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Student's rating of secondary school physics teachers' classroom practice: Implications for teaching and learning

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ABSTRACT

Evaluation in secondary schools has been left in the hands of school management, administrators, and teachers. Little or no attention has been paid to the concerns of students, who happens to be another important stakeholder in the teaching-learning process. Students' voices regarding teachers' classroom practice can have great implications for teaching and learning. This study investigated students' ratings of secondary schools' physics teachers with particular reference to teachers' use of instructional material(s), methods, and classroom management. This study adopted the descriptive survey design, which involved 1,256 physics students randomly selected from the three senatorial districts in Ondo, Nigeria. A researcher-designed questionnaire was used to collect data for this research and the data obtained were analyzed using descriptive and inferential statistics. Findings from this study revealed that physics teachers were rated low in their use of instructional materials and instructional methods. However, physics teachers were rated high in the area of classroom management. This study concluded that the use of good instructional materials and methods while still adopting the best classroom management is crucial to the realization of classroom objectives. The paper contributes to the scholarship on how students' views of their teachers can have great implications for teaching and learning.

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1. INTRODUCTION

There is a growing number of research on teachers' classroom practice that has great implications for teaching and learning. While a number of these research focused on curriculum policy and its impact on classroom practice, other studies were concerned with teachers' effectiveness in the classroom [1], [2]. Some of these studies focused on classroom teachers and others investigated the roles of students in achieving good classroom practice, which also has crucial implications for teaching and learning. For example, in a review carried out on classroom practice in the United States, Canada, Great Britain, Ireland, Australia, and New Zealand, teachers' effectiveness was evaluated along seven approaches. These include value-added models [3]–[5], classroom observations [6], principals' evaluation [7], analysis of classroom artifacts [8], portfolios [9], self-report of practice [10], and student's evaluation [11]–[13].

Teachers occupy a great position high toward continuous emancipation for better education. Teachers are also responsible for ditching out the curriculum content in bits using suitable methods of teaching. Oyedeji and Oke [14] remarked that no meaningful socio-economic and political development can take place in a nation without quality teachers. This implies that teachers occupy a great position in the realization of classroom goals. Teachers play a crucial role in the achievement of classroom objectives hence the professional training of teachers. This situation is the same for physics teachers because the knowledge of physics is crucial to the technological development of any nation. Aderonmu and Nte [15] define physics as the science that is concerned with energy and matter and its behavior and relationship with other parameters that can be physically measured. Physics generates fundamental knowledge that can assist in developing a nation technologically, thus making it easier for man to live in society. Bada and Akinbobola [16] remarked that physics is a fulcrum subject among the sciences because of its close relation to other sciences such as mathematics, chemistry, and biology.

Physics is an important aspect of science that deals with matter, energy, and its interactions. The knowledge of physics is crucial to innovations and development in the field of science and technology. Physics and its inventions have assisted in national development, especially in the production of devices that help to make life good and meaningful. In fact, it appears that everything in the world rests on the principles of physics for its design. The achievements attained in the field of information and communication technology (ICT) through the knowledge of physics alleviated the negative impact the COVID-19 pandemic had on the world. This development in the field of ICT prevented the world from going to a complete halt due to the lockdown measures put in place to prevent the further spread of the deadly virus. The Nigerian senior secondary school physics curriculum was designed to place a great value on the study of physics because of what its knowledge was capable of attracting to the nation. The goals of education in Nigeria are in line with the Nigerian philosophy of education, which sees education as an instrument for national development and social change [17]. This stance is also maintained at the different levels of education as speculated in the National Policy of Education. This policy document also stresses the pivotal role quality teachers play in the provision of quality education for all learners at all levels.

Despite the strive for new innovations in the field of education the world over, great attention is usually placed on the teachers because they are responsible for ditching out the curriculum content in bits using suitable methods of teaching. Not only should teachers be professionally trained but they should be assessed from time to time for effectiveness. Ugwu, Fagbenro, and Akano, [18] opined that the role of physics teachers was crucial to the effectiveness and achievement of students in physics, hence the need to pay attention to their activities with a view to appraising their roles to guarantee a successful teaching-learning process. This implies that there is a direct relationship between quality teacher education programs and the quality of instruction used in the classroom.

Several activities take place in the classroom with both parties (teachers and students) having to play different roles. These two parties play their different roles with the intention of achieving a common goal. This common goal is for the students to have a relatively permanent change in behavior hence, learning is said to have taken place. While many of these roles are usually carried out by the teacher, the student’s role during teaching and learning cannot be underestimated. Franklin and Harrington [19] stated that “successful classrooms are the result of a set of shared roles and responsibilities belonging to teachers and students.” This implies that proper synergy between teachers’ and students’ roles can ensure meaningful learning in the classroom. This situation appears to be apt now, especially with the advocate for teaching methods that would make students active participants in the classroom. These types of teaching methods are popularly referred to as student-centered teaching methods because they tend to get the students to be more involved in the classroom through active engagements between the teacher and the students. This allows for a conscious effort to be put in place for the voice of students to be heard. Despite this advocacy, practical experience still shows that most classroom practices are usually pioneered, implemented, supervised, and concluded by the teachers without paying adequate attention to other stakeholders whose contributions can also have a positive effect on the teaching-learning process.

