. (Brown, et al, 1998, cited by Al-Mahrooqui et al, 2018, p. 1). In addition, other concerns about the use of alternative assessment strategies have been raised: there is a loss of predictability in the classroom, and teachers cannot be sure what students will say when they engage in discussions in response to open-ended questions asked in the class. Classes tend to be loud because of the class discussions. Another criticism is that alternative assessment is time consuming; but these issues are solvable. Many educators are creating time for the construction of alternative assessment strategies and the evaluation of student performance by reorganizing the school schedule and by using team teaching.

1.6 Theoretical Framework

Alternative assessment is compatible with, and emerged from, the constructivist theory which views learners as constructors of knowledge. Constructivism is an approach to learning which holds that people actively construct or make their own knowledge; and that reality is determined by the experiences of the learner. (Elliott, et al, 2000, p. 256, cited by McLeod, 2019, p. 1). Within the constructivist theory meaning is not imparted or transferred from teacher to student, rather meaning is made or created by the student or learner. (Janisch et al, 2007, p. 222). The learner is not a passive recipient of knowledge, but actively participates in the process. However, this creation of knowledge is socially constructed, in interactions with other persons, e.g., the teacher, other students and individuals. In addition, the knowledge constructed by a learner is also personal. The same lesson can be perceived differently by each student as students' subjective interpretation of content differs. Learning is a cognitive activity, it exists in the mind, and does not have to match any real-world reality. (McLeod, 2019, p. 1 and Driscoll, 2000 cited by McLeod, 2019, p. 3).

The constructivist view of learning is grounded in the research of Jean Piaget (radical), Lev Vygotsky (social), Jerome Bruner, Von Glaserfeld, John Dewey, the Gestalt psychologists and the work in anthropology of Jean Lave. Constructivism as a theory was propounded by Jerome Bruner in 1966, and is based upon the principles of cognitive theory, and is sometimes referred to as cognitive constructivism. It was believed that the learning theories at the time (behaviorism and humanism) did not adequately represent the actual learning process. Their ideas were rooted in experiences in the classroom instead of experiments in a lab (compared to behaviorism). (Brau, 2018, p. 1).

There is no one constructivist theory of learning, but most constructivist theories have two common features: 1. Learners are active in constructing their own knowledge; and 2. Social interactions are important in this knowledge

construction process. (Bruning, Schraw and Norby, 2011, cited by Woolfork, 2013, p. 359).

1.6 Teacher assessment competencies

The use of alternative assessment in the classroom to improve student learning is not a new idea, however, the challenge is in ensuring that teachers are equipped with the required competencies so that they can effectively use alternative assessment strategies. This study hopes to identify the competencies which teachers need to be taught, so when these teachers are placed in schools they can create and drive a paradigm shift in the way in which students are assessed in Trinidad and Tobago.

In this study the term “competency” will be used instead of the word “skill” to explain what teachers should know in the area of alternative assessment and assessment generally. Skills are specific, and learned physical tasks or activities. Competencies incorporate a set of skills:

Competencies = skills + knowledge + abilities

The components of competencies enable a person to perform effectively in a job or situation. A competency can set a person apart from others, it is core to a person and how that person works or performs. (Davis, 2018, cited by McNeill, 2020, p. 2). A competency is more than just knowledge and skills, it involves the ability to meet complex demands by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context competency is essential to an educator’s pursuit of excellence. (Nessipbayeva, 2012, p. 150).

Educators should demonstrate several competencies, e.g., effective classroom management, effective teaching practices, technology skills and effective assessment. Effective assessment involves incorporating formal tests, responses to quizzes; evaluation of classroom assignments, student performances

and projects and standardized achievement tests to understand what students have learnt. (Nessipbayeva, 2012, p. 154).

Some competencies which teachers should possess in order to effectively engage in alternative assessment and assessment generally, are illustrated at Figure 1.

Comment [L6]: The Introduction should encompass:
 1.The Conceptual review of the study;
 2.The Theoretical review of the study; and
 3.The Empirical review of the study.

