




Factors Influencing Teachers' Choice and Use of Assessment

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Abstract

Research on the factors influencing teachers' assessment conceptions and practices is sparse. There is also a need to explore the complex relationship between personal and school-level factors that influence teachers' assessment practices. Therefore, this explanatory sequential mixed methods study investigated the levels and types of factors that influenced Jamaican secondary school teachers' choice and use of assessment and the interactions among the factor levels. 1088 secondary school teachers were surveyed, and the quantitative findings were explored with 32 teachers of English. Standard multiple regression revealed that micro-, meso- and macro-level factors influenced the teacher's frequency of use of traditional and alternative assessment tools and strategies, with the micro-level factors making the greatest unique contribution. Case study analysis also revealed that the assessment and teacher factors influenced teachers to use summative and formative assessment, respectively. The findings also revealed that the micro-level teacher factors mitigated the influence of the meso- and macro-level assessment factors to influence teachers to use assessment for formative purposes. These findings highlight the need for national and school-level policies and interventions to support teachers' formative use of assessment.

Introduction

"In educational research, "What works" is usually the wrong question because almost anything works somewhere, and nothing works everywhere. A better question is, "Under what circumstances does this work?" (Wiliam, 2019, p. 137).

In the quotation above, Dylan Wiliam, one of the leading writers on classroom assessment, highlights the variability in the effectiveness of classroom practices and the importance of context in figuring out what to do to improve student achievement. He also called on stakeholders to be critical consumers of educational research. Therefore, while there is evidence that formative assessment improves student achievement, it is unknown whether it works in Jamaica and under what circumstances it may work because the subject has not been researched. Consequently, I researched how formative assessment could be more effectively implemented in the teaching of English in secondary schools across Jamaica. Before implementing the Formative Assessment in English Intervention (FAEI), I investigated the existing nature of assessment to determine what, if anything, needed to be improved and in what ways changes could be made to increase the likelihood of teachers engaging

in the formative use of assessment in Jamaican classrooms. In seeking to describe the existing nature of assessment, I looked at what assessment tools and strategies Jamaican teachers used most frequently (what), how they used these tools and strategies (how), and what factors influenced their choice and use of assessment (why). So far, the data has revealed that teachers used predominantly traditional tools and strategies, particularly selected-response and short-answer tests (Williams-McBean, 2022). They used these tools and strategies primarily for behaviour management (to maintain student discipline and monitor and control their behaviour) and improvement or formative purposes, particularly to diagnose students' strengths and weaknesses, develop students' higher-order thinking, problem-solving and creativity skills and monitor student progress (Williams-McBean, 2024). This paper focuses on the factors that influence their choice and use of assessment. Understanding the what, how and why of assessment increases the efficacy of interventions (Ma & Bui, 2021; Yan et al., 2021).

Within the wider research community, Fulmer et al. (2015) and Ma and Bui (2021) highlight that research focused on the wide variety of factors that influence teachers' assessment conceptions and practices is relatively sparse, especially school-level factors. They also highlight the importance of investigating these factors to ensure more effective implementation of educational policies and interventions. Additionally, researchers recommend studies exploring the complex relationship between personal and school-level factors (Fulmer et al., 2017; Ma & Bui, 2021) and identifying the most influential or important factors (Yan et al., 2021). This study contributes to filling these gaps by focusing on factors at the individual classroom, school and national levels and the interactions among the factors at various levels. It answers the following research questions:

1. What micro, meso and macro factors influence Jamaican teachers' choice of assessment tools and strategies?
2. What micro, meso and macro factors influence the use of assessment tools and strategies by Jamaican teachers of English?
3. How do the micro, meso and macro factors interact to influence Jamaican teachers of English use of assessment?

Review of Related Literature

Improvement in student achievement depends on the types of assessment tools and strategies used (traditional or alternative) and how the assessment tools and strategies are used (for formative or summative purposes). Using traditional assessments, particularly tests, has been shown to thwart deep learning and focus students' attention on grades rather than learning. It also limits students' learning to specific content knowledge and skills that can be assessed using written exams (Wiliam, 2000) and supports the negative aspect of teaching to the test (item-teaching) (Popham, 2001). In contrast, using alternative assessment tools and strategies, for example, presentations, self-assessment, peer assessment, orals, and research, promotes higher-order thinking and increases the depth of student learning (Berry, 2010). Additionally, many assessment policies and standards across the globe have advanced the importance of diversifying assessment tools in the classroom. For example, the *Standards for Teacher Competence in Educational Assessment of Students* (hereafter *the Standards*) prescribed seven assessment competencies that teachers should possess to carry out their roles and responsibilities for student assessment, which include choosing and developing assessment methods appropriate to instructional decisions

(American Federation of Teachers, National Council on Measurement in Education, and National Education Association (AFT, NCME, & NEA), 1990). In explaining the knowledge and skills teachers who are competent in choosing appropriate assessment methods need, *the Standards* explained that teachers should know the strengths and weaknesses of a range of methods, including various types of tests and “oral questioning, spontaneous and structured performance assessments, portfolios, exhibitions, demonstrations, rating scales, writing samples, paper-and-pencil tests, seatwork and homework, peer- and self-assessments, student records, observations, questionnaires, interviews, projects, products, and others' opinions” (para. 14). Assessment-competent teachers should also be able to develop these diverse methods. This means that teachers need to know about and be able to evaluate, construct and use traditional and alternative assessment tools and strategies. However, tests predominate the teaching profession despite teachers' positive perceptions of alternative assessment tools and strategies (Berry, 2010; Williams-McBean, 2022). Therefore, it is important to determine what causes teachers to choose assessment tools and strategies. Knowing these influential factors can allow administrators, trainers and researchers to implement more effective interventions.

The effectiveness of assessment in improving student achievement also depends on whether the tools are used for formative or summative purposes. Formative assessment refers to “the use of assessment strategies by teachers, learners, and/or their peers, to make decisions about the next steps in instruction and used to provide descriptive or formative feedback to improve teaching and learning” (Williams-McBean, 2024, p. 3). It is often contrasted with summative assessment, which is used for accountability purposes, grading, and reporting on students' overall achievement. However, since it is the use of the assessment tools or strategies that allows it to be classified as formative or summative, even tests designed for summative purposes can be used to improve teaching and learning (Williams-McBean, 2024; Yalaki & Bayram, 2015). Therefore, in this study, the use of assessment refers to the assessment tools and strategies used and the overarching purpose for which they are used (formatively or summatively). The factors that influence teachers' use of varying assessment tools and strategies for formative or summative purposes are the focus of this study. Numerous studies have reported the positive impact of formative assessment on student academic and behavioural outcomes (see, for example, Karaman, 2021; Wiliam, 2013).

Theoretical Framework

Using Kozma's (2003) three-level model, Fulmer (2015) demonstrated that influential assessment factors may be classified at the micro, meso, and macro levels. This model has been subsequently used by researchers with the same focus (see, for example, Deneen et al., 2019; Ma, 2023;) and was used in this research as well. The micro-level factors include those at the individual teacher, student and class level, for example, teachers' assessment literacy, conception, self-efficacy, teaching experience, students' academic ability, motivation, class size, classroom-level access to technology and class climate (Black & Wiliam, 2018; Cowie & Harrison, 2016; Ma & Bui, 2021; Yan et al., 2022). The meso-level factors are those at the school level and include school policy, administrators' approach to assessment and expectations of important others in the immediate school community, for example, parents (Heitink et al., 2016; Ma & Bui, 2021). They also include researchers' recommendations and the content of textbooks (Wilson, 2024). The macro-level factors are national and international perceptions, policies and norms around assessment. They include high-stakes, summative standardized tests and their

washback effect (Ma & Bui, 2021; Wilson, 2024; Yan & Brown, 2021; Yin & Buck, 2019). These levels of factors interact and influence teachers' assessment conception and practices.