One important stakeholder whose feedback and opinions have usually been neglected in teaching-learning is the learner [20], [21]. Learners often struggle for relevance because their voices on teacher-learning matters are not heard. Chimbi and Jita [20] remarked that learners' voices are usually not heard in classroom discussions (actions and reactions) because learners are usually silenced not only by the teachers but also by the textbooks used. This implies that the students are robbed of their voices during teaching and learning not only by their teachers but also by the textbooks used for instruction. This suggests that the available textbooks might not have captured the adequate roles students will be required to play during instruction. This situation of not giving a voice to students dates back to Remmers [21] investigation on student evaluation of their teachers. Perhaps, the advocacy for the use of a student-centered method for instruction in secondary school was meant to turn around the status quo. Despite the popular consensus, Du Plessis [22] remarks that “learner-centered teaching is a global challenge” in this 21st century. In one of Remmers [21] recommendations after two decades of research on students’ evaluation of instruction, the researcher opines that students’ judgment about their teachers' teaching effectiveness can no longer be rendered false, irrational, or unreasonable. This implies that students can be trusted to assess their teacher's classroom practices. However, the struggle to validate students' evaluation of teachers continues to be an issue of discussion. After 60 years of Remmers [21] publication on students' evaluation of instruction, Aleamoni [23] described eight major concerns about student's evaluation of the teaching-learning process. Among these include the assumption that students are immature, lack the requisite experience and capriciousness, lack the capacity to make valid judgement about their teacher and the classroom activities. In a more recent study on students' evaluation of teaching, Strobe [24] concludes that student's evaluation of teaching are not valid enough to measure teaching effectiveness in the university. This situation is yet to be confirmed in the case of senior secondary school teaching.

However, some scholars do not share the belief that students' immaturity and lack of experience are enough to invalidate the evaluation of their teachers. For instance, Uddin *et al*. [25] remarked that "student evaluation of the teacher is one of the popular approaches to teacher's performance appraisal." In a study by Lim, Chiam, and Phang [26] on questionnaire design and data analysis as an alternative approach to students' evaluation of teaching, the researchers made a case for students assessing teachers using an appropriately designed questionnaire. This implies that students' voices about the evaluation of teachers can be valid as long as the right measuring instrument was used. This means that students are allowed to express their opinions on their teacher's classroom practice especially as it relates to teachers' effectiveness.

In this paper, emphasis is placed on three major classroom activities that are peculiar to the roles of the teachers. These include teachers' use of instructional methods, instructional materials, and classroom management. Instructional materials or resources are the total input into an educational program in terms of human effort, facilities, and equipment that help students to learn effectively. Instructional resources can be classified into seven categories [27]: human resources, visual resources, audio resources, audio-visual resources, school environment resources, community resources, and other resources. Instructional resources assist teachers in presenting learning experiences in a more cooperative form to the learners thus giving a voice to the learners through active engagements. Instructional resources also enhance teacher-student relationships and interactions. Instructional methods refer to the various techniques adopted by teachers to make teaching and learning effectively. Instructional methods may also be defined as teachers' behavior that is recurrent in appropriate proportion in order to achieve the stated objectives of teaching a concept. Oyekan [28] identified some principles underlying the choice of instructional strategies. These include the age and mental ability of learners, language competence of learners, physical development and maturity of learners, educational background and entry behavior of learners, time allotted for lessons per week, and the objectives of the lesson. All these principles go a long way to determine the method of instruction(s) to be adopted and the mode of assessing teaching-learning outcomes.

Classroom management is the process of identifying, understanding, motivating, stimulating, controlling, and unifying human and material resources in the classroom for maximum success during teaching. Classroom management is concerned with the physical setting of the classroom, the role of the teachers and students, the teacher's personality and authority in the classroom, classroom control, and discipline, effective communication, appraisal of learners' work performance, keeping and maintaining classroom records, and providing guidance and counseling services to students. Franklin and Harrington [19] remarked that effective classroom management practices and pedagogical teacher skills are fundamental in ensuring that disruptive behaviors do not adversely affect classroom learning. This implies that classroom management assists in preparing and ensuring a serene classroom environment for meaningful learning to take place. Maulana *et al*. [29] identified efficient classroom management as one of the six observable domains of teaching quality. The other domains identified include a safe and stimulating learning climate, clarity of instruction, activating learning, adaptation to students' learning needs, and teaching strategies. Findings by Maulana *et al*. [29] also confirmed that efficient classroom management was crucial to the realization of teaching-learning outcomes. The process of finding out if teaching-learning objectives have been achieved in the curriculum process is through the conducting of evaluation.

