

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

ABSTRACT

This study sought to **investigate teachers' perceptions** about the **use of alternative assessment** in the virtual classroom. The population selected for this **cross-sectional survey** was teachers from **five (5) schools** in Trinidad and Tobago. 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 utilized some alternative assessment strategies during the pandemic. Teachers acknowledged the need for them to develop additional competencies and be provided with the necessary resources to effectively utilize alternative assessment. They suggested that more professional development workshops should be conducted in schools and that teacher training institutions consider revising their approach to the teaching of student assessment.** Further research should be conducted to determine if alternative assessment is being used as face-to-face/in-person teaching has resumed.

Keywords: Alternative assessment; virtual classroom; competencies.

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Comment [SG2]: How many teachers were selected for the purposeful sampling?

1. 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 [1]. All educational institutions were forced to close, and teaching and learning entered a virtual world for which few were prepared.

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 a one-learning course [2, p.4].

Many teachers were overwhelmed by the shift to the virtual classroom, 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 [3]. 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, 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 [4, 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 [1]. 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).

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 [5].

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 [6, p.2]. Despite the continued presence of the pandemic, teachers needed to determine what students have or have not learnt. 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). Also, these data can only be acquired through the assessment process and cannot be lost or delayed [7, p.1] (Burgess & Sievertsen, 2020, p.1).

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 (SSII).

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assisted by SSIs responsible for secondary schools; and SSIs responsible for primary schools. All educational policies and mandates emanate from the Ministry of Education, the central authority that runs the public education system [8, 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 [9, 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, and are considered high stakes. CSEC and CAPE are standardized exit examinations which certify students for employment and entrance to tertiary institutions [9, p.452].

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 [10, 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 [11, 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 [10, p.1].

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. Assessments 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 [12, p.36].

2. STUDENT ASSESSMENT

The importance of student assessment cannot be overemphasized and this is supported by research. [13, p. 275; 14, 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 [15, 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 [16, 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.

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

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in a teacher's arsenal [17]. 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 [18, p. 2]. Teachers are also able to identify what they taught and what they need to do to improve instruction [19, 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 [20]. 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 [21, p. 549].

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:

- ✓ Contents should be simple, clear, easily understood and in line with the syllabus and the topic taught.
- ✓ The exercises should have a measurable outcome, i.e., there should not be any flaws with respect to the content.
- ✓ The exercises should grasp students' interest, be objective, creative and not boring to students [22].

3. 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 [23, 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 [24]. 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 [25, p. 444].

Other terms used synonymously with alternative assessment are: performance assessment; authentic assessment [26]; direct assessment; constructive assessment; and embedded assessment [27, 28]. This researcher perceives alternative assessment as an independent constructor approach to assessment which utilizes the use of authentic tasks to determine how students apply what they have learned to 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 [29, p. 1]. Alternative assessment is a learning assessment method that focuses on the individual needs and growth of each student. It is the counter to traditional forms of standardized assessment. (Study.com, 2019).

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. Other strategies include: crossword puzzles; illustrated stories, magazines; collage, poster or monologue; comic strips, photo essays, skits, video presentations or games; computer simulations, mobile and dioramas. Puppet shows, poems, exhibits, demonstrations, hands-on-execution of experiments, computer simulations and portfolios are all alternatives to the traditional pen/pencil/

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and paper tests [23, p. 14]. 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 [30].

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 [31, p. 6; 32, p. 444; and 33, 2019].

To rely too heavily on one and only one instance of a particular type of assessment is unfairly disadvantageous to some students, while unfairly advantaging others.

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 [32, p. 443]. Additionally, the role of the teacher changes, the teacher is no longer repository of knowledge, but a facilitator of learning [31, p. 10].

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 [31, 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 [31, p. 6].

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

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construction, implementation and decision-making. (Brown, et al, 1998, cited by Al-Mahrooqi 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.

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 [34, 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 [35, 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 [34, 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) [36].

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 [21, p. 359].

4. 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.

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

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 [37, p. 150]. A competency can set a person apart from others, it is core to a person and how that person works or performs [38, p. 2].

Educators should demonstrate several competencies, e.g., effective classroom management, effective teaching practices, technology skills and effective assessment. Effective assessment involves incorporating



Fig.1. Competencies for alternative assessment

formal tests, responses to quizzes; evaluation of classroom assignments, student performances and projects and standardized achievement tests to understand what students have learnt [37, p.154].

