

Assessing pedagogies for teaching and learning of accounting in senior high schools

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Abstract

Ghana's senior high school curriculum emphasizes accounting as a crucial subject for life-long learning. However, the current pedagogies used for teaching are not suitable for effective learning. This research aims to assess the appropriate pedagogies for teaching accounting in senior high schools in Ghana.

The study, based on constructivism theory, analyzed data from 75 accounting teachers and 353 final-year accounting students. Two sets of questionnaires were answered by the respondents. Additionally, 11 accounting lessons from final-year accounting classes were observed. Descriptive, inferential statistics and narratives were used to analyze the data. It found that teachers primarily used teacher-centered pedagogies for accounting lessons, with little use of problem-solving and demonstration techniques. The high school accounting curriculum recommends learner-centered pedagogies like field trips, discovery and team teaching, but no evidence was found on the usage of these pedagogies. It is recommended that accounting teachers implement more learner-centered pedagogies when facilitating accounting lessons.

Keywords: *accounting education, pedagogy, accounting teacher, teaching effectiveness and accounting student*

1.0 Introduction

The subject accounting is a significant part of Ghana's senior high school curriculum, which is designed to provide technical understanding of accounting principles, standards and concepts (Saayir, 2015). The teaching of accounting has raised concerns among accounting academics that accounting students are often taught by the memorization pedagogies instead of equipping them with the necessary skills required in practice (Albrecht & Sack, 2002). This approach to teaching and learning of accounting often limit the ability of students to become life-long learners in order to promote the subject. The apparent use of inappropriate pedagogies in delivery accounting lessons has greatly hampered students' ability to think critically in learning the subject. Also, accounting students have been observed to be struggling with the computation of basic accounts as they lack basic communicative skills (Hurt, 2007; Tailab, 2013). Accounting as a discipline usually emphasizes the application of regulations, principles, standards and international financial reporting norms that are essential to creating business reports. Accounting teachers need to employ comprehensive pedagogies to guarantee learners' holistic growth and become productive accounting graduates. To achieve the intended learning outcomes for the twenty-first century, teachers should focus on two key strategies: active participation of the classroom teacher in the implementation of successful pedagogies, as well as the appropriate use of high-quality textbooks, instructional materials, and learning environments in high schools. (Kwarteng, 2014; Alao & Ukpong, 2020). The senior high school accounting syllabus suggested the use of fieldtrips, team-teaching, discovery and demonstration pedagogies to promote effective teaching and learning. The syllabus recommended that accounting teachers should use the team-teaching pedagogy in order to complement the content deficiency of each other. It added that students need to be given real-world experiences through visits to accounting organisations and the opportunity to demonstrate computation of accounts (Ministry of Education, 2010). This implies that the above recommended pedagogies are effective in teaching and learning of accounting. But, academicians have been debating what constitutes efficient pedagogy for a very long time. Who are good teachers, a question that is frequently asked? Simply put, effective pedagogies are those who result in positive student results. Accordingly, students who had successful learning outcomes might have had their

teaching and learning done through effective pedagogies by excellent teachers (Niemi, Heikkinen, & Kannas, 2012). This implies that successful pedagogies are expected to be used by good teachers in their instruction to produce positive learning results. Effective pedagogies take students' opinions seriously; they are based on teachers' actions (what they do), knowledge and comprehension of their students (what they know about their students), and beliefs (the reasons behind their actions).

Building on students' past knowledge and experiences, supporting student development, and clearly thinking about both short- and long-term learning outcomes are all components of effective pedagogies (Farrant, 2004). According to Ferguson, Hanreddy, and Draxton (2011) and Niemi, Heikkinen, and Kannas (2012), appropriate pedagogy is used when teaching incorporates a variety of techniques, such as whole-class and structured group work, emphasizes developing higher-order thinking and metacognition, makes good use of dialogue, embeds assessment for learning, and takes into account the diverse needs of a range of learners. In a related development, the study conducted by Westbrook et al. (2013) recognized specific teaching methods as efficient pedagogies that support students' learning. These include the flexible use of whole-class, group, and pair work where students discuss a shared task, the regular and pertinent use of learning materials outside of textbooks, open-and closed-questioning, expanding responses, encouraging student questioning, drawing on solid pedagogical content knowledge, and varying lesson sequences. In order for students to engage, comprehend, participate and learn, effective teachers must be aware of the need to elicit a positive response from them. They can do this in more participatory and communicative ways. According to Akintelure (2003), memorizing the fundamental rules is insufficient to learn the subject of accounting. He argues that it calls for the learner's complete participation throughout all phases of the learning process, solid theoretical understanding, and extensive practice in the application of fundamental concepts. The pedagogies used in the classroom should promote individual and collaborative learning.