Research using Fulmer's application of Kozma's model have reported different strengths of influence of the three levels. For example, after presenting the assessment for learning profiles of seven countries, Australia, Canada, Ireland, Israel, New Zealand, Norway, and the USA, Birenbaum et al. (2015) concluded that "ultimately it is the overarching policy context that is providing the necessary zeitgeist for success" (p. 135). Similarly, according to Yan and Brown (2021), although personal teacher factors (years of experience and teacher training) and school context (available resources) offer some explanation for Hong Kong teachers' positive perception but unsatisfactory implementation of formative assessment, the surveillance and evaluation culture was the major obstacle. The overarching examination culture and accountability system based on achievement on standardized examination (macro-level factors) were primarily responsible for the limited implementation of formative assessment. In contrast, Ma and Bui (2021) reported that quantitatively, school banding, which refers to the school's reputation and prestige (a meso-level factor) and the student's academic ability (a micro-level factor) mediated the influence of the college entrance examination (a macro-level factor). The teacher who taught in a prestigious school with school leaders who value and expect high achievement on the college entrance examination from their high-performing students reflected the societal and policy valuing of the summative examination. In contrast, the teacher in a less reputable school with average-performing students and less administrator pressure demonstrated more formative conception and use of assessment despite the college entrance examination. The answer to the question of which level of factors is more influential depends on context. Therefore, it is pertinent to determine what obtains in the Jamaican context. However, although the research on which level of factors and which specific factor within each is varied and contradictory, there is a greater consensus that factors at various levels interact to influence teachers' use of assessment (Heitink et al., 2016). Therefore, this interaction also needs further research.

Individual Factors Influencing Teachers' Choice of Assessment Tools and Strategies

Without applying Fulmer's model, other researchers have reported on the influence of various school, classroom (teacher, student and subject), assessment and external factors, and have primarily presented contrasting results on each factor. For example, school factors such as grade level, class size, school size and school policy have been identified in the literature. Among the limited studies that focus specifically on school and class size, Duncan and Noonan (2007) reported that school and class size did not significantly impact teachers' choice of assessment tools and strategies while Dandis (2013) reported that large class size (sometimes 30) deterred teachers from using alternative assessment tools and strategies. Over-enrollment prevented the teachers in Mwanza et al.'s (2022) study from using written assessments that required time to mark and provide feedback. Additionally, Berry (2010) and Dandis (2013) reported that school policy influenced teachers to use standardized classroom tests predominantly. The policies mandated using traditional standardized tests because the teachers were preparing students for national standardized tests. In contrast, Duncan and Noonan (2007) did not find school policy to be a factor influencing teachers' choice of assessment strategies, nor was it found to be a very influential factor by Ong (n.d.) where only 3% of the teachers in the study viewed "accepted by administrators" as a major consideration

when selecting an assessment method (p. 5). In fact, in the latter study, school policy was the least influential factor. The contrasting results necessitated further research.

However, all the studies reviewed identified grade level as a factor influencing teachers' choice of assessment tools and strategies, concluding that elementary school teachers reported using alternative tools and strategies more often than teachers in middle and high schools (Berry, 2010; Bol et al., 1998; Brookhart, 2009; Ong, n.d.; Snow-Renner, 1998; Stiggins & Conklin, 1992; Zhang & Burry-Stock, 2003). This suggests that teachers of younger children are more likely to use alternative assessment methods. Researchers explained that frequent use of objective tests at the secondary level may have resulted from teachers' need to tailor tests to cover unique classroom objectives at higher grade levels and an increased concern about assessment quality at the secondary level based on higher stakes associated with standardized tests (Ong, n.d.; Stiggins & Conklin, 1992)

Teacher Factors

The teacher factors highlighted in the literature include teaching experience, teacher training, gender, teachers' perception of the subject, teacher workload and teachers' conception of assessment. Here, there was also much variability in the findings. For example, researchers have explicitly reported that teaching experience is an influential factor in teachers' choice of assessment tools and strategies, with the most experienced teachers indicating greater frequency of use of alternative assessment methods (Alkharusi, 2011; Bol et al., 1998). However, this was contradicted by Alsarimi (2000) and Zhang and Burry-Stock (2003) who found no difference based on years of experience. Similarly, while some studies found teacher training, especially measurement training, to be a factor that influences the types of assessment tools and strategies teachers use (Alkharusi, 2011; Zhang & Burry-Stock, 2003), others reported it was not an influential factor (Gullickson, 1984; Susuwele-Banda, 2005). Dean (1999) suggests that inadequate training at the teacher education level leads to greater use of traditional assessment tools and strategies. The literature also shows that increased teacher training is crucial for successfully implementing formative assessment interventions (Yan et al., 2021). This suggests that teacher training influences teachers' use of assessment for formative or summative purposes. The same is true for teachers' conceptions of assessment. If teachers conceive assessment as being for improvement purposes, they are likely to use assessment for formative purposes (Fulmer et al., 2015)

Reports on teacher gender showed it to be an insignificant factor as the teachers used traditional assessment methods (short answer, completion and multiple-choice items) and alternative assessment strategies (oral exams and extended answers) with no significant differences based on teacher gender (Alsarimi, 2000). Furthermore, Berry (2010) reported that when teachers perceive the subject to be accommodating of alternative tools and strategies, they are more likely to use them. The reverse was also reported. Finally, Berry (2010) also found that teachers' workload impacted the choice of assessment tools and strategies. The teachers in her study reported using traditional assessment tools more predominantly because the workload allowed for "so little time to think about assessing students by different strategies" (p. 105). The teachers' workload is also related to other factors: time constraints (Berry, 2010; Dandis, 2013) and the curriculum load (Berry, 2010). Teachers reported that assessment is often the last consideration as they rush to complete their syllabuses (Berry, 2010). Hence, the time

required and the demands of the curriculum restricted their choice of assessment strategies. Dandis (2013) also reported that time constraints prevented the teachers in his study from using more alternative tools and strategies.

Student Factors

Studies also found that teachers selected their assessment tools and strategies to cater to different student characteristics, namely, students' academic abilities and motivation levels (Berry, 2010; Dandis, 2013; Manigbas, III & De Luna, 2023; Mwanza et al., 2022). Berry (2010) found that teachers reported using less challenging assessment tasks for students with lower academic ability. They also gave more academically competent students additional and more challenging tasks—a practice that motivated the more competent students. In Dandis's (2013) study, teachers acknowledged that their students had varying abilities and should be assessed differently. However, because of time constraints and school obligations, they did not get to assess them this way. Though it was a factor considered, its influence was mediated by other factors, further highlighting the need to investigate the interaction among the factors.

Subject

The studies reviewed also presented conflicting findings on the influence of subject on teachers' choice of assessment (Alkharusi, 2011; Berry, 2010; Bol et al., 1998; Dandis, 2013; Duncan & Noonan, 2007; Zhang & Burry-Stock, 2003). Some studies reported that Mathematics teachers most frequently used alternative assessment tools and strategies (Bol et al., 1998; Zhang & Burry-Stock, 2003), and others reported that they used traditional assessment tools and strategies most frequently (Dandis, 2013; Senk et al., 1997; Watt, 2005). According to Senk et al. (1997), the 19 Mathematics teachers in their study reported that they used tests and quizzes most frequently, and these determined about 77% of student grades. The test items were mostly selected response items that primarily measured lower-order thinking skills. The types of items and the low cognitive demand underscore the traditional nature of the assessment using Gronlund (2006) classifications. The results conflict with other subjects, including language arts (McMillan, 2001; Zhang & Burry-Stock, 2003) and social studies (Brookhart, 2009). Furthermore, other researchers have reported no significant subject differences (Duncan & Noonan, 2007; Ong, n.d.). The results are, therefore, once again conflicting. Yan et al. (2022) also reported no significant influence on the formative use of assessment based on the subject taught.

External Factors

In this research, external factors were seen as those outside the immediate school community. They included parents' expectations, the national assessment policy and the national assessment culture. All were shown to be influential in differing degrees based on the studies reviewed. Berry (2010) found parental expectation to be an influential factor among Hong Kong teachers who used traditional assessments to communicate better with parents about their children's progress and to meet their accountability requirements to parents. McMillan (2003) and Mwanza et al. (2022) also acknowledged the influence of parental interest on teachers' choice of assessment tools and strategies.

Berry (2010) also found that the national assessment practices in Hong Kong wielded considerable influence on the teachers' selection of traditional assessment tools and strategies. She reported that because of "the prevailing external examination system, many schools in Hong Kong are overburdened with tests and examinations" (p. 103). In this study, 48.9% of the teachers reported feeling compelled to follow the national assessment practice of using traditional modes of assessment, and explicitly expressed that there was very limited room for them to use their discretion. Berry (2010) also highlighted that time, the national assessment culture/format, and the grade level combine to influence teachers' choice of assessment tools and strategies. Older students were more likely to be assessed using traditional tools because teachers were pressed for time and the country's culture placed a higher value on traditional forms of national assessment. McMillan (2003) and Ong (n.d.) found that the demands of accountability testing forced teachers to favour traditional assessment methods. According to Ong (n.d.), only 2.7% of the respondents selected their assessment methods without the influence of the public examination" (p. 5). The national assessment practices were clearly influential.