Classroom assessment generally, and the use of alternative assessment strategies in the physical or virtual classroom, or in a hybrid system, require that teachers be well-equipped with certain competencies as they need to play their role effectively [39, 40]. Some of these competencies are illustrated at Fig. 1.

5. STATEMENT OF THE PROBLEM

The pandemic negatively impacted the world, but with respect to education there were some positive changes. There have been concerns that traditional standardized testing has not been an effective means of evaluating students. Its weaknesses became very evident during the pandemic when teaching and learning, and assessment moved into the virtual environment. An alternative way had to be found to assess students, and teachers were forced to utilize the largely neglected alternative assessment strategies. 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. For many teachers, alternative assessment is a new area and they may not possess the required competencies to effectively engage in the use of alternative assessment. Having the required competencies 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, and the traditional standardized mode cannot do this effectively.

6. 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 teacher effective assessment practitioners in the virtual classroom.

7. METHODOLOGY

This study is a cross-sectional survey research conducted during the period September to November, 2022. 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 [41, p.1].

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 [4, p.184].

The population for this study comprised teachers from five schools (two (2) primary and three (3) secondary) in Trinidad and Tobago. Population refers to the entire group that a researcher wants to draw conclusions about. A sample is the specific group that data will be collected from [42].

Sampling is the process of selecting a number of individuals (i.e., a sample) from a population [4, p.12]. Purposeful (also called purposive/judgment/selective/subjective/

theoretical) sampling was used in this study [43, p. 547; 4, p.141]. It 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).

The data collection instrument used in this study comprised a single questionnaire. The questionnaire used was influenced by the Conceptions of Assessment Questionnaire [44]; and Teacher Assessment Practices [45] formulated by Professor Gavin Brown, University of Auckland, Australia; Professor Brown gave his permission for this researcher to use his questionnaires. Professor Brown's questionnaires were adapted for use in this study. It is to be noted that no statistical test was conducted to determine the reliability of the instrument. Professor Brown's instruments are tried and tested and I did not consider it respectful for me to challenge their

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established reliability. To me this is a professional courtesy

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that should be extended to a researcher who gives permission for you to use his/her instruments. However, the adapted instrument was piloted to determine if the format was suitable, and also if the items yielded the required responses. Based on the feedback received from the pilot, the questionnaire was amended and then administered to participants.

The questionnaire (Perception of the use of Alternative Assessment) 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 – 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.

The questionnaires were administered online and upon completion the participants returned the completed instruments. Data analysis was done manually, because it is a small study and the data were manageable. Each questionnaire was perused to verify that the questions were answered. After this data for each item were documented. Trends and patterns were identified and the findings were interpreted and presented in narrative form, and supported by a few graphs and tables.

8. RESULTS AND DISCUSSION

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.

The sample used in this study comprised twenty (20) participants, 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 these 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.

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. These data are broken down in Table 1.

Table 1. What participants understand by the term alternative assessment

Understanding of the term Alternative Assessment	Male	Female	%
Any type of assessment which is not a written test or exam	3	5	40
Alternative assessment occurs when students apply what they have learnt	5	3	40
No response	4	-	20

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. There is support for this finding in a study conducted by Sulaiman et al. [46]. The respondents in that study viewed alternative assessment as a continuous process that consists of various techniques and does not only emphasize subject matter (what students know). Rather the focus is on how what is learnt can be applied to solving problems. Students are able to demonstrate critical thinking and soft skills. (p.420). The presence of the pandemic forced teachers to shift both their instructional and assessment strategies.

A study conducted in June 2020 by the National Institute for Learning Outcome (NILOA) found that 97% of educational institutions surveyed made changes to their assessment practices due to the pandemic. The most frequently reported changes were of the modifications to assignments and assessments and flexibility in assignment deadlines. (Amobi, 2020). 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.

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.

Although all teachers may not have been able to state what they understand by the term alternative assessment, they recognized that they in fact used the strategy in order to assess their students in the virtual classroom. Teachers were forced to change how they conducted student assessment. Student involvement became part of the teaching and learning process and it was recognized that learning can be improved through the provision of feedback. This presented teachers with the opportunity to point out students' strengths and weaknesses.

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

There was a 100% affirmative response to this question.