Accounting teachers are tasked to develop their students' capacity as independent, collaborative learners for life as well as their capacity for critical thought. This work extends beyond simply assisting students in achieving high test scores. Teachers and accounting professionals have a general perception that students are not being given the necessary foundation of generic abilities in their accounting education (Mohamed & Lashine, 2003). This is due to the very traditional teaching techniques, which rely heavily on a uniform set of textbooks and basically include teachers passing along knowledge to students (Phillips & Phillips, 2007). This suggests that pedagogies that will inspire learners' thinking and produce a set of generic abilities were necessary for teaching accounting.

In spite of other possible causes of poor performance among senior high accounting students, research by Okoiye, et al. (2016) and others has shown that accounting teachers employ erratic instructional pedagogies that consistently disregard differences in students' aptitude, attitude, and capabilities. Others have noted that accounting teachers mostly employ teacher-centered pedagogies (lecture, question-and-answers), and use learner-centered techniques sparingly (Zohrabi, Torabi, & Baybourdiani, 2012; Mohammed, Kassim & Ismail, 2020; Waliur-Rahman, et al, 2021). Alao and Ukpong's (2020) also found that accounting teachers did not employ activity-based instructional techniques. The West African Senior Secondary Certificate Examination (WASSCE) results for Ghana each year show that accounting students have consistently performed poorly on the accounting paper. This was evidence from the chief examiner's findings on students' performance in the field of accounting during the past five years. Between 2016 and 2020, the chief examiner's reports consistently alert teachers to the necessity of raising students' performance through the use of effective pedagogies (West African Examinations Council, 2016; 2017; 2018; 2019, 2020). According to each year's report, candidates' performance was consistent with that of

the prior years. The questions were all of the same calibre and level of difficulty. Performance levels are nonetheless low despite the fact that the questions were within the overall scope of the course and the candidates' skill levels.

Kwarteng (2018a) confirms the observation made by WAEC, that teachers do not employ the proper pedagogies to teach in the classroom, which has led to teachers being blamed for students' low performance on accounting exams. He added that performance of the students remained persistently low, which showed that the pedagogies utilized to teach accounting in senior high schools appear to be ineffective. Senior high school accounting students allegedly performed poorly as a result of some accounting teachers' lack of preparation for the classroom (Kwarteng & Sappor, 2021). To guarantee that students comprehend the material being taught and are prepared to perform effectively, accounting teachers are expected to use cutting-edge pedagogies and effective classroom management techniques (Mucavele, 2008).

Due to insufficient research in the literature and the continuous low students' performance, the authors are motivated to assess the type and effectiveness of pedagogies used to teach and learn accounting in the senior high schools. The current study makes multiple contributions to stakeholders and the academic community. Current research on widely used teaching pedagogies employed by teachers in instruction and learning is crucial for determining the direction of skill development. In order to redirect teaching and learning towards the achievement of 21st century skills, the appropriate workshops must be designed for senior high school accounting teachers based on their knowledge of the prevalent accounting teaching pedagogies. This research would aid accounting teachers in adopting significantly more effective pedagogies for facilitating accounting lessons that promote effective learning. The scholarly community could advance further research on how to combine various pedagogies in facilitating accounting lessons if researchers are made to be aware of the current widely used teaching pedagogies in senior high schools.

2.0 Literature review

Literature reviewed centered on the learning theories as the theoretical basis underpinning the conduct of the study and the various empirical works already conducted.

2.1 Theoretical Basis: Learning Theories

Teachers must align their instructional pedagogies with the various theories surrounding learning in education. The broad categorisation of pedagogies as teacher-centered, learner-centered, and interactive can be matched with constructivism learning theory.

2.1.1 Constructivism Learning Theory

Jerome Bruner proposed the constructivism learning theory in 1966 (Olorode & Jimoh, 2016). Cognitive theory is the foundation of this theory, which is also known as cognitive constructivism. The theory proposes that individuals construct their own comprehension and knowledge of the world through direct experience and reflection. The theory posits that the learner constructs knowledge during the learning process. Kelly (2012) suggests that teachers can implement constructivism learning theory in the classroom by utilizing instructional pedagogies such as case studies, projects, problem-based learning, ideation, group work, discovery learning, research and simulation, among others. The constructivist learning theory could be utilized in the classroom to encourage students to employ more practical approaches to the creation of new knowledge. The constructivist classroom is one in which students and teachers engage in meaningful interactions and knowledge sharing. This theory of learning is student-centered, placing the student at the center of the process of creating new knowledge from extant information.

Vygosty (1978) stated that knowledge is not absolute and should not be transmitted; however, the facilitator should encourage the learner to acquire more knowledge through experience. According to Schunk (2012), constructivism spawned the numerous learning theories on self-regulated learning. Constructivism encourages students to use active methods (experiments and real-world problem-solving) to comprehend new information. Demonstration, problem-solving, discovery and field trips, among others, are student-centered pedagogies used by constructive teachers to facilitate learning so that students can construct their own knowledge.

