Analysing Ghanaian teachers' perceived effects of authentic assessment on student performance in Tema Metropolis

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Abstract

The main aim of this study was to determine the impact of authentic assessment strategies on student performance among Junior High School students, in the Tema Metropolis in the Greater Accra region of Ghana. The study employed a descriptive research design to determine the effect of authentic assessment strategies on students' performance. The results showed that students' portfolios, project works, rubrics, observations, self and peer assessment, story retelling, and demonstrations were the authentic assessment strategies employed by the Junior High School (JHS) teachers in the Tema Metropolis. The study further found that despite the variety of authentic assessment strategies employed by the JHS teachers in the Tema Metropolis, there were numerous challenges that obstruct the teachers in employing authentic assessment strategies. Among these challenges were difficulties in encouraging students' confidence in oral presentations, large student numbers, difficulties in managing performance tasks, insufficient allotted time in one meeting and the demand for greater investment of time and resources. The study also discovered that there is a positive relationship between the use of authentic assessment strategies by the teachers and the academic performances of the students. Further, the results revealed that when the authentic assessment strategies are used often, the academic performance of the students improves tremendously. The study therefore recommends that teachers need to master some aspects of authentic assessment such as characteristics, topics and scoring rubrics. They also should know several types of authentic assessment that can be used for assessing certain skill.

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1. Introduction

Assessment is an essential component in the process of teaching and learning. When an assessment is not done appropriately or if it does not meet the requirements and the expectations of both students and teachers, it may impede the process of learning. To make assessment beneficial for the learners, researchers and teachers have been trying to find optimal ways to measure students' knowledge, competence, and performance since the emergence of testing (Koné, 2015).

According to Mazur (2015), the traditional type of assessment that exists in the post-secondary course is a mid-term exam or final assessment test. This kind of assessment frequently fails to survey further types of learning and thus, usually do not explore real changes in student knowledge. However, authentic assessments assess what the learners have learned, and can also rouse the learners in their learning efforts; helping them cultivate critical thinking abilities, and enabling them to evaluate their own comprehension of the course content of which the traditional form assessment overlooks.

Authentic assessment rather represents the application and usage of information acquired through learning instead of confined ability appraisals (Montgomery, 2002). In addition, it contains the general performance of important yet complex activities in thought-provoking settings (Montgomery, 2002). When authentic assessments are appropriately employed, it could give input on a learner's studies to inspire further improvement. It could improve learners' knowledge, profound comprehension, critical thinking abilities, social aptitudes, and mentalities which could be utilized in the imitation of a real-world circumstance (Rukmini & Saputri, 2017). Authentic assessment method links learning with genuine and complex circumstances and settings (Olfos & Zulanta, 2007). It is an assessment dependent on the learners' practices in which genuine performances are rehashed (Svinicki, 2004). According to Eby (1998), authentic assessment is an assessment that promotes the learners' subjective way of studying than demonstrating to them what they have grasped or does. Authentic assessment is indicated as performance appraisal, fitting evaluation, alternate appraisal, or direct appraisal, and contains such methods as composed writings, portfolios, agendas, instructor perceptions, and group projects (Olfos & Zulanta, 2007). Authentic assessment approaches highlight learning process, and urge learners to direct psychological and intelligent exercises and in this manner predictable with constructivist ideas. In the meantime, authentic assessment reflects such an alternate assessment procedure. This assessment depends on valid learning activities rather than isolated tests and spotlights on the procedure as much as the item (Tynjälä, 1999). Authentic assessment requires usage of fundamental abilities inside the classroom and use of them to support further learning (Mintah, 2003). In such an appraisal, the learner shows his/her ability towards a mentality, in reality setting and is evaluated dependent on this major performance.

O'Malley and Pierce (1996) define authentic assessment as multiple forms of assessment that reflect student learning, achievement, motivation, and attitudes on instructionally-relevant classroom activities. This means that it can be described as appraisal which uses genuine proof from real circumstance as opposed to using tests. Based on the definition above, there are a few methods which are incorporated as authentic evaluation, for example, oral meetings, story or content retelling, composing tests, exhibitions and projects, demonstrations and experiments, developed response items, teacher observation and portfolios (O'Malley and Pierce 1996). As reported by many experts, authentic evaluation is useful to give clear and reasonable data of learners' accomplishment (Hamp-Lyons & Condon, 2000; Marsh & Wills, 2007). Furthermore, O'Malley and Pierce (1996) and Brown (2001) found that some techniques of authentic assessment such as portfolios, self and peer assessment promote students' involvement. Consequently, it will enhance students' participation both in learning and assessment, encourage students' autonomy and enhance their motivation.