After which the Statement of the Problem follows it;

Followed by the Objectives of the study;

Followed by the Research Questions or and Hypotheses before the Methodology.

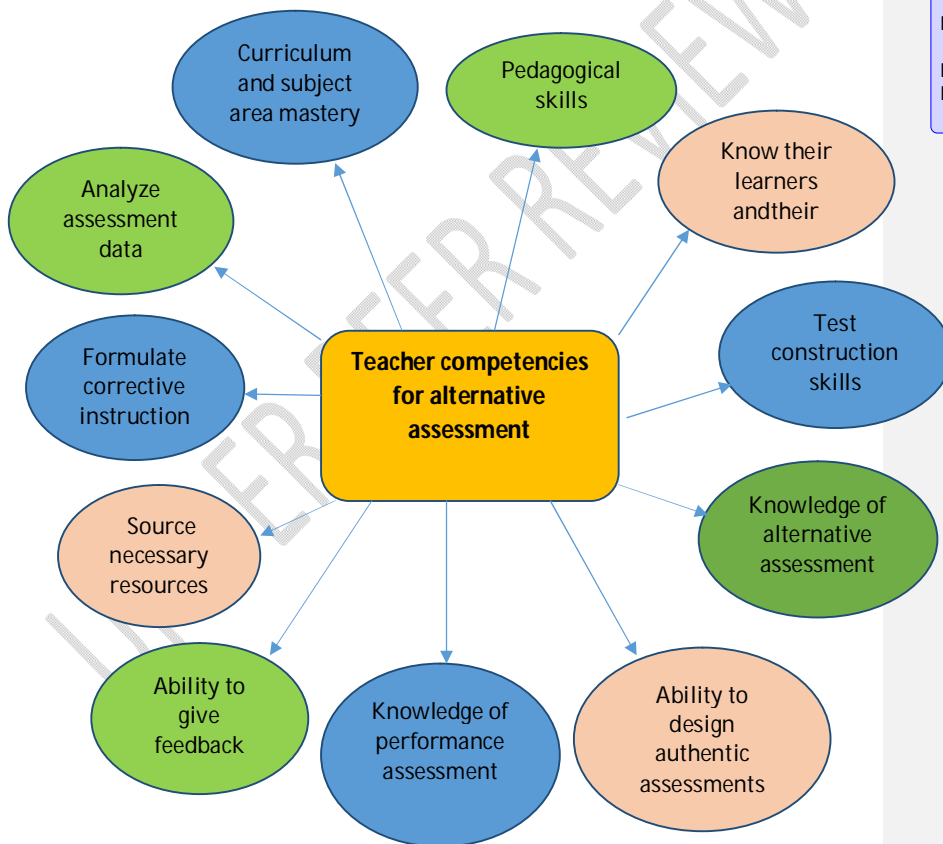


Figure 1. Competencies for Alternative Assessment

1.7 Methodology

This study is a cross-sectional survey research conducted during the period September to November, 2022. Surveys are of two kinds: cross sectional (data are collected at a single point in time); or longitudinal (where data are collected two or more times). Survey research involves collecting data to test hypotheses or to answer questions about people's opinions on some topic or issue. A survey is an instrument to collect data that describe one or more characteristics of a specific population. (Gay, Mills and Airasian, 2012, p. 184). Survey research designs are procedures in quantitative research in which investigators administer a survey (an instrument) to a sample or to the entire population of people to describe the attitudes, opinions, behaviours or characteristics of the population. (Tanny, 2018, p. 1).

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The information collected by survey instruments (e.g., a questionnaire) is assumed to be quantifiable. In the case of a multiple choice questionnaire items the information is quantified at the time it is collected. If open-ended questions are used the information obtained must be codified so that it can be analyzed and reported quantitatively. (Borg and Gall, 1989, p. 418). However, this researcher opted to report data from the open-ended questions in narrative form. In this study the data provided from the open-ended questions will be used to enrich the findings and give a voice to the participants in this study.