2.2 Empirical review

Teaching and learning pedagogies are classified in various ways. The teacher-centered instructional pedagogy (traditional instructional pedagogy) and the learner-centered instructional pedagogy are two prominent pedagogical classifications in the literature. Using the teacher-centered pedagogy, students typically receive the majority of information from their teachers and rely on their teachers to provide the correct answers (Zohrabi, Torabi, & Baybourdiani, 2012). Teacher-centered pedagogies are exemplified as lectures, whole-class discussions, and question-and-answer elements that are presented and discussed with teachers (Dimitrios, Labros, Nikolaos, Maria & Athanasios, 2013). Alternatively, the learner-centered instructional pedagogies includes learning through small-group discussion, cooperative learning, discovery, activity-based learning, experiential learning, project method, and team-based learning (Pereira, 2020).

Student-centered pedagogy, according to Wrigh (2011), is an instructional strategy in which students influence the content, activities, materials, generic skills, and learning environment. It is believed that group discussion, cooperative learning, activity-based learning, and project pedagogy are beneficial because they position students at the center of the learning process, where they can freely think. With the introduction of new teaching pedagogies characterized by teacher-student interactive pedagogy, according to Bransford (1999), teaching and learning have shifted from teachers to students. According to Pereira (2020), learner-centered approaches have been demonstrated to be effective in teaching and learning. Learner-centered instructional methods are taught with a focus on how students learn (Kramer et al., 2007), whereas the teacher-centered instructional approach concentrates on how students are taught and what they learn.

Literature also classifies instructional pedagogies as traditional, interactive, and case-study-based groups, where the teacher-centered instructional pedagogy is described as traditional, the learner-centered instructional pedagogy as case-study-based, and the 'hybrid' instructional pedagogy as interactive. However, there are some minor differences between these investigated pedagogies. Traditional instructional pedagogy provides few opportunities for students to interact with course content (Tamakloe, Amedahe, and Atta, 2005). It is a method of instruction dominated by the teacher. The interactive pedagogy, on the other hand, enables students to interact with the teacher in two-way communication by asking questions and engaging in discussion, despite the fact that it is a teacher-dominated instructional pedagogy, it still facilitates interaction between students and the teacher.

The case-study-based group instructional pedagogy divides students into groups and enables them to learn course material through case studies, with the teacher facilitating the learning. It is intriguing to observe that this pedagogy places less emphasis on teacher-centered instruction and more emphasis on students engaging in peer-to-peer discussion. Consequently, it is a student-centered instructional pedagogy that facilitates peer interaction (Apostolou, Hassell, Rebele & Watson, 2010). Abeysekera (2015) conducted a study at a Sri Lankan institution on students' preferences for accounting curriculum teaching methods and found that students preferred interactive instructional pedagogy to traditional instructional pedagogy in highly algorithmic

courses like accounting. Accounting should be taught using an interactive teacher-student pedagogy to ensure effective teaching and learning, he added.

In contrast, a study by Mohammed, Kassim and Ismail (2020) of student perceptions on pedagogical approaches and its relationship to exam performance in professional accounting education in Malaysia revealed that teacher-centered pedagogy (discussion, lecture, and question and answer sessions) is most preferred for the purpose of passing exams. The effectiveness of this pedagogy in developing holistically-minded professional accountants is a matter of concern as observed by Marriott & Marriott (2003). They added that students view accounting as a dull, uninteresting subject that consists of number processing. The preference for the teacher pedagogy among Malaysian professional students may be necessitated by the fact that accounting is a number-crunching, computation-heavy, rules-based discipline. Therefore, they preferred accounting teachers to demonstrate the subject's concepts in a systematic manner using a chalkboard.

Also, Alao and Ukpong (2020) found in a similar study that accounting teachers in Nigeria did not implement activity-based learning pedagogical strategies. Joseph and Rahmat (2019) argued that accounting teachers should employ an activity-based learning pedagogy because it is one of the modern pedagogies that fosters intellectual ability and problem-solving skills in students. Another study conducted by Waliur Rahman et al. (2021) indicates that the majority of accounting teachers in secondary schools in Bangladesh employ teacher-centered pedagogies. The majority of accounting teachers favor lecture and whole-class discussion pedagogy. Armstrong (2012) explained that teacher-centered pedagogy, as practiced by secondary school teachers, is the transmission of information and knowledge from the teacher to the students, analogous to the transfer of an object from its origin to its destination. Managing large courses requires a pedagogy that is both economical and efficient. This may explain why some accounting teachers prefer to teach the subject using the teacher-centered pedagogy.