However, authentic assessment requires teachers to have proper understanding and commitment to use, because it needs an intensive preparation and procedures to be applied effectively (O'Malley & Pierce, 1996). In this case, teachers play a significant role as the assessors who are supposed to master how to assess their students well. In contrast, a real situation shows that some teachers are not familiar enough with some techniques in authentic assessment such as self-peer assessment, project-based assessment and portfolio (Chan, 2006; Oz, 2014). Consequently, without adequate and proper knowledge and skills, some problems will almost certainly appear among teachers who apply the authentic assessment strategies. Making use of authentic assessment provides teachers the opportunity to compare the learners with one another and to point out their weaknesses.

The educational system of Ghana especially at the basic level is organized around class exercise, home assignments, midterm exams, final exams, and national exams. The learners are authorized to move to the next class based on the results of these summative assessments done at the end of a teaching unit, a semester, or an academic year. As most of the classes are large with at least 30 to 40 students at the JHS level, the only way for the teachers to ease their work consists of using multiple choice as well as theoretical questions with the students (Damodaran, 2007). This type of assessment may not offer the learners the opportunity to use what is being taught for real needs and may also demotivate them. In this way, learners in Ghana may consider most of the subjects as a mirage that is out of their reach. This is mainly due to the traditional means of assessing students. The issue now is if another strategy can be used in assessing learners at the JHS level in Ghana. It is evident there are limited or no literature of authentic assessment in the Ghanaian context especially in relation to its impact on students' performance. In view of all these assertions, it is very critical for a study to be conducted on authentic assessments among Junior High Schools in Ghana. Unique in relation to

past investigations, the present study tends to focus on the effect of authentic assessment on the performances of students among the Junior High Schools in the Tema Metropolis in the Greater Accra region of Ghana. Specifically, this study sought answers to the following questions:

1. What authentic assessment strategies are employed by JHS teachers in the Tema Metropolis?

2. What is the effect of the authentic assessment strategies on students' performance?

3. What challenges are faced by teachers in employing authentic assessment strategies?

1.1. Literature review

Authentic assessment is any technique which can be used by teachers, instructors, educators and lecturers in order to assess students' professional and personal growth (Mhlauli & Kgosidialwa, 2016). It is a shift from the traditional way of assessing students' knowledge, skills and attitudes by using tests, examination and experiments. Mueller (2005) describes authentic assessment as a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills. Palm (2008) affirms that in authentic assessment the learners should develop learning. The learners ought to take part in the utilization of earlier learning to get past that knowledge, build up connections between bits of this learning to develop detailed comprehension around a sensibly engaged subject, and direct their work and express their decisions through expound correspondence. This suggest that authentic assessment encourages students develop analytical skills; have the ability to integrate what is learnt; to be creative; be able to work collaboratively; and develop written and oral expression skills (Palm, 2008).

According to Mabry (1999), teachers should match reason or desired results with the assessment strategies they tend to utilize in their lessons. Instructors should utilize an assortment of assessment strategies and methods so as to empower all learners to have a progressively complete image of their development and accomplishment. These strategies must be painstakingly chosen to give chances to the learners to rehearse and perform important assignments that are thoughtful of life outside of the classroom. Some of these strategies are described below.

Student portfolio is described as "a systematic collection of student work and related material that depicts a student's activities, accomplishments, and achievements in one or more school subjects" (Venn, 2000). The contents may include student's self-evaluation of the strengths and weaknesses of their work. Students are encouraged to create folders

containing a student's impression and favoured work. World-wide more teachers favour the use of portfolios in all academic disciplines (Venn, 2000; Mueller, 2005). The assumption is that student portfolios are useful as a support to the new instructional approaches that emphasize the student's role in constructing knowledge and understanding and the teacher's role in promoting students' learning. The use of a student portfolio in assessment enhances teacher and students' involvement in evaluation. It is assumed that student portfolio assessment enhances motivation, assists lecturers with decision making, and is effective for reporting accomplishments and progress to parents (Elsworth, 2014; Mueller, 2005; Sonkushre, 2012).