Conducting a survey research is not just a straightforward process of asking questions and reporting answers. Survey studies often suffer from a lack of participant response. Many potential participants (who agreed to participate) do not return the completed questionnaires or simply omit certain questions. This limited sample can skew data and make it difficult for the researcher to draw accurate conclusions from the study. (Gay et al, 2012, p. 184).

The major challenge in collecting data for this study was the reluctance of teachers to participate. The teachers identified to participate were all asked beforehand to indicate their willingness to complete the questionnaire. Those who indicated that they were willing to participate were then emailed the questionnaire. 40% of these teachers never completed the questionnaire and gave the researcher no feedback. 60% of the teachers kept their word and submitted the completed questionnaires.

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The population for this study comprised teachers from primary and secondary schools in Trinidad and Tobago. Population refers to the larger group from which the sample will be selected. (Gay et al, 2012, p. 113).

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Are you sure you sampled from ALL THE PRIMARY AND SECONDARY SCHOOL TEACHERS IN TRINIDAD AND TOBAGO?

Sampling is the process of selecting a number of individuals (i.e., a sample) from a population. (Gay et al, 2012, p. 12). The sampling procedure involves the researcher determining the location or site for the research, the participants who will provide data in the study and how they will be selected; and the number of participants needed. This procedure applies both to qualitative and quantitative research. (Creswell and Plano Clark, 2018, p. 175).

Purposeful (also called purposive/ judgment/selective/subjective/theoretical) sampling was used in this study. (Mertens and Wilson, 2019, p. 547; Gay et al, 2012, p. 141). Purposeful sampling is a form of non-probability sampling where the researcher relies on his/her own judgment when choosing the members of the population to participate in the survey. (Alchemer.com, 2021). Researchers intentionally select or recruit participants who have experienced the central phenomenon or key concept being explored in the study. (Creswell et. al, 2018, p. 176). Non-probability sampling is a fast, easy and inexpensive way of obtaining data. (Statistics Canada, 2021).

Purposeful sampling was used because it presented this researcher with a way of getting the information needed to fulfill the research objectives. Participants were chosen who were reliable and responsible teachers who actively engaged in virtual teaching and assessment during the Covid-19 pandemic. In

other words, the sample selected to participate experienced the phenomenon being investigated in this study.

The primary downside to purposive sampling is that it is prone to research bias, due to the fact that researchers are making subjective, or generalized assumptions when choosing participants for their survey. (Alchemer.com, 2021). In order to avoid some level of researcher bias in this study care was taken to make the questions clear and concise so that misinterpretation would be minimized. (SurveyMonkey, 2023).

The sample used in this study comprised 60% males and 40% females. They work at primary and secondary denominational and government schools. 60% of the participants are Teacher 3s (secondary level) and 40% Teacher 1s (primary level). The subjects taught by the secondary school teachers are: Mathematics, Spanish and Economics. All of the teachers have higher education qualifications ranging from a B.Ed./B.Sc. to Masters in Education (M.Ed.) and MBAs. The teachers obtained their qualifications from the University of the West Indies, School of Education, St. Augustine campus, and the University of Trinidad and Tobago.

The primary teachers teach infant classes; and the secondary teachers teach from forms 1 to 6 (Grades 6-12). Collectively they have between 3-45 years teaching experience. 60% of the teachers are under thirty years of age; 20% over 30 years and 20% over 40 years. 80% of the participants were full-time appointed teachers, and 20% temporary, but full-time.

The data collection instrument used in this study comprised a single questionnaire. The questionnaire used was influenced by the Conceptions of Assessment Questionnaire formulated by Professor Gavin Brown, University of Auckland, Australia; Professor Brown gave his permission for this researcher to use his questionnaire.

The questionnaire used in this study comprised four sections, A – D, and 12 questions. Section A sought to gather demographic information about the respondents; Section B – questions 1-4; Section C – questions 5-10; and Section D

Comment [L10]: What is the sample size?