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 [47]. 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 [48]. 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 WhatsApp groups comprising teachers and parents/guardians.

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

The participants identified some alternative assessment exercises which they 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

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.

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

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 education may well be recognized as a core to every school's plan for institutional resilience and academic continuity [49].

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 (largely standardized tests)
- 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

In fairness to teacher training institutions, prior to the pandemic there was no urgency to expose trainees to online platforms. However, in order to be proactive this should have been done. 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 more hands-on experience in the classroom.

Apart from being taught, competencies are learnable through experience. Teachers can learn competencies by dealing with relevant assessment situations. This means that teachers need to gather experience with the assessment of students in situations that are typical for the teachers' profession to become competent in assessing students [50].

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

It was interesting to see that some teachers felt that research skills should be taught. Teachers who pursued degree level qualifications or 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 available to the public. This is not the case because teachers have not been made to feel that 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 [51, 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 [52, p. 72]. It is felt that schools should be institutions of learning for both students and teachers.

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

While simulations do provide an avenue for practice, there should be mainly real-time, hands-on classroom experience for trainee teachers.

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
- Write guidelines, e.g., workbooks and manuals
- Teacher educators should model best practice

Some teacher training institutions tend to present a "do as I say, not as I do" scenario. Ideally, instructors and lecturers should model what good practice and assessment look like. If alternative assessment is being taught, then trainees should be assessed using alternative assessment strategies. The use of alternative assessment encourages students to learn to apply knowledge, rather than memorize material [53]. Alternative assessment also provides an avenue

for teachers to prepare students for life beyond the classroom through the development of life skills such as, critical thinking, collaboration, and the synthesizing of information [54].

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 participants admitted that 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

In this era of teaching and learning, teachers need to be cognizant of the times in which they are working and adapt their teaching and assessment strategies. If alternative assessment use can improve student learning, then teachers should step out of their comfort zones and adopt new methodologies.

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

In schools, the first mentor for any teachers should be the principal. The principals should be the go-to person for novice teachers and teachers who are interested in doing research at the classroom level and trying new strategies in their classrooms.

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 a 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.

While the virtual classroom was a new experience for most teachers it was not entirely a negative experience. The major challenge was the interference of parents in the student assessment process. Ways have to be found to eliminate or at least reduce this problem.

9. CONCLUSION

The data provided by the participants in this study revealed that teachers used alternative assessment during virtual teaching. Teachers also identified some of the competencies required and the support and resources needed for them to effectively engage in alternative assessment in their classrooms. However, this study has more serious implications.

The findings of this study address the need for more focus to be placed on the way in which teacher training institutions prepare trainees, especially in the area of assessment. Improvement in this area would ensure that there is a greater level of assessment literacy among teachers.

Alternative assessment is not a one-man/woman show; it is time-consuming and for it to work effectively in our schools, teachers have to begin to work collaboratively and show support for each other. A 2015 study revealed that teachers took ownership of their own learning through partnerships between teachers from different

schools. Teacher collaboration is important and by the sharing of experiences both teachers and students can benefit [55, p.131].

The use of alternative assessment means that students will have the opportunity to be assessed in a variety of different ways. More importantly, students will be able to participate in the assessment process. At present, the majority of students have no meaningful voice at all in their own education. In the 21st century this lack of voice on the part of the customer (the student) is unacceptable [56, pp.8 and 13]. Ultimately, academic success hinges on high quality interaction between teachers and students [57].

A redefinition of what learning entails and what academic achievement should look like will be required; and it will finally be recognized, and hopefully accepted, that all children can learn, given the right environment.

10. RECOMMENDATIONS

The following recommendations are suggested:

- The stakeholders in education are obligated to work collectively to ensure that students within 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.
- Teachers should have national, regional and international online access to libraries; access to textbooks and updated educational journals.
- Apart from tangible resources, teachers should be given 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. They 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 [58].

- 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.
- While teachers need their vacation period to rest and recharge, part of each of the paid vacation period should be allocated to workshops, seminars and conferences. Time should not be taken from teaching sessions during the term to conduct training for teachers.
- In an effort to encourage teachers to engage in research and to reduce teacher isolation, each school should have a research committee where teachers can work as a team to engage in research. Also, teachers would be able to get their classroom research done, and share their findings with colleagues [59-62].

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