As students take part in the development of their portfolios, analyzing the criteria for what constitutes good work, and learning to evaluate their own work through guided reflective practices, students grow and develop in their knowledge and understandings (Venn, 2000; Elsworth, 2014). Venn (2000) outlined some of advantages of student portfolios which include: promoting student self-evaluation, reflection, and critical thinking; measuring performance based on genuine samples of student work; providing flexibility in measuring how students accomplish their learning goals; enabling teachers and students to share the responsibility for setting learning goals and for evaluating progress toward meeting those goals; giving students the opportunity to have extensive input into the learning process; facilitating cooperative learning activities, including peer evaluation and tutoring, cooperative learning groups, and peer conferencing; providing opportunities for students and teachers to discuss learning goals and the progress toward those goals in structured and unstructured conferences and enabling measurement of multiple dimensions of student progress by including different types of data and materials.

The main advantage of a student portfolio assessment is to promote a dialogue between the teacher and students about their work. Students are given an opportunity to discuss their work and encouraged to set goals regarding what has been accomplished and what needs to be done in future to sustain their achievements. Mueller (2005) suggested that students' portfolios often tell compelling stories of the growth of the students' talents and showcase their skills through a collection of authentic performances. In any process of creating portfolios students are taught and encouraged to perform authentic tasks which show application of acquired knowledge and skills. Fernsten and Fernsten (2005) contended that portfolio assessment provide an authentic way of demonstrating skills and accomplishments and also encourages a real world experience that demands organization, decision making, and metacognition. This suggests that any portfolio assessment would be deemed authentic as students reflect on their work, engage in self-assessment and goal-setting.

Rubrics are also an important component of Authentic Assessment Strategies. As assigning grades is often part of assessment, rubrics are tools designed to evaluate open-ended oral interactions, projects, and writing tasks (Abeywickrama & Brown, 2010). Rubrics can be holistic and analytical depending on the need of the evaluation. According to Green and Hawkey (2014), analytical rubrics are more detailed due to the specific descriptors for each criterion and the levels of performance. Holistic rubrics, on the other hand, offer a more general description of each criterion without providing a particular illustration for the levels of performance (Green & Hawkey, 2012). Crusan (2014) mentioned another type of rubric called primary trait rubric. This third variety of rubric highlights one aspect of the writing. For example, it can be used to assess the use of transition words in the English Language learners' writings.

As grades show effort, progress, and students' level, rubrics can help the learners comprehend the skills that the teacher wants to assess and get prepared accordingly. At the same time, rubrics play a significant role in authentic assessment. For example, a well-designed analytical rubric may mitigate some of the weaknesses of authentic assessment such as low intra and inter-rater reliability. As found by Andrade and Du (2005), rubrics decreased the anxiety of the learners while dealing with the assignments and helped them improve their work in order to obtain better grades. For instance, the analytical rubrics showed the learners their strengths and weaknesses and made them conscious of their progress. Consequently, these rubrics may have a positive impact on learning and assessment. Primary trait rubrics, meanwhile, can help the students concentrate their effort on the performance that the teacher intends to evaluate. As noted by Crusan (2014): "students appreciate the freedom to focus on one feature in their writing to the exclusion of others as it frees them from worry and raises awareness of that one issue and ways to combat it".

Another important component of Authentic Assessment is self and- peer assessment which involves the learners in the assessment of their learning processes (Abeywickrama & Brown, 2010; Brown & Hudson, 1998; Oscarson, 2014). This does not mean that the learners are going to design their own tests and give themselves grades. Instead, the teachers give the students the opportunity to check if all the required elements are included in their responses or whether their answers have reached the goals set for the tasks. Peer-assessment also allows the learners to review or give feedback to their classmates about projects such as oral presentations and writings. The students can do this work using checklists, rating scales, and questionnaires.

Project work is defined by Hedge (1993) as an extended task which usually integrates language skills work through a number of activities. Being an integral part of authentic assessment, project work exposes learners to planning, outlining, brainstorming, collecting information from books or face-to-face interviews, negotiations with group

peers, designing PowerPoint, reporting the final product to the class in written or oral form, and evaluating its outcome. These various processes contained in project work are lifelong and authentic skills that learners need in order to function socially and become autonomous learners. In brief, project work may increase the authenticity of authentic assessment strategies and initiate learners to be creative and critical thinkers in relation to real life experiences.