Comment [L11]: Compress this Sample and Sampling Technique into just a paragraph.

It is too lengthy.

Comment [L12]: Which year did Brown use the scale? Any Psychometric properties of Brown Scale?

Comment [L13]: Was the Questionnaire adapted or adopted?

What is the Title of the Questionnaire used for data collection?

– questions 11-12. Items 2, 3, 4 and 6 were closed items where suggested responses were given to the respondents. Questions 1, 5, 7, 8, 9, 10, 11 and 12 were open-ended questions. The questionnaire was the sole data collection instrument, it was piloted, and based on feedback received it was amended for improvement and administered to the participants.

Comment [L14]: What was the result of the pilot study?
What is the reliability index of the scale ?

Comment [L15]: Where are:
i.Procedure for Data Collection?
ii.Method of Data Analysis??
The two i and ii are conspicuously missing.....!

1.8 Findings

In the following paragraphs the findings emerging from the data provided by the participants in this study will be presented, based on the order of the questions in the questionnaire.

Comment [L16]: Delete.
Use Results

Question 1: Please indicate what you understand by the term alternative assessment.

All of the participants were aware of the term “alternative assessment”.

40% of the participants perceived alternative assessment as any type of assessment exercise which is not a written test or examination. On the other hand, other respondents (40%) felt that alternative assessment occurs when students apply what they have learnt to execute tasks or solve problems. Generally, participants agreed that alternative assessment is another way of testing students’ performance and is different from the normal, standardized format. 20% of the participants did not respond.

Comment [L17]: Any table to substantiate these 40%?

Question 2: When you hear the term “alternative assessment” which of the following comes to mind?

Participants identified several conceptions of alternative assessment.

- another method of assessing students with the focus being on the application of knowledge to authentic tasks.
- exercises which involve students in the selection of the types of assessment given to students. Student involvement in their own assessment makes the assessment process enjoyable as students have the opportunity to perform, create and produce something.
- It forces teachers to identify students' strengths and weaknesses.
- Learning can be individualized and teachers are obligated to give students timely and meaningful feedback on their performance.

Question 3: When you conducted virtual classes did you utilize any alternative assessment exercised during your classroom assessment?

There was a 100% affirmative response to this question.

Comment [L18]: Any table to present this?

Question 4: Which of the following alternative assessment exercises did you utilize during your virtual classroom assessment?

The following are some types of alternative assessment exercises which teachers used to undertake assessment in the virtual classroom.

- Written reports/essays/poems/TV news reports
- The production of charts, posters and murals
- Demonstrations and experiments
- Dramatic presentations/skits
- Oral reports/presentations
- Video recordings/songs
- Exhibitions

Question 5: What competencies do you think teachers should possess in order to effectively assess student learning using alternative assessment?

In order to effectively assess students in the virtual classroom using alternative assessment teachers identified some of the competencies which are needed.

- Adaptability and flexibility
- Computer/digital literacy
- Classroom management
- Open minded approach
- Instructional delivery
- Interpersonal skills

Comment [L19]: Is this study a mixed methods research involving both quantitative and the qualitative data collection and analyses?

Many of the findings presented here seems qualitative and less-quantitative.

Question 6: Identify the major competencies taught to you at your teacher training/preparation institution?

Participants identified some of the major competencies which were taught to them:

- The selection of appropriate assessment based on the curriculum
- The design of various types of assessment
- Formulating rubrics

However, limited guidance was provided with respect to:

- The use of online platforms to conduct student assessment
- The design of alternative assessment exercises
- Collaborating with students and colleagues

Question 7: What other competencies do you think should be taught to help trainee teachers become effective in using alternative assessment strategies in the virtual classroom?