Evidently, many factors influence teachers' choice of assessment. The individual factors identified in the literature were classified as micro, meso and macro factors (see Table 1) to provide greater synthesis and a more detailed description of the factor levels. The review of the extant literature also highlights that the individual factors and the levels are interrelated. The influence of time is based on grade level, national assessment practice and curricular demands in the sense that students in the higher grades are more likely to be assessed using traditional methods because teachers have limited time to complete the curriculum and adequately prepare them for national standardized tests. Therefore, it was also important to investigate those interactions in the Jamaican context.

Table 1. Micro, Meso and Macro Level Factors Identified in the Literature

| | Micro | Meso | Macro |
|----------------|---|---|---|
| Actors | Students and Teachers | Parents, Researchers, School Administrators, Textbook Authors | National and International Policymakers |
| Factors | Teacher Factors Teacher content knowledge Experiences as a teacher Experiences as a learner Formal teacher training Teacher gender Teacher self-efficacy Teacher conception of assessment Teacher workload Student Factors The learners' academic abilities The students' motivational levels Grade level | Schools' assessment policies Administrators' attitude toward assessment Current research Expectations of parents School size Textbooks Infrastructure | Standardized tests formats Demands of the national curriculum National assessment practices Availability of past papers National norms around assessment National assessment policies International policies, perceptions and norms around assessment |

| Micro | Meso | Macro |
|---------------------------------------|------|-------|
| Class size | | |
| Students' behaviour | | |
| Other Factors | | |
| Subjects | | |
| Workload of the assessment strategies | | |
| Time constraints | | |
| Classroom-level access to technology | | |

Method

Ma and Bui (2021) recommend a mixed approach to investigating the factors that influence teachers' assessment practices because quantitative studies can provide a general picture while qualitative studies provide a deeper understanding of the factors and their interactions. The factors that influence teacher's choice and use of assessment are also highly contextualized. Therefore, this study was conducted using an explanatory sequential mixed methods design (Creswell, 2014), which included a quantitative phase followed by a qualitative phase, which provided a deeper understanding and explanation of the quantitative results.

The quantitative phase primarily answered research question 1 (*What micro, meso and macro factors influence Jamaican teachers' choice of assessment tools and strategies?*). Explanations of the quantitative results were sought in the qualitative phase. The qualitative phases provided answers to research questions 2 and 3 (2. *What micro, meso and macro factors influence the use of assessment tools and strategies by Jamaican teachers of English?* 3. *How do the micro, meso and macro factors interact with each other to influence Jamaican teachers of English use of assessment?*). The quantitative phase was conducted using the survey design and the qualitative phase was conducted using a multiple-case instrumental case study design (Creswell, 2014; Yin, 2014).

The Participants

In the quantitative phase, 1088 teachers who taught eight groups of subjects (English, Mathematics, Social Sciences, Sciences, Business, Practical Arts, Performing Arts, Modern Languages and Mixed) in the five types of secondary schools in Jamaica were surveyed on the factors that influenced their choice of assessment. Male and female teachers with varying years of service were selected using proportionate, stratified random sampling (see Table 2). The sample was stratified at the school level based on school type and rank. The ranking was based on student achievement on the Caribbean Secondary Examination Certificate English A (Language) examination. This examination is the primary exit examination at the secondary level in Jamaica. After the stratification, 45 secondary schools were randomly selected, and within the schools, the teachers were randomly selected.

Table 2. The Quantitative Sample

| Demographics | | N | % |
|-------------------------------|--|------------|-----------|
| Gender | Male | 325 | 31 |
| | Female | 726 | 69 |
| Age | Young adult | 149 | 18 |
| | Middle-aged | 913 | 82 |
| Years of Experience | 0 – 5 years | 275 | 216 |
| | 6 – 10 years | 328 | 32 |
| | 11 – 15 years | 163 | 16 |
| | 16 – 20 years | 112 | 11 |
| | ≥ 20 years | 154 | 15 |
| School Type & Rank | Traditional High school (Coed) | 213 | 20 |
| | Above Average | 47 | 4 |
| | Average | 85 | 9 |
| | Below Average | 81 | 7 |
| | Traditional High school (Boys) | 60 | 6 |
| | Above Average | 20 | 2 |
| | Average | 20 | 2 |
| | Below Average | 20 | 2 |
| | Traditional High school (Girls) | 100 | 9 |
| | Above Average | 33 | 3 |
| | Average | 33 | 3 |
| | Below Average | 34 | 3 |
| | Upgraded High School | 587 | 54 |
| | Above Average | 195 | 18 |
| | Average | 196 | 18 |
| | Below Average | 196 | 18 |
| | Technical High School | 128 | 11 |
| | Above Average | 37 | 3 |
| | Average | 52 | 5 |
| | Below Average | 39 | 3 |
| Subject | English | 191 | 18 |
| | Mathematics | 132 | 13 |
| | Social Sciences | 177 | 17 |
| | Sciences | 115 | 11 |
| | Business | 119 | 11 |
| | Practical Arts | 175 | 17 |
| | Performing Arts | 34 | 3 |
| | Modern Languages | 43 | 4 |
| | Mixed | 60 | 6 |

From this quantitative sample, 32 teachers of English from six schools were purposefully selected to participate in the qualitative phase. These teachers were selected because (1) they were teachers of English who had participated in the quantitative phase and were willing to continue in the research; (2) the quantitative and qualitative phases were being used to inform the design and implementation of the Formative Assessment in English Intervention (FAEI). Therefore, I was particularly interested in the assessment practices of teachers of English in the qualitative phase; (3) they were the best participants to provide information on factors that influenced teachers of English choice and use of assessment tools and strategies. I used stratified purposive sampling (Patton, 1990) to select the participants in the qualitative phase. The participants were also stratified based on school type and rank to explore the role school context played in teachers' choice and use of assessment. The qualitative participants are instrumental cases who provided data on this complex issue in various contexts (school types). Therefore, the individual cases are not the primary focus (Creswell, 2014; Liu et al., 2021).

Data Collection Methods and Analysis

Data was collected using a self-developed Teacher Assessment Practices Questionnaire in the quantitative phase. The development of the instrument was informed by the literature that highlighted demographic details and micro, meso and macro factors that influence teachers' choice and use of assessment (see, for example, Alkharusi, 2011; Berry, 2010; Black & Wiliam, 2018; Dandis, 2013; Heitink et al., 2016; Ma & Bui, 2021; Wilson, 2024; Yan et al., 2022). According to Cobern and Adams (2020), developing survey instruments based on a model generated from the literature – a literature-validated theoretical model – provides evidence of validity for the survey. This validity evidence was augmented through two pilot studies, member checking by ten secondary school teachers, including five heads of department and expert-checking by educational measurement specialists. The instrument included a factor influencing teachers' choice of assessment scale – 19 literature-generated individual factors on a 4-point Likert scale (*Least influential*, *Somewhat Influential*, *Influential* and *Extremely influential*). These factors were classified as micro, meso and macro subscales with Chronbach's alpha of .79 (11 items), .51 (4 items) and .59 (4 items), respectively. The rule of thumb is that alpha equal to or greater than .70 indicates an acceptable level of internal consistency (Taber, 2018). However, the low alpha on the meso and macro factors subscales can be attributed to the small number of items (Wells & Wollack, 2003). Nevertheless, I classified the factors as teacher, student and assessment factors, and the alpha for those scales were .60 .73 and .71, respectively. Alphas of .60 are acceptable (Churchill Jr. & Peter, 1984; Taber, 2018), especially for newly developed measures (Nunnally, 1988). Expert checks were used to validate the classifications of the individual factors.

To answer research question 1 (*What micro, meso and macro factors influence Jamaican teachers' choice of assessment tools and strategies?*), a precursory examination of the means and standard deviations of the items on the Factors Influencing Teachers' Choice of Assessment scale was done. A factor was rated as more influential if it had a higher mean score with a smaller standard deviation. Standard multiple regression was also conducted to assess how much of the variance in teachers' reported use of traditional and alternative tools and strategies could be accounted for by the micro, meso and macro factors and the student, teacher and assessment factors. The data was presented using charts and graphs, with accompanying descriptive explanations and interpretations.

In the qualitative phase, I collected data through semi-structured interviews, non-participant observation and document analysis. With their informed consent, I interviewed all the participants on the factors that influenced their choice and use of assessment. Most of the interviews lasted for 45 minutes, but the range was between 20–90 minutes. The tape-recorded interviews were transcribed and then sent to the participants for verification before they were analysed. After the interviews, I observed each teacher thrice for 45 or 90 minutes to identify how they used assessment. Then, I conducted debriefing interviews to understand better why they used assessment in the observed ways. To better understand the school context, I also observed school functions, such as prize-giving ceremonies, parent-teacher meetings, and general school practices. The classroom observation notes were also extended at the end of each day. Finally, I analysed students' notebooks and test papers to determine the type of feedback teachers gave and provide further evidence of teachers' use of assessment. Then, I used those analyses to solicit their explanations on the factors that influenced their choice and use.