1.2. Challenges of Authentic Assessment

With regard to challenges associated with authentic assessment, Green and Hawkey, (2012) evoked the difficulties that the raters may face while rating open-ended questions. According to these researchers, these questions can have more than one correct answer and it is not guaranteed that the rater takes into account all of the possible answers. This issue may push the raters to use their intuition. As a result, their scoring may suffer from unfairness and inconsistency. This lack of fairness decreases reliability and validity. As explained by Green and Hawkey (2012), "if individual markers are allowed to award points based on their intuitions, the reliability and validity of the test will inevitably suffer". However, these problems may find their solution in the use of rubrics such as holistic, analytical, and primary traits rubrics. Designing well-detailed analytical rubrics with specific descriptors increases reliability and makes the scoring more valid. Besides, they help the raters focus on the targeted performance and offer some feedback to the learners (Green & Hawkey, 2012).

With respect to assessing writing, Crusan (2014) found that assessing writing in an authentic way is time and energy consuming. If it is done on a large scale, furthermore, it would increase the cost. Howell, Bigelow, Moore, and Evoy (1993), moreover, claimed that the scoring of writing might not be deprived of examiner bias in spite of the use of rubrics. Their research included 147 educational professionals whose role was to score the students' writing related to a prompt. The researchers found that the scorers could be influenced by the students' backgrounds even though they were given rubrics. For example, the researchers mentioned that the scorers lowered their expectations once they noticed that the students were from a minority group. The teachers' incapacity of assisting the learners appropriately during the drafting process also impeded the learners' performance.

Although this issue is considered by Howell et al. (1993) as a challenge in authentic assessment, the use of trained and qualified raters using an analytical rubric may increase the reliability of the raters and help them focus on the criteria and domains targeted by the designer of the rubric (Green & Hawkey, 2012). O'Sullivan (2012), in his research about assessing speaking tasks, also noted that training teachers before using a rubric increases their reliability. Once the raters are familiar with the rubric, it helps

them make a clear distinction between the different levels and the descriptors. O'Sullivan (2012) further suggested that the raters could work together and train themselves about the use of a rubric and then let another colleague assess the learners' speaking skills in order to avoid any possible bias towards or against a student with whom the teacher is acquainted. This may deprive the scoring of examiner bias as found by Howell et al. (1993) in spite of the use of rubrics.

1.3. The Effects of Authentic Assessment on Students' Performance

Learning in a classroom setting involves both the students and their teachers and requires more than sitting in a well-managed classroom and listening to a well-planned lesson. Each learner needs a certain level of motivation for them to achieve their goals that they have set for learning. If motivation is not maintained, learners may feel that they are not capable of learning the specific subject. This inspiration is characterized as the degree to which a student is resolved to play out the classroom assignments or undertakings and seek after them so as to arrive at the objectives set for learning (Dörnyei & Ushioda 2011). It also incorporates the emotional and cognitive states that preparing and performing those tasks or projects can engender.

The teachers, in their turn, should prepare materials, activities, and appropriate types of assessment that will arouse the learners' curiosity and interests and encourage them to learn in order to improve on their performance (Dörnyei 2014).

According to Dörnyei (2014), assessment should not be limited to paper and pencil tests. Instead, it should be fair with specified success criteria not showing only learners' level but also their progress, and opportunities for learners to express their opinions. All those suggestions are integral parts of authentic assessment because of its continuous process, authenticity of the assessment materials, autonomy, and the use of rubrics to assess the performance. Analytical rubrics, for instance contain a clear description of each criterion and a section for the assessor to provide some comments related to learners' strengths and weaknesses. This type of rubric, furthermore, shows students' progress and may help them set new goals for their learning if they are trained to use it. In other words, the use of rubrics might decrease learners' anxiety related to assessment (Andrade & Du, 2005).

Authentic Assessment also develops learners' autonomy and involves them in the evaluation process. According to Dörnyei and Ushioda (2011), the greater the learners' autonomy is, the more enhanced is their motivation which would also lead to enhanced performance. In line with this statement indicating that authentic assessment might have a positive impact on learning and motivation, Nier, Silvio, and Malone (2014) investigated the students and the instructors' beliefs about their knowledge of assessment and language learning. These researchers used questionnaires and interviews in order to elicit data from nine instructors of Arabic who were all native speakers and 13 students who were learning Arabic in a foreign language setting (United

States). Nier et al. (2014) found that there was a mismatch between what the students and their instructors thought of the focus of teaching and assessment. The students expected their teachers' assessment to be oriented towards real-world language situations and needs and not grades. In other words, they would have liked that their teachers design their own assessments that would take into account the teaching and learning goals so that they could be more motivated. The teachers, on the other hand, insisted on orienting their classes towards the curriculum goals and adapting tests from standardized tests without seeking to satisfy the learners' desire to use the language for communicative purposes.