It is also noteworthy that ratings of instructional usage and effectiveness are expressed differently in the literature from the perspectives of both students and teachers. Fatima, Ahmad, and Mohd Nor (2007) found that accounting students consider student-centered pedagogies to be the most effective form of teaching pedagogy and recommend their use. This was supported by Mohidin, Jaidi, Sang and Osman (2009), who also favored a student-centered pedagogy from the perspective of educators. Nonetheless, Rodriguez, Gomez and Lee (2020) argue that with teacher-centered pedagogies to teaching, such as the lecture method, both teachers and students communicate opposing viewpoints. Students and teachers appear to have the same preference for student-centered instructional pedagogies, but they are likely to have different preferences for teacher-centered pedagogies, according to these studies. This establishes the rationale for increasing research to consider the perspectives of both students and teachers as a potential argument for testing a hypothesis. Therefore, we hypothesize: There is no discernible difference between teachers' and students' perceptions of the pedagogical techniques used by accounting teachers in senior high schools in Ghana; There is no discernible difference between teachers' and students' perceptions of the effectiveness of accounting teaching methods in senior high schools.

3.0 Materials and Methods

The research employed a concurrent triangulation mixed-methods strategy. This approach, as described by Creswell (2013), allows research to be conducted using both quantitative and qualitative data collection methods concurrently, with one type of data corroborating the other. The current study employed both a quantitative approach (with the use of questionnaires) and qualitative data (with the use of observation) concurrently, with the qualitative data being analyzed to corroborate the quantitative findings. The population was made up of high school accounting

teachers and final year students from 41 Senior High schools in Ghana. The designated schools were among the country's senior high schools that offer accounting as part of a business studies curriculum from the three ecological zones of Ghana (Northern, Middle belt and Coastal Zones). The final-year accounting students were used because they have sufficient interaction and experience with accounting curriculum and could provide more accurate responses to the research questions than first- and second-year students. The population was comprised of 360 accounting students and 78 accounting teachers. The census technique was used to include all population for the study. However, 75 accounting teachers and 353 accounting students, were ready to participate in the study and hence formed the respondents for the study. The census technique was deemed appropriate because the population was modest (Leedy & Ormrod, 2005) in comparison to the total number of senior high school students in the country.

The primary data collection instruments were questionnaires and an observation guide. Two sets of pedagogy questionnaires were developed; one for teachers and the other for students. The questionnaire sets were constructed independently based on the reviewed literature and the overarching research objective. Before testing, three experts in educational measurement validated the face and content validity of the two sets of questionnaires. Subsequently, the questionnaires were pilot-tested with 55 students and 15 teachers who shared comparable characteristics with the study population, but were not a part of the study population. This produced alpha coefficients of 0.75 for student questionnaires and 0.77 for teachers' questionnaires. According to Fraenkel and Wallen (2000), an acceptable reliability coefficient is at least 0.70. In support of their claim, Abington-Cooper (2005) emphasized that an instrument's reliability above 0.7 is satisfactory and can be used to acquire useful data. Therefore, a Cronbach's alpha values of 0.75 and 0.77 ($n=55, 15$) were deemed acceptable for obtaining credible data for the study. An observation guide was used as corroborative instrument to gather qualitative data on the pedagogies utilized by accounting teachers during actual classroom interactions. The content and face validity of the observation guide were evaluated by colleagues, who provided their expert feedback for the guide's improvement. In addition to using member verification to validate the observation, the observable pedagogies were discussed with the observer to determine agreement or disagreement. The purpose of observation was to corroborate the questionnaire responses. Permission from the University for Development Studies' Faculty of Education ethics review board was sought before recruiting participants. Participants' informed consent was obtained after they were made aware of the dangers of participating in the study and their right to withdraw. Participation was voluntary, and confidentiality and anonymity were guaranteed.

The questionnaires were distributed and collected over a three-week period, from the 15th of October to the 6th of November 2019, after teachers and students completed them. In total, 353 student questionnaires and 75 teacher questionnaires were retrieved. The response rates for students and teachers were 98% and 83%, respectively. In addition, a total of 18 accounting lessons were observed in the final-year accounting classes in a non-participant observation. The data obtained on the pedagogies was used to corroborate the questionnaire responses. Quantitative data were reported using descriptive statistics (mean and standard deviations) and inferential statistics (independent t-test). A mean value between 1.00 and 2.49 indicates that the pedagogy is not used at all, a mean value between 2.50 and 2.99 indicates that the pedagogy is minimally used, and a mean value between 3.00 and 4.00 indicates that the pedagogy is frequently used. The standard deviation provided additional information regarding the dispersion of the field-collected responses. It represents the homogeneity or diversity of participant responses. A standard deviation below 1.00 indicates homogeneity in participant responses, whereas a standard deviation above 1.00 indicates heterogeneity (Amedahe & Etey, 2013). It can be concluded that a standard deviation closer to

0.00 indicates homogeneity in the responses of the participants. The qualitative data (observation) underwent a narrative analysis. In lieu of mentioning school names, pseudonyms (SA, SB, SC, SD, SE,...SK) were used when reporting observation results. Background of respondents, teachers' and students' perceptions of the pedagogies used in teaching accounting, and the effectiveness of the pedagogies in facilitating accounting lessons were analyzed.