Marshall and Rossman (2016) explain that qualitative data analysis involves familiarisation, data reduction, interpretation, verification and presentation. Therefore, I familiarised myself with the data by repeatedly reading the transcripts and observation reports. Then, I reduced the data through coding and categorising using QDAMiner. Some of the codes and categories were deductive or theory-generated coding (Marshall & Rossman, 2016). For example, the 19 individual factors and the categories or levels of factors were identified from the literature. However, I also coded the data inductively. I interpreted the data by identifying patterns or relationships in the data (causes and effects, sequence, hierarchy, frequencies) and their possible explanations using excerpts from the data as support. For example, I used coding frequency in QDAMiner to identify the frequency with which each type and level of factor was reported and/or observed. This answered research question 2 (*What micro, meso and macro factors influence the use of assessment tools and strategies by Jamaican teachers of English?*). Yin (2014) proposes pattern matching as a strategy for interpreting qualitative data in case studies and explains that it involves comparing a prediction(s) based on the findings of previous studies or pilot studies with an empirical pattern identified from the findings of the case study. Therefore, for research question 3 (*How do the micro, meso and macro factors interact with each other to influence Jamaican teachers of English use of assessment?*), I predicted that the meso factors would mediate the interaction between the micro and macro factors. If the national policies and practices supported using alternative assessment tools and strategies for formative purposes, the teachers would follow to the extent that the schools' assessment policies supported their implementation. I looked for rival explanations throughout, as supported by the data collected. I conducted cross-case (teachers) and cross-context (school-type) analyses to strengthen the interpretation of the data. Finally, the findings will be reported as an overall cross-case analysis with subtopics with supporting excerpts from individual cases as recommended by Yin (2014) for reporting the findings of multiple case studies.

Results

In reporting the findings, I used pseudonyms for the participants and schools. Each research question will be answered using quantitative and qualitative methods, as appropriate. Though reference will be made to the frequency of use of traditional and alternative assessment tools and strategies, detailed findings related to that section of the research are not the focus here as those results were already reported (Williams-McBean, 2022).

There, it was shown that Jamaican teachers used traditional assessment tools and strategies most frequently despite school type. Additionally, detailed findings on how the teachers used these tools will not be presented as those were reported in another paper (Williams-McBean, 2024). It showed that Jamaican teachers of English predominantly used assessment for behaviour management and improvement or formative purposes. Here, I will present why these teachers chose these tools and strategies and used them in the ways they did.

Factors Influencing Jamaican Teachers' Choice of Assessment Tools and Strategies

The first research question (*What micro, meso and macro factors influence Jamaican teachers' choice of assessment tools and strategies?*) focuses on the individual, levels (micro, meso and macro) and types (teacher, student, assessment) of factors influencing the frequency with which teachers choose traditional or alternative assessment tools and strategies. To answer this question, I conducted a preliminary examination of the means and standard deviations of the items on the factors influencing teachers' choice of assessment scale. The higher the mean score for an item, the more influential the teachers rated a factor. These results are presented in Table 3. This descriptive analysis conducted using SPSS shows that the top five most influential factors influencing Jamaican teachers' choice of assessment tools and strategies were *teacher content knowledge*, with 50.4% ($n = 1057$) — rating it as extremely influential; *experiences as a teacher*, 49.5% ($n = 1056$); *the learner's academic abilities*, 46.2% ($n = 1053$); *the format of standardized tests (e.g., CSEC)*, 47.6% ($n = 1041$); and, *formal teacher training*, 40.7% ($n = 1056$), in descending order. The standard deviations were relatively low, indicating that the scores for each item were not very widely spread. Interestingly, *formal teacher training* was ranked in the top five, while teachers reported using mainly traditional assessment tools and strategies. It is also important to note that *national assessment practices* 18.4% ($n = 1034$) was the fourth least influential factor, with only *the availability of past papers* 21.9% ($n = 1054$), *school size* 22.1% ($n = 1053$) and *expectations of parents* 16.2 % ($n = 1049$) ranking lower.

Table 3. Factors Reportedly Influencing Teachers' Choice of Assessment Strategies

| Rank | Factors | N | | Mean | SD | LI | SI | I | EI |
|------|-----------------------------------|-------|---------|------|-------|------|------|------|------|
| | | Valid | Missing | | | | | | |
| 1 | Teacher content knowledge | 1057 | 31 | 3.4 | 0.699 | 1.6 | 7.7 | 40.3 | 50.4 |
| 2 | Experiences as a teacher | 1056 | 32 | 3.32 | 0.801 | 3.3 | 11.3 | 35.9 | 49.5 |
| 3 | The learner's academic abilities | 1053 | 35 | 3.27 | 0.791 | 2.3 | 14.5 | 36.9 | 46.2 |
| 4 | The format of standardized tests | 1041 | 47 | 3.25 | 0.857 | 4.7 | 13.2 | 34.6 | 47.6 |
| 5 | Formal teacher training | 1056 | 32 | 3.16 | 0.849 | 4.9 | 14.4 | 40 | 40.7 |
| 6 | Grade level | 1047 | 41 | 3.11 | 0.865 | 5.5 | 15.8 | 40.6 | 38.1 |
| 7 | Class size | 1047 | 41 | 3.09 | 0.928 | 7.1 | 17.6 | 34.3 | 41.1 |
| 8 | Experiences as a learner | 1048 | 40 | 3.03 | 0.88 | 7 | 16.4 | 43.4 | 33.2 |
| 9 | The students' motivational levels | 1061 | 27 | 3.03 | 0.961 | 9.2 | 17.1 | 35.4 | 38.3 |
| 10 | Time constraints | 1040 | 48 | 2.98 | 0.863 | 5.4 | 21.9 | 41.7 | 31 |
| 11 | The school's assessment practices | 1050 | 38 | 2.96 | 0.843 | 5.7 | 20.2 | 46 | 28.1 |
| 12 | National curriculum demands | 1050 | 38 | 2.92 | 0.837 | 6.1 | 20.9 | 47.7 | 25.3 |
| 13 | Students' behaviour | 1057 | 31 | 2.89 | 1.053 | 14.5 | 18.2 | 31.4 | 36 |

| Rank | Factors | N | | Mean | SD | LI | SI | I | EI |
|------|-------------------------------|-------|---------|------|-------|------|------|------|------|
| | | Valid | Missing | | | | | | |
| 14 | Assessment strategy workload | 1036 | 52 | 2.78 | 0.881 | 9.1 | 24.8 | 45 | 21.1 |
| 15 | Current research | 1023 | 65 | 2.77 | 0.96 | 13.3 | 20.5 | 42.4 | 23.8 |
| 16 | National assessment practices | 1034 | 54 | 2.74 | 0.863 | 9.3 | 25.5 | 46.8 | 18.4 |
| 17 | Availability of past papers | 1054 | 34 | 2.58 | 1.046 | 20.6 | 22.4 | 35.1 | 21.9 |
| 18 | School size | 1053 | 35 | 2.45 | 1.129 | 29.2 | 18.9 | 29.8 | 22.1 |
| 19 | Expectations of parents | 1049 | 39 | 2.26 | 1.072 | 31.6 | 27.1 | 25.1 | 16.2 |

Note. LI = Least influential, SI = Somewhat influential, I = Influential and EI = Extremely influential

The descriptive analysis also showed that the teachers identified the micro-level factors as most influential ($M = 3.09$, $SD = 0.87$), followed by the macro-level factors ($M = 2.87$, $SD = 0.902$), then the meso-level factors ($M = 2.61$, $SD = 1.001$). The micro-level factors were reported as influential, while the meso and macro-level factors were somewhat influential. Additionally, the teacher factors were reported as the most influential ($M = 3.14$, $SD = 0.838$), followed by the assessment factors ($M = 2.89$, $SD = 0.884$) and the student factors ($M = 2.87$, $SD = 0.971$). The means scores indicate that the teachers reported the teacher factors as influential while assessment and student factors were somewhat influential.