The mismatches revealed by this study may therefore push the learners to interpret the classroom activities differently so that they can meet their expectations. As Oscarson (2014) states: "If learners find that there is a mismatch between the two, they are likely to attempt to sway classroom activities in a direction which better meets their interest and perceived needs" (p. 713). The use of Authentic Assessment may remedy this issue since learners are involved in goal setting and in the accomplishment of different tasks. Based on the conclusion of this study, Authentic Assessment empowers the learners and gives them the opportunity to decide on the focus of their learning in collaboration with their teachers. Once this confidence is established, the students are driven by their goals and the teachers' role consists in helping them to achieve these objectives.

Brookhart and Durkin (2003) conducted a case study with 96 students from an urban high school in an L1 classroom setting in the United States in order to investigate the students' perceptions of the different classroom tasks and how they achieved those tasks by taking into account the types of assessments that the professor used to evaluate those activities in a social studies class. The study showed the relevance and the benefits of authentic assessment strategies at the expense of paper-and-pencil tests. With performance assessment, the learners learnt for the sake of learning and in addition, they wanted to learn from their classmates or help them learn. Students in this study further reported that with authentic assessment, they were trying hard for the performance but not for the test or the grades. Finally, this study confirmed that the choice of the tasks and the types of assessment can have a positive impact on learners' motivation to carry out a task. However, the authors suggested deeper analysis in order to better understand how classroom assessments are related to motivation and performance.

Authentic assessments come with one of a kind quandary for the teacher. In contrast to objective tests, which loan themselves to quantitative investigation, authentic assessments are considerably more abstract and reliable models are hard to keep up. With an end goal to institutionalize the scoring of these appraisals rubrics are utilized. A rubric is termed as "an assessment tool that uses clearly specified evaluation criteria and proficiency levels to gauge student achievement of those criteria" (Montgomery, 2000). At

the end of the day, the learners are given clear objectives they can endeavor to meet so as to exhibit their competency level. Accordingly, the mystery is expelled from their readiness for assessment.

Bas (2011), moreover, examined the effects of project-based learning on ninth grade students' academic achievements and attitude towards English lessons in EFL context. To reach this objective, data were collected from 60 Turkish English learners when they were dealing with a unit called past activities. The participants' academic achievement test related to the English curriculum and the English lesson attitude scale were used to elicit data from these respondents. English lesson attitude scale measures these participants' attitude towards English lessons. The participants were divided into an experimental group and a treatment group. The experimental group worked on a project that focused on the past activities in small groups. The teacher first explained the guidelines for the projects, and then learners started a process of planning and choosing a topic, collecting information, sharing their findings, and then reporting their outcomes to the class. The control group, in its turn, worked on the same activities, but the teacher was using traditional methods such as presenting the rules, asking students questions that they answered, and then followed by a series of selected response tests. The results indicated that there was a significant statistical difference between the experimental group achievement (M = 73.3, SD = 12.4) and that of the control group (M = 62.3, SD = 15.1) with a t-value of (3.26) based on an independent samples t-test. Concerning their attitude towards English lessons, the findings revealed that the experimental group had a more positive attitude and higher performance than the control group. According to Bas, this difference could be explained by the fact that the experimental group carried out the activities as a project, worked together, and negotiated in order to find solution to the problem. In other words, the project exposed these students to real life skills of collecting information and analyzing it in order to present the outcome to an audience. According to Blumenfeld et al. (1991), project work "engages students in investigation of authentic problems". As a result, it may enhance their motivation and interest to discover novel things and it also integrates the four skills (listening, speaking, reading, and writing) and the knowledge acquired from other academic disciplines. Again, project work is an initiation to real life and collaboration in order to perform better and reach the objectives set for the project (Blumenfeld et al., 1991)

2. Method

2.1. Research design

This study utilized descriptive research design to investigate the effect of authentic assessment strategies on students' performance. This is because quantitative descriptive research designs are frequently intended to gather information that depicts the qualities of people, occasions or circumstances.