4.0 Results and Discussion

4.1 Respondents Background Information

The teacher respondents were requested to provide information regarding their sex, age, highest level of education, and years of teaching experience. The majority of teachers were male (80%), compared to 20% female. Regarding age, 52% were between the ages of 21 and 30 years, 40% were between the ages of 31 and 40, and 8% were older than 40 years. The majority of teachers (68%) hold a bachelor's degree, while 24% hold a master's degree and 8% hold Higher National Diplomas. 48% of teachers had between 1 and 5 years of experience; 36% had between 6 and 15 years; 12% had between 16 and 20 years; and 4% had over 21 years of teaching experience.

Accounting has traditionally been a field dominated by males in Ghana, despite the fact that few females are entering the field at present. One could ascribe the trend to the philosophical foundation of accounting education, which favors masculinity (Hines, 1992; Reiter, 1997; Triyuwono, 2006; Tietz, 2007; and James, 2008). The sex distribution results indicate that female business teachers may prefer to teach subjects like Business Management, Secretarial Science and Economics. The majority of accounting teachers were young and active members of the teaching profession, who are expected to use creative and innovative pedagogies to facilitate accounting lessons. In addition, the majority of accounting teachers held a bachelor's or master's degree as their highest academic degree and were therefore deemed to have sufficient knowledge to teach the subject effectively. It was expected that accounting teachers would have devised more effective pedagogies for teaching and learning the subject given their adequate teaching experience.

Regarding student respondents, the majority (65%) were males, while 35% were females. Also, 66% were between 17 and 19 years of age, 24% were over 20 years of age, and 10% were between 14 and 16 years of age. The students' sex distribution depict that male accounting students outnumber female accounting students in Ghanaian high schools. This trend may also be attributed to the traditionally masculine nature of accounting education. Female students may prefer subjects that do not involve a great deal of calculation, since accounting is rumored to be full of calculations. The majority of the students were of school-age, and their level of maturity was adequate for senior high school education, as indicated by their age distribution.

4.2 Perception of Teaching Pedagogies Used in Teaching Accounting

In addressing teaching pedagogies employed by accounting teachers, views were sought from both students and teachers. They were made to indicate, in their respective views, the frequency of the usage of the pedagogies during their accounting teaching lessons. Results obtained from the analysis of the data gathered is presented in Table 1.

Table 1: Perceived Pedagogies Used in Teaching Accounting

	Mean	SD	
<i>Teachers' Perception</i> (n=75)	<i>Pedagogies Mostly Used</i>		
	Discussion	3.64	.49
	Question and Answer	3.44	.52
	Lecture	3.04	.52
	<i>Pedagogies Slightly Used</i>		
	Problem solving	2.72	.54
	Demonstration	2.64	.58
	<i>Pedagogies Not used</i>		
	Discovery	1.72	.62
	Field Trip	1.48	.65
Team teaching	1.36	.72	
<i>Students' Perception</i> (n=353)	<i>Pedagogies Mostly Used</i>		
	Question and Answer	3.84	.53
	Discussion	3.82	.52
	Lecture	3.80	.49
	<i>Pedagogies Slightly Used</i>		
	Demonstration	2.70	.70
	Problem Solving	2.40	.82
	<i>Pedagogies Not used</i>		
	Team teaching	1.91	.74
	Discovery	1.70	.73
Field Trip	1.63	.51	

Source: Field Data, 2019

Decision Rule: Mean 3.00-4.00 = **Most often used**; Mean 2.50-2.99= **Slightly used** and 2.49 below = **Not used at all**

Teachers' perspectives on the pedagogies they employed when teaching accounting revealed that five were utilized. Accounting teachers, whose responses were homogeneous ($SD < 1.0$), described the teaching pedagogies they employ when instructing their students. Discussion ($M=3.64$; $SD=.49$), question/answers ($M=3.44$; $SD=.52$) and lecture ($M=3.04$; $SD=.52$) were cited as the most frequently employed pedagogies by teachers when instructing accounting lessons. They also reported that the problem-solving ($M= 2.72$; $SD=.54$) and demonstration ($M= 2.64$; $SD=.58$) pedagogies for enhancing accounting teachings were employed infrequently. However, accounting teachers did not use the discovery ($M= 1.72$; $SD= 0.62$), field trip ($M= 1.48$; $SD= 0.65$) and team teaching ($M= 1.36$; $SD= 0.72$) pedagogies. As classified by Kassim and Ismail (2020), the results indicated that teachers employed teacher-centered pedagogies for facilitating accounting lessons. This clearly demonstrates that accounting teachers disregard the use of learner-centered and hybrid strategies. This finding is consistent with previous research (Zohrabi, Torabi, & Baybourdiani, 2012; Mohammed, Kassim, & Ismail, 2020; Waliur-Rahman et al, 2021) indicating that accounting teachers primarily employ teacher-centered pedagogy and use learner-centered pedagogy infrequently.