The Level of Factors Influencing Teachers' Choice of Traditional Assessment Tools and Strategies

The influence of the factor levels and the demographic details (gender, age, years of service and subject) on teachers' frequency of use of traditional and alternative tools and strategies were further explored through standard multiple regression after ensuring the data met the assumptions sample size, multicollinearity and singularity, outliers, normality, linearity, homoscedasticity and independence of residuals (Pallant, 2013) and transforming the categorical variables through dummy coding in SPSS. For the frequency of use of traditional assessment, the model explained 18% of the variance ($R^2 = .180$ and Adjusted $R^2 = .165$, $SE = .65$) and reached statistical significance $F(16, 840) = 11.54$, $p < .001$). The effect size is medium (Cohen, 1988) ($f^2 = .22$). However, only the micro factors, ($\beta = .27$, $t = 6.26$, $p < .001$), macro factors, ($\beta = .11$, $t = 2.76$, $p = .01$), teacher gender ($\beta = .08$, $t = 2.34$, $p = .02$) and Mathematics ($\beta = -.13$, $t = -2.45$, $p = .01$) made statistically unique contributions, with the micro factors making the largest contribution. Female teachers were associated with a higher frequency of use of traditional assessment tools and strategies, and Mathematics teachers were the least associated.

Similarly, the standard multiple regression model for predicting teachers' frequency of use of alternative assessment tools and strategies explained 22% of the variance ($R^2 = .221$ and Adjusted $R^2 = .207$, $SE = .57$) and reached statistical significance $F(16, 840) = 14.93$, $p < .001$). The effect size is medium (Cohen, 1988) ($f^2 = .25$). All the factor levels (micro factors, ($\beta = .16$, $t = 3.83$, $p < .001$), meso factors ($\beta = .13$, $t = 3.37$, $p < .001$), macro factors, ($\beta = .13$, $t = 3.34$, $p < .001$)) made statistically unique contributions to the model. Teachers with 0-5 years of service ($\beta = -.08$, $t = -2.08$, $p = .04$), Mathematics ($\beta = -.18$, $t = -3.49$, $p < .001$), Social Sciences ($\beta = .13$, $t = 2.29$, $p = .02$) and Performing Arts ($\beta = .11$, $t = 2.86$, $p = .004$) made statistically unique contribution. The micro factors made the largest contribution. Again, the mathematics teachers were the least associated with using alternative assessment tools and strategies. In contrast, the Performing Arts teachers were most likely to use them ($M = 3.03$,

SD = .69). Less experienced teachers (0-5 years) were also least likely to use alternative assessments.

Types of Factors Influencing Teachers' Choice of Traditional Assessment Tools and Strategies

Standard multiple regression was also used to assess to what extent the types of factors (teacher, student and assessment) and the demographic variables identified as influential in the literature could predict teachers' frequency of use of traditional and alternative assessment methods. For the frequency of use of traditional assessment, the model explained 18% of the variance ($R^2 = .175$ and Adjusted $R^2 = .159$, $SE = .65$) and reached statistical significance $F(17, 845) = 10.57$, $p < .0001$). The effect size is medium (Cohen, 1988) ($f^2 = .22$). This model confirmed the significant contribution of teacher gender ($\beta = .09$, $t = 2.68$, $p = .007$) and Mathematics ($\beta = -.13$, $t = -2.40$, $p = .02$). It also showed that while micro and macro level factors can predict teachers' frequency of use of traditional assessment tools and strategies, only the teacher ($\beta = .20$, $t = 5.19$, $p < .001$) and assessment factors ($\beta = .14$, $t = 3.29$, $p = .001$) at those levels made significantly unique contributions. The teacher factors made the largest contribution.

Similarly, the standard multiple regression model for predicting teachers' frequency of use of alternative assessment tools and strategies explained 22% of the variance ($R^2 = .226$ and Adjusted $R^2 = .211$, $SE = .57$) and reached statistical significance $F(17, 845) = 14.55$, $p < .001$). The effect size is medium (Cohen, 1988) ($f^2 = .25$). This model also confirmed the significant contribution of the demographic variables, Performing Arts ($\beta = .11$, $t = 2.91$, $p = .004$), Social Sciences ($\beta = .13$, $t = 2.41$, $p = .02$) and Mathematics ($\beta = -.17$, $t = -3.43$, $p < .001$). It also showed that student factors are not statistically significant in predicting teachers' frequency of use of alternative assessment tools and strategies. The teacher factors ($\beta = .189$, $t = 5.11$, $p < .001$) and assessment factors ($\beta = .187$, $t = 4.53$, $p < .001$) made significantly unique contributions, with the teacher factors making the largest contribution.

Overall, the results of the multiple regression analyses showed that micro and macro-level teacher and assessment factors could predict teachers' frequency of use of traditional assessment tools and strategies. They also showed that the three levels of teacher and assessment factors can predict teachers' frequency of use of alternative assessment tools and strategies. The micro level and teacher factors (formal teacher training, experiences as a teacher, experiences as a learner, knowledge of current research and teacher content knowledge) made the most unique contribution toward explaining teachers' reported choice of traditional and alternative assessment tools and strategies. This finding was unsurprising because three of the five items categorized as teacher factors – *teacher content knowledge*, *experiences as a teacher* and *formal teacher training* – were ranked in the top five of the individual factors selected as being influential. Only one of the teacher factors – *the teachers' knowledge of current research* – is a meso-level factor. Given the fact that the multiple regression models could explain no more than 22% of the variance, further research was necessary to explain the 78% unexplained variance. Therefore, further explanations were sought in the qualitative phase.

The qualitative data did not corroborate the greater influence of micro-level or teacher factors. In contrast, the participants were influenced by a mix of micro, meso, and macro-level factors, with the meso-level factors, particularly the school's assessment policy, exerting the greatest influence (see Table 4). As seen in Table 4, the

average count for the 18 micro-level factors was 13.3, 16.5 for the six meso-level factors, and 15 for the four macro-level factors. Similarly, the teachers were influenced by teacher, student, assessment, and infrastructural factors. The infrastructural factors were not identified in the quantitative phase. However, the assessment factors, especially the schools' assessment policy, exerted the greatest influence despite the school type (see Table 5).

Table 4. Level of Factors Influencing Teachers' Choice of Assessment Tools and Strategies (Qualitative Phase)

| | | | | | | | | | Total | | |
|---|----|-----|----|-----|----|-----|----|-------|-------|---------|--|
| | SH | JSH | HH | RRH | WH | HTH | NH | Count | Cases | Total | |
| Micro Factors | | | | | | | | | | | |
| Time constraints | 7 | 5 | 8 | 19 | 2 | 3 | 8 | 52 | 15 | | |
| Behaviour of learners | 6 | - | 10 | 9 | 7 | 4 | 3 | 39 | 20 | | |
| Teacher content knowledge | 8 | 2 | 7 | 6 | 3 | 1 | 2 | 29 | 16 | | |
| Assessment workload | 1 | 2 | 4 | 10 | 3 | - | 4 | 24 | 12 | | |
| Academic ability of learners | 4 | - | 1 | 3 | 4 | 3 | 5 | 20 | 11 | | |
| Experience as a teacher | 4 | 2 | 2 | 3 | - | 1 | - | 12 | 10 | | |
| Grade level | 2 | - | 4 | 3 | - | 2 | 1 | 12 | 9 | Count: | |
| Formal teacher training | 1 | 1 | 2 | 3 | - | 2 | - | 12 | 7 | 239 | |
| Class size | - | - | 2 | 4 | - | 2 | 2 | 10 | 6 | | |
| Student learning styles* | 3 | - | - | 1 | - | 4 | 1 | 9 | 8 | Cases: | |
| Electrical support* | - | - | 2 | 4 | - | - | - | 6 | 3 | 32 | |
| Classroom arrangement* | - | - | 1 | 1 | 2 | - | - | 4 | 3 | | |
| Student gender* | - | - | - | - | - | 1 | 2 | 3 | 2 | | |
| Student stress level | - | - | - | - | 2 | - | 1 | 3 | 2 | | |
| Motivation level of student | - | - | - | 1 | - | - | - | 1 | 1 | | |
| Experience as a learner | 1 | - | - | - | - | - | - | 1 | 1 | | |
| Teacher's preference* | - | - | - | 1 | - | - | - | 1 | 1 | | |
| Assessment diversity* | - | - | - | - | - | 1 | - | 1 | 1 | | |
| Meso Factors | | | | | | | | | | | |
| School's assessment policy | 11 | 6 | 14 | 26 | 3 | 5 | 14 | 79 | 21 | | |
| Textbooks* | 1 | 1 | 9 | 5 | 1 | 2 | 2 | 21 | 17 | Counts: | |
| Availability of ICT* | - | 1 | 2 | 9 | - | - | - | 12 | 7 | 99 | |
| Current research | - | - | - | 5 | - | - | - | 5 | 1 | | |
| Expectations of parents | 1 | 1 | - | - | - | - | - | 2 | 2 | Cases: | |
| School size | - | - | - | - | - | - | - | - | - | 32 | |
| Macro Factors | | | | | | | | | | | |
| Format of standardized assessments | 3 | 2 | - | 8 | 6 | 3 | 2 | 24 | 13 | Counts: | |
| National assessment practices | 2 | 2 | 1 | 4 | 2 | - | 1 | 12 | 8 | 60 | |
| Demands of the National Curricula | - | - | 1 | 2 | - | 1 | 1 | 5 | 5 | Cases: | |
| Availability of past papers (e.g., CXC) | - | - | - | - | - | 1 | - | 1 | 1 | 19 | |

Note. SH = Sunnyside High – above average performing traditional high school, JSH = James Stewart High – average-performing traditional high school for Boys, HH = Harrison High – below average performing traditional high school, RRH = Roaring River High – above average performing upgraded high school, WH = Willow High – below average performing upgraded high school, HTH = Hill Top High – above average performing technical high school, NH = Northside High – below average performing technical high.