2.2. Population

The targeted population of the study was public Junior High schools in the Tema Metropolis in the Greater Accra region of Ghana. This consisted of 42 Junior High Schools in the Tema Metropolis in the Greater Accra region.

2.3. Sampling procedures

A two-stage sampling procedure was employed in this study. In the first stage, the stratified sampling technique was used for the selection of the JHSs. The schools were divided into circuits of which four schools were selected from each circuit. In the second stage, convenience sampling technique was used to select 200 teachers from the selected schools.

2.4. Research instrument

2.4.1. A structured questionnaire consisted of four parts was utilized to gather the primary data. Part I comprised of demographic information about the respondent, such as gender, age and professional education level. Part II comprised of the authentic assessment strategies employed by JHS teachers in the Tema East metropolis. Part III evaluated the challenges faced by teachers in employing authentic assessment strategies while Part IV looked at the impact of authentic assessment on students' performance. A Likert scale consisting of five options was used to measure the extent to which the respondents agree or disagree with the questions. The scales included: never (1), almost never (2), sometimes (3), almost every time (4) and every time (5). Some questions had an option of "other" where respondents can describe other responses not included in the structured section. In line with Mugenda and Mugenda (2003) who stated that researchers should avoid physical or psychological harm to the participants, the questionnaire was designed such that personal information about the respondent remains anonymous and information obtained from the respondents in the process of the whole research was kept confidential. Prior to the data collection, the questionnaire was pilot tested, and the analysis of the piloted data was used in restructuring the instrument.

2.5. Data collection procedure

Before collecting any information, the researcher requested authority from Ghana Education Service in the district to conduct the research from their schools. The researcher booked meetings with the educators (teachers) in the schools engaged with the investigation to empower quick accumulation of information. The questionnaires were disseminated to the respondents in the sampled schools and given up to 5 days to complete them.

2.6. Analysis of data

The data was subjected to statistical analysis using tools such as Microsoft Excel and Statistical Package for Social Science (SPSS). Microsoft Excel was used to organize the data and to generate descriptive statistical result of the data. The organized data in Excel format was then imported into the SPSS 22 to analyze for Pearson's Bivariate Correlation and Simple Linear Regression

3. Results

In the Results section, summarize the collected data and the analysis performed on those data relevant to the discourse that is to follow. Report the data in sufficient detail to justify your conclusions. Mention all relevant results, including those that run counter to expectation; be sure to include small effect sizes (or statistically nonsignificant findings) when theory predicts large (or statistically significant) ones. Do not hide uncomfortable results by omission. Do not include individual scores or raw data with the exception, for example, of single-case designs or illustrative examples. In the spirit of data sharing (encouraged by APA and other professional associations and sometimes required by funding agencies), raw data, including study characteristics and individual effect sizes used in a meta -analysis, can be made available on supplemental online archives. Discussing the implications of the results should be reserved for presentation in the Discussion section.

3.1. Demographic data of respondents

The results of the analysis of the data revealed that 73.3% of the respondents were males and 26.7% were females. With respect to age of the respondents, majority (47%) were under the age of 30years, 30% of them were between the ages of 31 to 40 years, 13.3% were between the ages of 41 to 50years and 10% were between the ages of 51 to 60 years. In terms of highest educational qualification, 56.7% of the respondents representing the majority had Bachelor's Degree as their highest professional qualification, 26.7% of the respondents had Master's Degree and 16.7% had Diploma.

3.2. Authentic assessment strategies employed by JHS teachers in the Tema Metropolis

As indicated in Table 1, 63.4% of the respondents representing the majority asserted that they make use of the student portfolios almost every time or every time, 23.3% make use of them sometimes and 13.3% almost never.

Table 1:

Authentic Assessment Strategies Employed By JHS Teachers in the Tema Metropolis

Authentic Assessment **Strategies**	Every Time	Almost Every Time	Sometimes	Almost Never	Never
Student Portfolios	13	111	45	26	0
Project Works	52	84	59	0	0
Journals	26	52	52	52	13
Conferences & Interviews	0	39	33	78	45
Rubrics	65	78	39	13	0
Observations	84	59	52	0	0
Self & Peer Assessment	39	65	52	39	0
Story Retelling	78	65	52	0	0
Performance Assessment	20	72	39	39	25
Demonstrations	59	84	26	26	0

In terms of project works, 70% of the teachers claimed that they make use of the project works as authentic assessment strategies almost every time or every time and the rest of them representing 30% make use of them sometimes. With regards to the frequency of usage of journals by the respondents, only 40% make use of the strategies almost every time or every time, 26.7% make use of it sometimes and 33.4% of the respondents almost never or never make use of them. For conferences and interviews, 20% of the respondents make use of them almost every time, 16.7% sometimes and 63.3% almost never or never. Similarly, 73.3% of the teachers representing the majority sought to use rubrics as authentic assessment strategies almost every time or every time while 40% make use of them sometimes and 6.7% almost never. Majority of the respondents (73.3%) tend to

make use of observations almost every time or every time and the rest of them (26.7%) make use of them sometimes.