The question-and-answer method ($M=3.84$; $SD=0.53$), the discussion method ($M= 3.82$; $SD=.52$), and the lecture method ($M=3.80$; $SD=.49$) were utilized most frequently to facilitate accounting lessons, according to the students. The perception of students and teachers regarding the most frequently used pedagogy was identical. The students' responses to the most common pedagogies employed by their accounting teachers to teach accounting lessons were uniform. The

teacher-centered pedagogies employed by accounting teachers may not produce effective learning outcomes for students. This claim is supported by Akintelure (2003), who argued that accounting should be taught by involving students in all phases of the learning process. This results in improved learning outcomes. The results also indicate that accounting teachers employ demonstration and problem-solving techniques to a limited extent. Similarly, to the opinions of the teachers, the results of the students indicate that team teaching, discovery and field trips were not used at all by accounting teachers during accounting lessons, despite the senior high school accounting curriculum recommending their use. It suggests that accounting teachers in senior high schools in Ghana are not employing the appropriate pedagogies when teaching accounting lessons.

The results from the teachers' and students' perspectives on the teaching pedagogies utilised by their accounting teachers do not appear to differ. Validation of the claim required a testable hypothesis. The hypothesis was tested using a t-test on independent samples. Table 2 displays the outcome of the analysis.

Table 2: Results of t-test analysis between teachers and students' perspective on pedagogies used in teaching accounting lessons

Respondents	N	Mean	SD	T	Df	Sig. (2-tailed)
Students	353	30.66	4.29	1.213	376	.226
Teachers	75	26.58	3.38			

Source: Field data, 2019

Independent sample t-test significance at 0.05

An independent t-test analysis was conducted to determine whether there is a statistically significant difference in the perception of teachers and students in relation to the pedagogies that are mostly used in teaching accounting lessons. The results showed that there is no statistically significant difference in the perceptions of teachers and students on the pedagogies used in the teaching of accounting, $t(367) = 1.21$, (2 tailed) = .226. This indicates that students' perception ($M=30.66$, $SD=4.29$) on the frequent used pedagogies (discussion, question and answers, lectures) did not differ from the teachers' perspective ($M=26.58$, $SD=3.38$). Therefore, teachers and students have the same perspective on the common pedagogies used in teaching accounting. Thus, both teachers and students share similar perceptions on pedagogies that are mostly used in teaching accounting and those that are never employed.

Observation Results (Qualitative Data)

Accounting teachers utilize discussion, question-and-answer, lecture, and problem-solving pedagogies, as determined by the observation of 90-minute lessons in each school. Teachers had difficulty incorporating the field excursion, team teaching and discovery pedagogy into their lesson delivery. During the discussion of the observation report, some teachers verified that these pedagogies require cost, time, and resources. It was added that they lack the funding and other resources necessary to teach accounting using field trips. It has been observed that accounting teachers consistently use teacher-centered pedagogies that do not take into account differences in students' ability, attitude, and capability (Observation report, SA, SC, SD, SF, SH, SJ, SK; October 15th to November 6th, 2019).

4.3 Perception on Effectiveness of Pedagogies in Teaching Accounting

Teachers and students were asked to indicate, from their various perspectives, the general effectiveness of eight teaching pedagogies, regardless of whether or not they are employed in accounting lessons. Teachers and students were presented with eight teaching pedagogies and asked

to assess their effectiveness. The objective was to ascertain which pedagogies produce positive learning outcomes for students. The obtained results are shown in Table 3.

Table 3: Effectiveness of Pedagogies in Teaching Accounting as Perceived by Teachers and Students

		Mean	SD
<i>Teachers' Perception</i> (n=75)	<u>Effective Pedagogies</u>		
	Discussion	3.64	.49
	Problem-solving	3.64	.49
	Demonstration	3.64	.49
	Discovery	3.52	.59
	Field Trip	3.04	.46
	<u>Slightly Effective pedagogy</u>		
	Team Teaching	2.72	.94
	<u>Not Effective Pedagogies</u>		
	Question-and-Answers	1.70	.73
Lecture	1.36	.72	
<i>Students' Perception</i> (n=353)	<u>Effective Pedagogies</u>		
	Demonstration	3.84	.53
	Discussion	3.82	.52
	Problem-Solving	3.72	.55
	Field Trip	3.70	.55
	<u>Not Effective Pedagogies</u>		
	Team teaching	2.40	.82
	Lecture	1.91	.74
	Questions and Answers	1.80	.64
Discovery	1.70	.73	

Source: Field Data, 2019, **Decision Rule:** Mean 3.00-4.00 = **Effective**; Mean 2.50-2.99 **Slightly effective** and Mean 2.49 below = **Not Effective**

As shown in Table 3, discussion, problem-solving, demonstration, discovery and field trips are the most effective pedagogies for the instruction of accounting from the perspective of teachers.