- = none was reported or observed, * = not identified in the quantitative phase.

Table 5. Types of Factors Influencing Teachers' Choice of Assessment Tools and Strategies (Qualitative Phase)

| | SH | JSH | HH | RRH | WH | HTH | NH | Total | | |
|---------------------------------|----|-----|----|-----|----|-----|----|-------|-------|----------------|
| | | | | | | | | Count | Cases | Overall |
| Assessment Factors | | | | | | | | | | |
| School's assessment policy | 11 | 6 | 14 | 26 | 3 | 5 | 14 | 79 | 21 | Counts: 202 |
| Time constraints | 7 | 5 | 8 | 19 | 2 | 3 | 8 | 52 | 15 | |
| Standardized assessment formats | 3 | 2 | - | 8 | 6 | 3 | 2 | 24 | 13 | Cases: 29 |
| Assessment workload | 1 | 2 | 4 | 10 | 3 | - | 4 | 24 | 12 | |
| National assessment practices | 2 | 2 | 1 | 4 | 2 | - | 1 | 12 | 8 | |
| Curricula demands | 2 | - | - | 3 | - | - | - | 5 | 5 | |
| Availability of past papers | - | - | 1 | 2 | - | 1 | 1 | 5 | 5 | |
| Diversity* | - | - | - | - | - | 1 | - | 1 | 1 | |
| Student Factors | | | | | | | | | | |
| Behaviour of learners | 6 | - | 10 | 9 | 7 | 4 | 3 | 39 | 20 | |
| Academic ability of learners | 4 | - | 1 | 3 | 4 | 3 | 5 | 20 | 11 | |
| Grade level | 2 | - | 4 | 3 | - | 2 | 1 | 12 | 9 | Counts: 99 |
| Student learning styles* | 3 | - | - | 1 | - | 4 | 1 | 9 | 8 | |
| Class size | - | - | 2 | 4 | - | 2 | 2 | 10 | 6 | Cases: 25 |
| Gender* | - | - | - | - | - | 1 | 2 | 3 | 2 | |
| Student stress level | - | - | - | - | 2 | - | 1 | 3 | 2 | |
| Motivation level of student | - | - | - | 1 | - | - | - | 1 | 1 | |
| Expectations of parents | 1 | 1 | - | - | - | - | - | 2 | 2 | |
| School size | - | - | - | - | - | - | - | - | - | |
| Teacher Factors | | | | | | | | | | |
| Teacher content knowledge | 8 | 2 | 7 | 6 | 3 | 1 | 2 | 29 | 16 | Counts: 60 |
| Experience as a teacher | 4 | 2 | 2 | 3 | - | 1 | - | 12 | 10 | |
| Formal teacher training | 1 | 1 | 2 | 6 | - | 2 | - | 12 | 7 | Cases: 19 |
| Current research | - | - | - | 5 | - | - | - | 5 | 1 | |
| Experience as a learner | 1 | - | - | - | - | - | - | 1 | 1 | |
| Teacher's preference* | - | - | - | 1 | - | - | - | 1 | 1 | |
| Infrastructural Factors* | | | | | | | | | | |
| Textbooks* | 1 | 1 | 9 | 5 | 1 | 2 | 2 | 21 | 17 | Counts: 42 |
| Availability of ICT* | - | 1 | 2 | 9 | - | - | - | 12 | 7 | |
| Electrical support* | - | - | 2 | 4 | - | - | - | 6 | 3 | Cases: 17 |
| Classroom arrangement* | - | - | 1 | 1 | 2 | - | - | 4 | 3 | |

Note. SH = Sunnydale High – above average performing traditional high school, JSH = James Stewart High – average-performing traditional high school for Boys, HH = Harrison High – below average performing traditional high school, RRH = Roaring River High – above average performing upgraded high school, WH = Willow High – below average performing upgraded high school, HTH = Hill Top High – above average performing technical high school, NH = Northside High – below average performing technical high.

- = none was reported or observed, * = not identified in the quantitative phase.

Table 5 shows that cumulatively, the assessment factors were reported and observed to be most influential, with 202 instances in 29 cases (average count = 25.3). It also shows that the top five factors that influenced teachers' choice of assessment tools and strategies were: the school's assessment policy (79 instances in 21 cases), time

constraints (52 instances in 15 cases), the behaviour of learners (39 instances in 20 cases), teacher content knowledge (29 instances in 16 cases), and the format of standardized assessments (24 instances in 13 cases), and assessment workload (24 instances in 12 cases) were tied at fifth. The presence of four assessment factors in the top five confirmed their greater influence. Importantly, the infrastructural or resource factors, which usually led teachers to use traditional assessment tools and strategies, were less of a factor for Sunnydale High than the other schools. There was only one instance where “textbook” was a factor, as the teacher used a test because it was in the students’ textbook. “Textbook” was the most influential infrastructural or resource factor, with 21 instances in 17 cases reported and/or observed in all schools.

The teacher factors were reported to be most influential in the quantitative phase, and I wanted the teachers to explain that result. Therefore, I asked the participants to rank the teacher factors identified from the quantitative phase: teacher content knowledge, experience as a teacher, formal teacher training, current research, and experience as a learner (see Figure 1). The results showed that *Experience as a teacher* (39%) was ranked as most influential teacher factor, while *Formal teacher training* (6%) was ranked as least influential. Experience as a teacher was the only teacher factor in the top five factors influencing teachers’ choice of assessment in this phase.

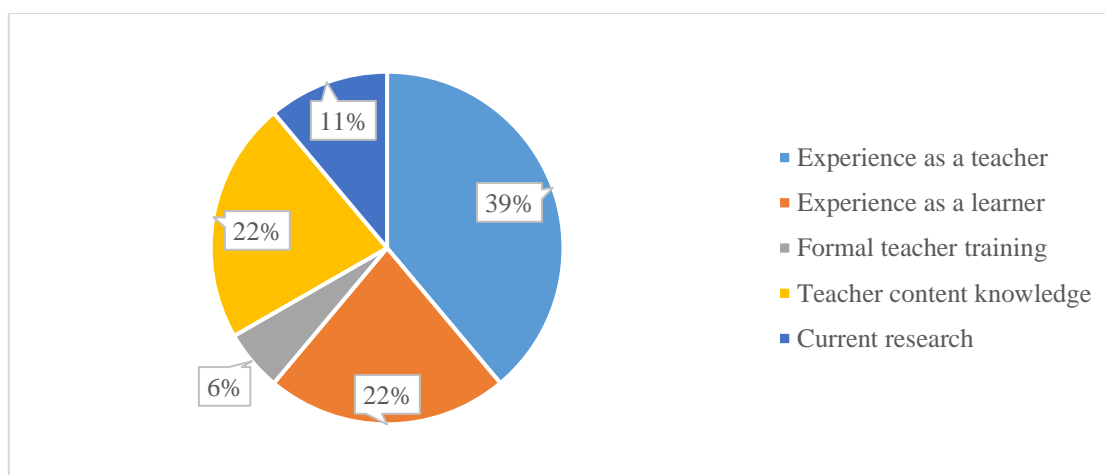


Figure 1. Influence of Teacher Factors on Teachers’ Choice of Assessment Tools and Strategies

Many teachers explained that their teacher training was unrealistic and did not adequately prepare them for the realities of the classroom. For example, Ms. Khan from Hill Top High (the above-average technical high school) explained, “Formal teacher training provides a basic background and not a detailed, up-to-date, and real-life situation of what is currently happening in the classroom.” The lack of adequate preparation was emphatically expressed by another teacher at Sunnydale High (the above-average traditional high school) when I asked her how important was her teacher training in guiding her assessment practices:

The only thing that I got from my Dip Ed. was a paper to say that I am qualified to earn a certain salary. I got ZERO from my Dip Ed. Programme. Zero and I mean that in every sense of the word. Zero. I got out of my teacher training. Up to now, I have not been taught how to write a lesson plan, and yet you come into the school system, and the system demands that you write lesson plans. I’ve never been taught how to assess students. When I tell you that I got ZERO from MY Dip. Ed., believe me a di trut’ mi a tell yuh. ZERO! We didn’t do anything. WE DID NOTHING! I’m not even laughing. Yeah, so ZERO!