Taking self and peer assessment into consideration, 53.3% of the respondents asserted they make use of them as strategies in authentic assessments almost every time or every time while 26.7% sometimes and 20% almost never. Similarly, 73.3% claimed they make us of story retelling as authentic assessment strategy almost every time or every time while the 26.7% make use of them sometimes.

Respondents were asked how often they make use of the performance based assessment as authentic assessment strategy. 46.7% of them asserted that they make use of it almost every time or every time, 20% sometimes and 33.3% make use of it almost never or never. With respect to demonstrations as authentic assessment strategies, majority of the respondents as shown by 73.3% asserted that they use them almost every time or every time, 13.3% sometimes and 13.3% almost never. From these findings, it implied that students' portfolios, project works, rubrics, observations, self and peer assessment, story retelling, and demonstrations were the authentic assessment strategies employed by the JHS teachers in the Tema Metropolis.

3.3. Challenges faced by teachers in employing authentic assessment strategies

One of the objectives of the study was to identify challenges faced by teachers in employing authentic assessment strategies. In order to achieve this, respondents were asked to determine among the various challenges presented to them via the questionnaire the extent to which each of them is a challenge. The results are presented in Table 2.

Table 2:

Challenges Faced By Teachers in Employing Authentic Assessment Strategies

Authentic Assessment Strategies	Very Serious Challenge (%)	Serious Challenge (%)	Moderate Challenge (%)	Minor Challenge (%)	Not at all a Challenge (%)
Difficulties in Encouraging Students' Confidence in Oral Presentations.	16.7	40	13.3	30	10
Difficulties in Ensuring Awareness of Responsibility by Students	-	20	20	36.7	23.3
4.1.1 Limitation of Available Assessment Methods Due to Large Students Number	30	33.3	26.7	10	-
Difficulties in Managing the Performance Tasks	40	33.3	13.3	13.3	-
Inadequate Allotted Time in One Meeting	50	30	20	-	-
Initial Resistant of Students to Authentic Assessments	16.7	20	20	36.7	6.7
Demand of Greater Investment of Time and Resources	46.7	26.7	20	6.7	-

3.4. Difficulties in encouraging students' confidence in oral presentations

Respondents were asked to provide feedback on whether in implementing the authentic assessment; it was hard to encourage students' confidence to do oral presentations and took long scoring time. In view of this, 56.7% claimed it to be a serious or very serious challenge, 13.3% moderate challenge and 30% minor or not at all challenge.

On responsibility of students, 20% of the respondents claimed that the problem of implementing authentic assessment was related to ensuring that students were fully aware of their responsibility to do their task as serious challenge; 20% of also perceived it as moderate challenge while 60% claimed it to be minor challenge or not at all challenge.

With respect to whether large student numbers limited the assessment methods available for them and the number of assessments that could be conducted as a challenge, 63.3% of the respondents asserted it to be serious or very serious challenge, 26.7% moderate challenge and 10% of them claimed it to be a minor challenge. Similarly, 73.3% of the respondents claimed that because of the excessive number of students in the classes, it was quite difficult for the teachers to manage the performance tasks; they therefore perceived this as serious or very serious challenge. On the other hand, 13.3% claimed it to moderate challenge and 13.3% claimed it to be a minor challenge.

On the issue of time, 80% of the respondents claimed the issue of allotted time was inadequate to cover all students to perform in one meeting as serious or very serious challenge while the rest of the respondents as shown by 20% perceived it as moderate challenge.

With regards to whether the students may initially be resistant to authentic assessments due to uncertainty about what is required and how it will be marked, 36.7% claimed it to be serious or very serious challenge, 20% claimed to moderate challenge and 43.3% to be minor or not at all challenge.