Participants identified several other competencies which should be taught to trainees:

- Using online platforms to conduct student assessment
- Selection of appropriate assessment exercises
- How to give timely and meaningful feedback
- Using assessment results in decision making
- Collaboration with students and colleagues
- Organization and planning
- Coaching and assessment
- Motivational strategies
- Formulating rubrics
- Problem solving
- Research skills
- Teamwork
- Creativity

Question 8: Describe how the assessment component at your teacher training institution was taught.

The participants explained that the assessment component was taught in the following ways:

- The preparation of assessment exercises based on lesson objectives
- Through simulations, role play and dramatic presentations
- Through group work, debates and discussions

Question 9: What do you think should be done by teacher training institutions to better prepare trainee teachers to effectively conduct assessment/alternative assessment in the virtual classroom.?

The participants suggested that the following can be done by teacher training institutions:

- Teamwork, understanding of group dynamics and a thorough understanding of working with each other should be intentionally fostered
- Give trainee teachers more hands-on experience in the classroom
- Conduct workshops on the use of different digital services
- More focus on the teaching practice component
- More training sessions in alternative assessment
- Written guidelines, e.g., workbooks and manuals
- Teacher educators should model best practices

Question 10: Do you think that the use of alternative assessment strategies can help to improve teaching and learning in the physical or virtual classroom?

The use of alternative assessment can improve teaching and learning because:

- Students are encouraged to think outside of the box and step out of their comfort zone
- Every student learns at his/her own pace and this gives them a fair chance at learning
- It gives students the opportunity to apply what was taught
- Student involvement in the assessment planning process

Question 11: What resources do teachers need to help them become more effective at student assessment in general and the use of alternative assessment in the virtual/physical classroom?

- Proper and fast functioning, up-to-date electronic devices and improved connectivity
- Access to experts in the field who can serve as mentors

- More support from curriculum officers
- Regular ICT training

Question 12: Briefly describe your overall experience with student assessment in the virtual classroom during the period when schools were closed.

- Student assessment in the virtual classroom was tiresome and time consuming.
- While the use of online assessments was a breath of fresh air for both teachers and students, there was also the downside which included foreign language students' use of translators to complete exercises. This defeated the purpose of the assessment.
- There was a marked difference in the student performance because parents didn't allow their children to work independently. Pupils performed better in the virtual classroom than the physical because of this interference.
- It was easier to give feedback on assessments.

Comment [L20]: Recheck the research type (quantitative or Qualitative or mixed methods?)

Check the Procedure for data collection as well as the Method of Data Analysis.)

1.9 Discussion and Recommendations

Comment [L21]: Separate Discussion from Conclusion and Recommendations; they are three different subheadings.

The findings of this study show that teachers are aware of the concept of alternative assessment and generally were grateful that they had the opportunity to utilize the strategies. The presence of the pandemic forced teachers to shift both their instructional and assessment strategies. Teachers had no choice but to use alternative assessment strategies as a way had to be found to determine what students have or have not learnt. Our teachers rose to the occasion and ensured that student assessment continued despite the pandemic. Under normal conditions this shift would not have occurred as quickly. By using alternative assessment during the pandemic teachers were provided with good practice for the future and

it opened the door for the continued usage of alternative assessment strategies in the physical classroom.

Admittedly, the pandemic was a traumatic experience for the world population, but in the field of education it forced positive changes to occur. During the pandemic parents were forced to be teachers and students, parents and teachers had to adapt to online tools. (Harris, 2020). The pandemic had a transformative impact on education, as it revolutionized the way in which people think about learning. Virtual learning became the norm and it is felt that it will grow in predominance in the curriculum of students. Because of asynchronous virtual learning students were given the opportunity to manage their time and learn at their own pace. (Studyo, 2022). Teachers had access to a lot of online resources; and communication between teachers and parents improved due to platforms such as Google classroom and the creation of What's App groups comprising teachers and parents/guardians.

Comment [L22]: Hanging!

Comment [L23]: Hanging!

The participants utilized several alternative assessment strategies which gave students the opportunity to become independent learners. Despite the concern from teachers that some students were receiving assistance from parents at least some students developed a sense of responsibility.