Ms. Newell explained that her formal teacher training “was not important at all” because she had already been teaching before she earned her diploma in education, while Ms. Brooks explained that teachers’ college taught her to pass exams and not to retain information.

For most of the teachers, experience as a teacher was crucial. Mrs. Downer, from Willow High (the below-average upgraded high school), stated, “Teaching experience is very important because very often what is taught in college and university is very different from the realities of the classroom.” Experience as a teacher was also influential because the feedback the teachers received from students and the time the teacher had to prepare, administer and mark the assessment (as stipulated by the schools’ assessment policies) dictated what assessment tools and strategies were used.

Factors Influencing Jamaican Teachers' of English Use of Assessment Tools and Strategies

The qualitative phase was also used to explore the teachers of English use of the assessment tools and strategies. The uses of assessment predominantly reported by Jamaican teachers across subjects were improvement, student accountability, and school accountability. This showed that Jamaican teachers primarily used traditional assessment tools and strategies (i.e., tests with selected response items) to report students' grades to parents and administrators. This reflects a summative use of assessment. Simultaneously, they used assessment to improve teaching and learning (formatively). However, teachers of English were observed predominantly using assessment for improvement and behaviour management purposes. Therefore, this section will present the findings on the factors that influenced the teachers to use assessment for summative, formative and behaviour management purposes. This allowed me to respond to the second research question: *2. What micro, meso and macro factors influence the use of assessment tools and strategies by Jamaican teachers of English?*

Factors Influencing the Summative Use of Assessment

The schools' assessment policies were the primary factor that influenced the teachers’ predominant use of traditional assessment for grading and reporting. In all the schools, the administrators mandated or exhibited a preference for traditional tests. The administrators also mandated a quota of grades per month, six weeks or term. Therefore, the teachers used easy-to-mark, selected-response items to get the required number of grades. Ms. Hall explains how the school's assessment policy that mandates a quota of grades prohibits her from focusing on the formative use of assessment:

In terms of administration and the school, I don't think they place much emphasis on formative assessment because you are only told that you need to have so many grades to put into the system, and you're given a deadline, and most times, the deadline is so short. You have to just give tests because you just need the grades all the time. You need the grades for this month. You need the grades for that. And especially with literature, if I'm going to do formative assessment, I can't be producing so many grades for the month.

The schools' assessment policies prioritised traditional assessment and its summative use. Therefore, the teachers used traditional assessments for grading and reporting to fulfill the mandate.

Factors Influencing the Behaviour Management Use of Assessment

As seen in Table 4, the *behaviour of learners* (a micro factor) was the most influential student factor influencing the teachers' choice of assessment tools and strategies, with 39 instances in 20 cases. In looking at the student characteristics observed and reported, they were predominantly the same despite school type (see Figure 2). The students were most frequently described as and observed to be talkative (183 instances in 26 cases) and disruptive (127 instances in 22 cases). This dominant student characteristic led many teachers to use selected-response tests and essays to control the students and alleviate the disruption of alternative assessment. As Ms. Coley explained:

I most frequently use activities from the texts because when they are in discussions, sometimes it tends to get the class out of order and the noise level ... It is noisy. When you are trying to talk to them and have a discussion with them, you can't hear them, and they can't hear you. Sometimes, the noise is not even in [that class].



Figure 2. Word Cloud of Student Characteristics

However, the students were observed to be most talkative when discussions were proliferated with literal-level questions, and these types of questions dominated despite the school type. As other students were quickly shouting out the answers, some students took the opportunity to talk with their neighbours — which resulted in the teachers having to ask them to stop talking. The literal-level questions also encouraged the students to shout out their answers and disregard the hand-raising protocols. These discussions were difficult for the teachers to control or conduct in an orderly manner. Therefore, the type of questioning led to undesirable student behaviour, causing teachers to use a quieter traditional assessment tool: a test. The students' disruptive behaviour also reduced the teachers' urge to be creative, so they resorted to tests.

Factors Influencing the Improvement Use of Assessment

Teachers predominantly used assessment for improvement because of micro-level factors: student holistic development, student engagement and student learning, teacher interest and instructional decisions. The teachers explained that students find alternative assessment methods more interesting and engaging. They also use them to develop the student as a person and not just to pass examinations. This is exemplified in the following quotation from Ms Jones at Sunnydale High (the above-average traditional high school):

It [alternative assessment] is more engaging. It's more interactive, and I also get to see different aspects of the students. I think they benefit from it more, too because it's not just a matter of an answer being right or wrong or one mark attached to this item, or you don't get the mark attached to that. I'm also always interested in ... not just teaching a lesson, but really shaping the individual, creating the human person, helping them to develop, and so on. For example, you might have a child who is shy and hates to be the centre of attention, but when you bring that person up, that person has to do what needs to be done, and it helps to build self-confidence and their sense of awareness ... just show a different side of their personality and you can actually see the growth; the personal growth. You see, I use teaching as a vehicle to affect people's lives.

All the teachers used assessment for formative purposes because they genuinely wanted their students to learn. Ms. Young shared:

Assessment is very important because, as I was explaining to a parent this morning, so many people die from organ failure because they didn't know it was happening. They didn't feel any pain. They didn't feel faint. They didn't have any symptoms to know that they needed to go to a doctor and get some medication. They just died. So, for me assessment is like that. I'd rather my students ... Even if they're getting poor grades, and it's not just grades. If they're not performing the way I'd like them to, at least I know that there is a problem, and I know I can work on improving my classroom. I like to think that no matter what it is, it's not solely the students' responsibility and there's something that ... the largest part of the work is for me to go and fix and see what I can do and improve.

Teachers used assessment to evaluate their students' learning, the lesson and themselves so they can improve students learning. They believed the formative purposes were most important. They also use self- and peer evaluations to get students actively engaged in their own learning. Mrs. Turner explains:

I'm aware of assessment strategies that you use formatively in terms of questioning, observing them in classes, even pupils' own self-evaluation, letting them be aware of where they are, where we're going, right. I'm VERY VERY conscious of trying to create active learning classes. It is very difficult because they have been cultured to just sit there and have me direct everything, but I want them to take some responsibility and get an idea of where we are and where we're going. So, I use self-evaluation a lot.

Teachers' conception of assessment strongly influences their choice and use of assessment. They conceive assessment for improvement purposes, so they use it to improve teaching and learning despite competing responsibilities and stipulations from their school administration and national policies.

Interaction Between the Micro, Meso and Macro-Level Factors

The third research question sought to explain how the micro, meso and macro-level factors interacted to influence Jamaican teachers of English use of assessment. There are many interactions. However, the most recurring is the macro influencing the meso to counteract the micro. However, the relationship is not harmonious as teachers often must set aside the formative use of assessment for its summative uses despite knowing the latter is more beneficial for their students. This tension is exemplified in Ms. Fox's explanation:

Before I think my own personal perception influenced me. My own beliefs influenced by, like I said, research and my own training. I think now, with the change in the school's assessment policy, I can already see it affecting me, and I don't want it to. For example, I don't grade any piece of first work that my students do because I don't think that should be done. I want to see what it is that they know and how it is that they are mastering what I am teaching, and then I can have them identify strengths and weaknesses to move forward. Now, if I am going to be held accountable to a Code and to a quota and my performance appraisal is going to be based on my ability to meet said targets, I fear that it is going to ask me to question what it is I already know to be right and force me to now grade to make up the quota. Because then I will be seen as inadequate based on the Code of Regulations.

Ms. Fox's formative use of assessment was previously influenced by her personal conception of assessment (micro) which was influenced by research (meso) and her teacher training (micro-level) factors. However, the Principal used the National Code (macro factor) to develop a school assessment policy (meso factor) that required 36 grades per term. Despite her unwillingness to deviate from formative assessment, if she does not produce the quota of grades, she will be appraised as ineffective. Therefore, she produces the quota of grades, resorting to what she deems as meaningless grading, even while trying to maintain her formative use of assessment.