With regards to whether the authentic tasks may require or be perceived to demand a greater investment of time and resources than traditional assessments, 73.4% of the respondents asserted that it is a serious challenge or very serious challenge, 20% perceived it to be moderate challenged and 6.7% minor challenge.

3.5. The impact of authentic assessment on students' performance

The correlation between teachers' perceived use of authentic and students' performance was also evaluated. The results of this analysis demonstrate a positive direct connection between Authentic Assessment Strategies adopted and Students' Performance as indicated by *r(193) = .98, p< .01*.

A followed up regression analysis on the effect of authentic assessment used on students' performance was carried out and the results indicated that the use of authentic assessment significantly predicts students' academic performance *(b=6.63, t(194)= 74.7, p<.000)*. Specifically, the results indicated that the use of authentic assessment explain about 97% of the variance in students' performance *[F (1, 193) = 5580.9, p<.000, with R² =0.967]*.

4. Discussion, conclusions and recommendations

The main aim of this study was determine the impact of authentic assessment strategy on student performance among Junior High School students in the Tema Metropolis in the Greater Accra region in Ghana. The research specifically sought to assess the authentic assessment strategies employed by JHS teachers in the Tema Metropolis, identify challenges faced by teachers in employing authentic assessment strategies and determine the impact of the authentic assessment strategies on students' performance.

In line with this, the study shown that students portfolios, project works, rubrics, observations, self and peer assessment, story retelling, and demonstrations were the authentic assessment strategies employed by the JHS Teachers in the Tema Metropolis. According to Mabry (1999) educators must match purpose or outcome expectations with assessment strategies. Thus, teachers will need to use a variety of assessment tools and techniques in order to enable all students to have a more complete picture of their growth and achievement. These tasks need to be organized and structured so that they are contextualized, integrative, metacognitive (require students to think about thinking), related to the curriculum taught, flexible (require multiple applications of knowledge and skills), open to self-assessment and peer assessment, contain specified standards and criteria, and are ongoing and formative (Weber, 1999).

It was revealed that in spite of the variety of authentic assessment strategies employed by the JHS teachers in the Tema Metropolis, there were numerous challenges that obstruct the teachers in employing authentic assessment strategies. Among these challenges were difficulties in encouraging students' confidence in oral presentations, limitation of available assessment methods due to large students' number, difficulties in managing the performance tasks, inadequate allotted time in one meeting and demand of greater investment of time and resources. This finding is consistent with Crusan (2014) findings that assessing writing in an authentic way is time and energy consuming. If it is done on a large scale, furthermore, it would increase the cost. Further, Al-Nouh, Abdul-Kareem and Taq (2014), found that teachers sometimes find it a bit challenging in motivating student in oral presentations as well as increasing their confidence due to anxiety and fear, lack of eye contact with the audience, focusing on accuracy more than fluency, incorrect pronunciation, lack of proper vocabulary and weak speaking skills.

Andrade and Du (2005) asserted that analytical rubrics, for instance contain a clear description of each criterion and a section for the assessor to provide some comments related to learners' strengths and weaknesses. This type of rubric, furthermore, shows students' progress and may help them set new goals for their learning if they are trained to use it. In other words, the use of rubrics might decrease learners' anxiety related to assessment which in a way support our finding that the use of authentic assessment impacts on students' learning outcome.

Authentic Assessment also develops learners' autonomy and involves them in the evaluation process. According to Dörnyei and Ushioda (2011), the greater the learners' autonomy is, the more enhanced is their motivation which would also lead to enhanced performance. In line with this statement indicating that authentic assessment might have a positive impact on learning and motivation, Brookhart and Durkin (2003) study showed the relevance and the benefits of authentic assessment strategies at the expense of paper-and-pencil tests.

In tandem with the empirical evidence, the current study also confirmed that that there is a positive relationship between the use of authentic assessment strategies by the teachers and the academic performances of then students. This revealed that when the authentic assessment strategies are used often, the academic performance of the students will improved tremendously. It was further observed that the Authentic Assessment Strategies highly impact the Students' Performance positively.

Finally, the findings from the study have led to the conclusion that in spite of the challenges teachers have in using authentic assessment, there was a significant positive relationship between authentic assessment strategies and students' academic performance. It is therefore recommended that pre-service and in-service training should organize for teachers to enable overcome the challenges identified in this study, and to also enable teachers to appreciate the use of alternative or authentic assessment strategies in this difficult era of Covid-19.

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