Despite using alternative assessment strategies the participants recognized that it was mostly a situation of trial and error. Teachers just did not have the competencies necessary to successfully execute alternative assessment with ease and confidence. Teachers were able to identify the competencies needed for them to effectively undertake alternative assessment in the virtual classroom. They recognized that the assessment competencies taught at the teacher training institutions were limited. The repertoire of competencies need to be expanded to include the skills identified by the participants in question 7. Teachers want to be able to collaborate with students and colleagues in more meaningful ways. Also, it was important for teachers to be able to become more technology savvy in the light of the virtual environment created by the pandemic. Teachers should be ready in the event that virtual teaching becomes the norm again. Virtual

Comment [L24]: You don't need reference to research question number or hypotheses.

education may will be recognized as core to every school's plan for institutional resilience and academic continuity. (Kim, 2020).

Comment [L25]: Hanging!

The necessary assessment competencies can be taught to in-service teachers via professional development workshops and more guidance from curriculum officers. For pre-service teachers, teacher training institutions should expose trainees to hands-on experience in the classroom.

It was interesting to see that some teachers felt that research skills should be taught. Teachers who pursue degree level qualifications do research courses; this is done for them to be able to complete their project or thesis/dissertation. However, this researcher believes that what should be taught is a course that attempts to mold teachers into classroom researchers. Teachers should be actively involved in action research at the classroom level. Teams of teachers should be eager to engage in research, but generally in schools, teachers who are interested in conducting research at the classroom level do not get the requisite support from their colleagues.

Research should be a necessary extension of the teaching profession and should make our classroom research and professional knowledge more viable to the public. This is not the case because teachers have not been made to feel they do something that merits research and dissemination. Teachers therefore need support in order to see themselves as researchers and to see their practice 'worthy' of research. (Hancock, 1997, pp. 87 and 95). However, this may be a challenge because it was observed that there is a lack of a scholarly culture among teachers and teacher educators. In the teacher training institutions, aside from hours spent in traditional lectures, there was very little expectation of reading and research by students. This lack of scholarly culture was reported to be common not only in the teacher training institutions, but in the public school system and other educational institutions. (Steinbach, 2012, p. 72).

Comment [L26]: Hanging!

Comment [L27]: Hanging!

The stakeholders in education are obligated to work collectively to ensure that students with the school system have the best opportunity to learn. The Ministry of Education should utilize the funding provided by the government to provide teachers with adequate resources to do their jobs. Teachers need time

during the school day to engage in planning activities and there should be adjustments in the timetable to facilitate this; and planning rooms should be provided within schools. Also, teachers should have national and international online access to libraries; access to textbooks and updated educational journals.

Apart from tangible resources, teachers need to be provided with more autonomy with respect to assessment practices. In other words, assessment needs to be placed in the hands of teachers, not only for formative but also summative assessment. Teachers should be empowered to recognize that they are better positioned than bureaucrats to evaluate student growth. Teachers need to realize the amazing power they have by virtue of their relationship with their students and their communities, and thereby a culture of meaningful assessment can be cultivated in schools. (McCraan, 2018).

Finally, the Ministry of Education can benchmark best practices from successful educational systems within the Caribbean and around the world, e.g., Cuba, Singapore, Japan and China.

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Comment [L28]: Hanging !

Comment [L29R28]: Three different subheadings:

i. Discussion which should present each result, explain the reasons for the results and give authorities the corroborate the results as well as those that contrast the finding. This should be done for each of the findings.

ii. Conclusion.
This should give the precise of the the findings of the study in concise form;

iii. The recommendations
This should be borne out of the research findings and focus on what should be done by the educational stakeholders to tackle the research problem(s).

Comment [L30]: Source?

Comment [L31]: Country/State of publication.

Comment [L32]: Hearken to the correct APA format of dailies referencing.

Comment [L33]: &

Comment [L34]: Which country?

Comment [L35]: (Ed.)

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