The teachers had two primary reasons for assessing their students: they wanted to improve their students' learning, and it was required. Mrs Grant from Northside High (the below-average performing technical high) explained:

Well, the school dictates a particular one, so the teacher is really at a loss where their favourite is concerned, or what works best. It's always a formal setting where everybody sits and does an exam. That's what the school stipulates.

Frequently, what is required supersedes, i.e., teachers are compelled to give tests for accountability purposes instead of various forms of assessment to cater to students' needs and improve their learning. This is exemplified in the quotation from Ms. Hall from Roaring River High, the above average performing upgraded high school:

Within the education system, the focus is on tests, so you really must teach them to pass the tests. Now and again, you can get in some life lessons and some other little things when you have a teachable moment, but it's not gonna be done all the time.

Macro-level factors such as the format of standardised tests for CXC and City and Guilds, the stipulations of the National Education Inspectorate and the Education Code influence teachers' choice and use of assessment. They lead school administrators to implement policies that promote grading and traditional assessment at the expense

of formative assessment and alternative assessments. However, teachers' conception of assessment and their genuine interest in improving teaching and learning influence them to persist and try to do both where possible.

Discussion

This explanatory sequential mixed methods study investigated the factors that influenced Jamaican secondary school teachers' choice and use of assessment. Specifically, it sought to find out what level (micro, meso and macro) and what type (student, teacher, assessment and infrastructural) factors influenced their choice and use of varying assessment tools and strategies. It also aimed to find out how the factors interacted to influence the teachers' choice and use.

The results showed that individual factors at all three levels exerted some level of influence on teachers' choice of traditional or alternative assessment tools and strategies. However, only the micro and macro factors with teacher gender and Mathematics made statistically unique contributions in predicting teachers' frequency of use of traditional assessment tools and strategies, with the micro factors making the largest contribution. For alternative assessment, standard multiple regression showed that all the factor levels significantly contributed to predicting teachers' frequency of use of these methods. Again, the micro-level factors made the largest contribution. Additionally, less experienced and mathematics teachers were least likely to use alternative assessments while Performing Arts and Social Studies teachers were most likely to. Overall, the micro-level factors made the largest contribution to explaining teachers' frequency of use of traditional and alternative assessment tools and strategies

The finding on the significant influence of teacher gender contradicts those reported by Alsarimi (2000). However, Jamaican mathematics teachers' least likelihood of using traditional assessment tools and strategies is similar to the results reported in other studies that focused on the influence of the subject the teachers taught (see, for example, Dandis, 2013; Watt, 2005). Mathematics teachers were also least likely to use alternative assessment tools and strategies, disconfirming previous results (see Zhang & Burry-Stock, 2003). Despite the contradiction, the subject plays a role in Jamaican classrooms, contrasting reports from Duncan and Noonan (2007) and Ong (n.d.).

The results also showed that teacher, student and assessment factors influenced Jamaican secondary school teachers' frequency of use of traditional and alternative assessment tools and strategies. In the quantitative phase, standard multiple regression showed that only the teacher and assessment factors made significant, unique contributions to predicting teachers' frequency of use of traditional and alternative assessments, with the teacher factors making the largest contribution. However, this finding was not confirmed in the qualitative phase, where the assessment factors were reported and observed to be most influential to the teachers of English. These teachers also explained that teacher training did not adequately prepare them for their assessment responsibilities in the classroom. In the qualitative phase, the school's assessment policy (a meso-level factor) was the most influential, and it forced teachers to choose traditional assessment tools and strategies more frequently. Previous studies have consistently reported that teachers are inadequately prepared for their assessment responsibilities (Gotch, 2022;

Popham, 2018; Zulaiha et al., 2020). Some have also reported that school's assessment policies influence teachers to use traditional assessments (Yan & Brown, 2021).

As it pertains to the use of assessment, Williams-McBean (2024) reported that Jamaican teachers of English primarily used assessment for behaviour management (to maintain student discipline and monitor and control their behaviour) and improvement or formative purposes, particularly to diagnose students' strengths and weaknesses, develop students' higher-order thinking, problem-solving and creativity skills and monitor student progress and school accountability (Williams-McBean, 2024). Therefore, this study explored the factors that influenced those uses. The findings revealed that the behaviour management use resulted from the students' talkative and disruptive behaviour (a micro-level student factor), while the formative use emanated from the teachers' conception of assessment for improvement and their belief that teaching should contribute to the holistic development of students. They also wanted to actively involve their students in their learning and cater to their interests. Therefore, micro-level student and teacher factors exerted the greatest influence on these teachers to use assessment for formative purposes. The summative use of assessment was primarily driven by the schools' assessment policies (a meso-level assessment factor), which required a quota of grades and showed a preference for traditional assessment tools and strategies.

Formative assessment enhances active learning (Gikandi et al., 2011). Additionally, teachers' use of assessment for formative purposes is influenced by their personal beliefs, including their conceptions of assessment and formal teacher training (Heitink et al., 2016; Yan et al., 2021; Yan et al., 2022). As Yan (2018) explained, teachers enact their conceptions of assessment during teaching. This was evident in this study where the teachers of English enacted their improvement conceptions of assessment despite the challenges. Furthermore, Yan et al. (2021), in their systematic review, reported that the most frequent personal factors that influenced teachers' implementation of formative assessment were the teachers' "education and training, instrumental attitude, belief of teaching, and skill and ability" (p. 17). They also explained that instrumental attitude refers to the 'teacher's perceptions about the effectiveness or consequences of performing formative assessment in influencing learning and/or teaching' (p. 8). Consequently, teachers used assessment formatively because they perceived it as being effective for making instructional decisions, tracking students' progress and improving teaching and learning. This instrumental attitude was evident in this research. Teachers' beliefs about teaching were also influential. However, the teachers of English explained that their teacher training was the least influential if at all.

Furthermore, the factors did not exert influence in isolation. The schools' assessment policies were influenced by the stipulations of the Education Code and the National Education Inspectorate and the format of the national standardised examinations. For the teachers of English who participated in this study these national policies and practices created a grading culture and forced them to focus on producing grades, often, instead of improving learning through assessment. Nevertheless, the teachers' conception of assessment and their desire to see their students succeed mitigate the pressure. Therefore, the predominant relationship identified was that macro-level factors influenced the meso-level factors and propelled teachers to use traditional assessment tools and strategies for summative purposes. However, that influence is mitigated by micro-level factors that influence teachers to continue to use assessment for formative purposes despite the compulsion.

Previous studies have shown that an overarching examination and evaluative culture can prevent the formative use of assessment (Yan & Brown, 2021). They have also reported that micro-level factors, such as students' academic ability, can mediate the influence of a macro-level factor (college entrance examination (Ma & Bui, 2021). While a micro-level factor also mediated the influence of the examination in the Jamaican context, the specific micro-level factor differed. Here, it was primarily the teachers' conception of assessment and their roles as teachers that played that role. The student factors considered were the students' engagement and interest.

Conclusion and Recommendations

Classroom teachers should use various assessment tools and strategies to determine what students know and can do. It is also recommended that when teachers are using assessment for formative purposes, they should elicit evidence of achievement from various activities (Yan et al., 2021). However, many teachers do not know how to construct and use these instruments. Therefore, national and school policies should support teachers' use of traditional and alternative assessment tools and strategies. The Ministry of Education and teacher training institutions should also provide the requisite assessment training to pre- and in-service teachers.

Additionally, teachers' primary role is to improve students' learning. Therefore, the formative use of assessment should be a priority. Despite policies that support the use of formative assessment, the overarching accountability system that holds teachers and schools accountable for student achievement, as reflected by standardized test scores, will continue to frustrate teachers' efforts to use assessment for formative purposes. Therefore, school administrations should revise their assessment policies to include fewer and less frequent summative assessments. They can consider six per term: two classwork, two homework, and two tests. This could be supplemented with anecdotal records where teachers report on the strengths and weaknesses of each student qualitatively rather than just provide a score. The revisions should also include assessments that can develop the students' skills, such as reflection, negotiation, empathy, cooperation, leadership, problem-solving, and resilience. Assessment needs to be shifted from focusing on only regurgitating content to requiring students to use content to develop much-needed skills. Finally, these revisions could require that diagnostic tests are not used to provide grades but are used to inform curriculum planning. Therefore, a report on how the results informed teaching for the term must be provided after the teacher administers the required diagnostic test. Subsequent lessons should reflect decisions based on the results of the diagnostic tests.

Finally, the qualitative phase of this study only explored the teachers of English' choice and use of assessment. Therefore, the explanations provided are limited to those teachers. Future studies could explore the relationship among the level and types of factors for teachers who teach other subjects. The study was also confined to the secondary level. Therefore, other levels of Jamaican education should be researched.

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