Teachers believe that engaging students in accounting problem-solving, discussion and demonstration enhances their learning and motivation. This helps them to cultivate an analytical and critical mindset. These pedagogies are classified as learner-centered, as they result in positive student learning outcomes. Surprisingly, accounting teachers indicated that lecture (M=1.36) and question and answers (M=1.70) pedagogies, which are teacher-centered pedagogies, are ineffective for delivering accounting lessons. Despite the fact that teachers have been using these pedagogies in their classrooms, they concurred that they are ineffective for teaching accounting. However, Mohammed, Kassim, and Ismail (2020) refuted this claim when they conducted a study on student perceptions of pedagogical approaches and their relationship to exam performance in professional accounting education in Malaysia. The study reveals that teacher-centered pedagogy, including lecture and question and answer sessions, is most preferred for the purpose of passing exams. This opposing viewpoint held by Malaysian students could be ascribed to the exam-focused perspective.

Students believe that the most effective pedagogies for teaching accounting are learner-centered, including the discussion, problem-solving, demonstration and field excursions, as shown in Table 3. It is essential to note that students are the ultimate beneficiaries of the various accounting pedagogies employed by teachers. Therefore, pedagogies that facilitate simple subject mastery were deemed the most effective. Based on the data presented in the table 3, it was determined that the demonstration pedagogy was the most effective method, as it supports positive learning outcomes among all other pedagogies. This could be ascribed to the nature, complexity, rules-based nature, and standards of accounting, which necessitate active student participation and practice. However, according to the students, discovering, lecturing, team teaching, and question-and-answer pedagogies were ineffective at producing positive learning outcomes.

The results from the teachers' and students' perspectives on the effective pedagogies seems not to differ. Validation of the claim required a testable hypothesis. The hypothesis was tested using a t-test on independent samples. Table 4 displays the outcome of the analysis.

Table 4: Results of t-test analysis between teachers and students' responses on pedagogical effectiveness used in teaching accounting lessons

Respondents	No.	Mean	SD	Calculated t	Df	Sig(2-tailed)
Students	353	30.66	4.29	1.215	376	.228
Teachers	75	26.58	3.38			

Source: Field data, 2019 Independent sample t-test significance at 0.05

The results of the independent t-test analysis presented in Table 4 indicate that there is no statistically significant difference between the responses of students and teachers regarding the effective pedagogies used to teach accounting lessons. This is due to the fact that the calculated t-value of 1.215 is less than the t-critical value of 1.96, while the sig(2-tailed) value of 0.228 exceeds the 0.05 level of confidence. Therefore, the student's (M=30.66, SD=4.29) and teacher's (M=26.58, SD=3.38) responses to the effective pedagogies (discussion, problem-solving, demonstration and field excursion) did not differ. Therefore, the null hypothesis is maintained. This suggested that teachers and students shared similar perceptions of the most effective pedagogies for teaching accounting lessons.

5. Discussion

It was evident from the findings that accounting teachers primarily employed discussion, lecture, and question-and-answers pedagogies when instructing the subject. Teachers and students shared the same opinion regarding the pedagogies utilized to facilitate accounting lessons. These pedagogies are teacher-centered as classified by Dimitrios et al (2013). This pedagogies according to the constructivist theory of learning, does not engage students in active learning. Therefore, we contend that the continued use of these pedagogies among accounting students would not result in positive learning outcomes. This claim was supported by Akintelure (2003), who stated that accounting should be taught through the complete engagement of students throughout the entire learning process. This necessitates the implementation of problem-solving and demonstration pedagogies in order to equip students with enhanced cognitive and learning skills.

Also, both teachers and students reported that the field trip, team teaching and discovery pedagogies were not utilized when accounting lessons were taught. Even though these pedagogies were recommended by accounting curricula, they cited cost, time, and resource constraints as reasons for not employing them. It is also essential that teachers involve students in field trips and meaningful initiatives that contribute to the resolution of societal issues. The field excursion is a hands-on, activity-based method that could expose students to learning beyond the classroom or to real-world learning. This was supported by Joseph and Rahmat (2019), who argued that accounting teachers should utilize activity-based learning as it is one of the modern pedagogies for developing learners' intellectual ability and problem-solving skills outside of the classroom. Phillips and Phillips (2007) were of the opinion that the models for teaching accounting are too conventional, relying heavily on a homogenous set of textbooks and focusing primarily on knowledge transmission. They added that accounting instruction should emphasize learner-centered and activity-based strategies.

Furthermore, the observations of accounting lessons confirmed that accounting teachers typically employ the whole-class discussion, lecture, and question-and-answer pedagogies when delivering their lessons. In a highly computational and mechanical subject like accounting, these pedagogies are not interactive instructional pedagogy. Students favor instructional strategies like peer and pair, problem-solving, field excursion, and team-teaching. This finding was supported by Abeysekera (2015), who found that Sri Lankan university students preferred interactive instructional pedagogy over traditional instructional pedagogy in highly algorithmic courses such as accounting. To ensure effective teaching and learning, it is important to emphasize that accounting should be taught using a more student-engagement-focused and interactive pedagogy. It was observed that accounting teachers consistently employ teacher-centered pedagogies. However, these pedagogies failed to account for differences in students' abilities, attitudes, and capacities. This was supported by the findings of Okoiye et al. (2016), who reported that accounting teachers use teaching pedagogies that never account for differences in students' ability, attitude and capability. From the lesson observation, it was realised that accounting teachers do not use field trips, team teaching or discovering pedagogies in their daily lessons. These pedagogies were viewed as expensive, time-consuming, and resource-intensive.

Regarding the effectiveness of the pedagogies, both accounting teachers and students were in agreement that the discussion, field excursion, problem-solving and demonstration pedagogies were the most effective in advancing student learning outcomes. Even though teachers do not use field trips to teach accounting, they considered it as effective pedagogy that could facilitate student learning. According to the teachers, the discussion, field excursion, problem-solving and demonstration pedagogies give significant weight to student voices in order for them to construct their own knowledge and understanding of the subject based on existing knowledge. These

pedagogies are effective at expanding upon the prior knowledge and experience of students. Lockridge (2000) supported the claim that field excursions are an excellent way to incorporate multiple types of learning into a single activity. These pedagogies produce a learning environment in which students actively participate in the teaching-learning process. This was supported by Abeysekera (2011), who indicated that students preferred active instructional methods over traditional ones. Teachers believe that the above-mentioned pedagogies have increased student performance because the majority of them promote high and active learner engagement. Teachers and students concurred that the nature of accounting necessitates regular and consistent practice by the learner; consequently, pedagogies such as demonstrating workings, problem-solving and discussion assist students in acquiring the habit of consistent practice. In contrast, both teachers and students viewed lecture, team-teaching, and question-and-answer pedagogies as ineffective for enhancing students' learning outcomes.

6. Conclusion and Recommendation

The purpose of the study was to assess the type and effectiveness of pedagogies used to teach accounting from the perspectives of teachers and students. The study revealed the pedagogies used by accounting teachers in the classroom and the effectiveness of these pedagogies. It was argued that accounting teachers should use problem-solving, field excursions, discovery, team-teaching, and demonstration pedagogies to facilitate accounting lessons. Literature describes these pedagogies as learner-centered, allowing for complete student participation in the teaching-learning process. These pedagogies have endured the test of time and been utilised for many years. Even though field trips and team-teaching are recommended by the high school accounting curriculum, accounting teachers did not use them to facilitate lessons. The field trip pedagogy is one of the most effective strategies for providing students with experiential learning, as it facilitates the acquisition of abstract accounting concepts and conventions and stimulates students' interest and inquiry. Both teachers and student rated problem-solving, discussion, and demonstration as the most effective pedagogies for accounting instruction. These instructional pedagogies, when implemented by teachers, could affect the success and efficiency of student learning. In fact, the teaching and learning of accounting would be deficient if these pedagogies were not utilised, as they have been demonstrated to produce positive learning outcomes.

Teachers of accounting are ultimately responsible for producing high school graduates with the appropriate qualifications for the job market. In preparing students for life-long learning, the work of accounting teachers would be incomplete if they did not use the right and appropriate pedagogies. The current demand for high school accounting graduates is centred on those who are able to apply critically thinking to the resolution of organisational problems. It meant that accounting teachers would need to use innovative pedagogies to develop students' critical and analytical thinking skills. This is due to the fact that accounting is not a subject that can be mastered through memorization of fundamental principles and rules. The subject requires the learner's full participation throughout all phases of the learning process, as well as solid theoretical knowledge and extensive practise in the application of fundamental principles. On the basis of the findings, the following recommendations were made:

Accounting teachers should minimize the use of lecture, questions and answers, and whole-class discussion pedagogies in the classroom. They leave little opportunity for student participation. Second, accounting teachers should employ appropriate and recommended teaching pedagogies, such as fieldtrips, problem-solving and team teaching in order to solve business and societal problems. Accounting teachers are urged to attend seminars, professional development training programmes, and workshops in order to become acquainted with current teaching pedagogies.

7. Limitation and Suggestion for further research

The research significantly relied on conventional and traditional teaching-learning pedagogies, rather than online-related teaching pedagogies such as flip classroom, kahot among others. The arrival of the COVID-19 era ushered in an academic reliance on online instruction pedagogies. However, online-related pedagogies flourish in regions with the necessary infrastructure. Due to the absence of the necessary infrastructure to support online teaching pedagogies in Ghanaian senior high schools, these pedagogies were excluded from the study. Future research could examine the level of online-infrastructure development in senior high schools to facilitate online instruction. Studies could then be conducted to determine the pedagogies that could be utilized in that space.

8. References

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