Evaluation plays a vital role in the curriculum process. As a matter of fact, it is the last stage in the curriculum process and its findings at this stage keep the curriculum process in constant cyclic activity. The results derived for evaluation are most time used in curriculum planning which happens to be the first stage of the curriculum process. The rating of physics teachers by their students can thus be seen as a new innovation, as evaluation should not be limited to the teachers only. This justifies the fact that the teaching-learning process should be evaluated in its entirety and not just limited to the teachers. The result of this comprehensive evaluation can assist in obtaining rich data that can be used in the curriculum planning stage. Since evaluation is the process of determining the worth of an event or value, the rating can also be explained to be a level on its scale that shows how perfect or otherwise an event is. This means that both evaluation and rating emphasize passing a value judgment on an identified situation based on accurate and objective information gathered through tests and measurement.

Rating refers to data that need interpretation [30]. Benton [30] opined that student rating is significant and consistent with the achievement of students, teacher self-rating, rating by administrators and colleagues, rating by trained observers, and in the area of student written comments. This finding provides a concrete basis for the genuineness of facts derived from student ratings. Benton [30] identified some of the misconceptions researchers have about student rating to include inconsistency in student judgment, the erroneous belief that student rating is just for popular contest, unreliable and invalid rating by students; inappropriateness in time affecting student rating, the erroneous belief that students' feedback cannot be used to help instruction, and the emphasis that student's rating has led to grade inflation. This suggests that students' rating of teachers perhaps, was yet to be given the attention it deserves before now because of the misconceptions researchers have had about the concept [24], [25], [31]. In Nigeria for example, the rating, assessment, and evaluation of physics teachers are usually done by education inspectors, education supervisors, education service commissions, and ministries of education, without any special input from the students. This paper fills this gap by providing an empirical study on the rating of physics teachers by their students, with an emphasis on physics teachers' use of instructional materials, instructional methods, and classroom management.

A number of studies have been carried out on the evaluation of teachers by their students. Oluwatayo [32] investigated students' ratings of the teaching behavior of chemistry teachers in Ekiti State. He adopted a combination of survey and 2x2 factorial designs, which involved 750 senior secondary school 2 (SS2) chemistry students selected from 16 local government areas of Ekiti State. Students rated chemistry teachers were very good in the areas of punctuality, class attendance, and in the evaluation of students' work. Chemistry teachers were also rated good in the areas of classroom management and organization, teacher personality, and teacher relationship with students. Their study also found that there was no gender bias in male and female physics students' ratings of their teachers. Akani [33] investigated the achievement levels of basic science teachers on their methods, teachings aids, classroom management, and student participation and found out that teachers attained a little average in their achievement in the use of methods and teaching aids, with a grand mean of 3.11. The researcher also revealed that basic science teachers attained an average performance level in classroom management, with a grand mean of 2.53. The study equally revealed that lecture and demonstration methods topped the methods used for teaching basic science by teachers.

Ugwu, Cookey, and Nwokocha [34] evaluated teacher performance in the physics classroom in Owerri education zone, Nigeria. They adopt a descriptive survey research design, which involved 388 respondents selected using stratified random sampling. The findings from the study showed that physics teachers performed very well in the areas of classroom control and management, and the presentation of subject matter. The study also revealed that male and female students differed in their ratings of physics teachers. Franklin and Harrington [19] reviewed teachers' and students' roles towards effective classroom management and strategies for students' engagement and found out that teachers' roles include teaching as a career, teacher as a role model, teacher as a creator, and teachers as students. The researchers also found out that students' roles include the student as communicator, regulator, role model, challenger, and receptor.

Ugwu, Fagbenro, and Akano [18] assessed the effectiveness of physics teachers in Owerri, Nigeria using a descriptive survey research design, which involved 289 respondents. The researchers made use of a researcher-designed questionnaire to obtain information on physics teaching effectiveness in classroom control and management, coverage of lessons, knowledge of the subject matter, personality characteristics, and presentation of lessons and found out that physics teachers were very effective in the areas of knowledge of subject matter and presentation of lessons, skill evaluation, and classroom control and management. Findings also showed that physics teachers were fairly effective in the areas of content coverage and the use of the laboratory. They discovered that male and female physics students had different perspectives on the effectiveness of physics teachers. The reviewed literature has shown that students have rated teachers in the subjects of physics, chemistry, and basic science with attention on the areas of achievement, opinion, teacher characteristics, classroom management, instructional methods, and resources [18], [32]–[34]. The review has also shown that the rating of physics teachers has been carried out with a focus on student gender, motivation, and achievement [29], [30], [35]. Despite the fact that students have rated their teachers in some schools in Nigeria, few or no studies have been conducted on senior secondary schools in Ondo, Nigeria.

This study is premised on Remmers's [21] recommendation on students' evaluation of instruction and the teachers. Remmers [21] remarks that students' judgment of their teachers' teaching effectiveness can no longer be set aside or immaterial in education hence the need for this study. Chimbi and Jita [20] also remark that learners' voice especially in pedagogical reform policy with instructional practice is still a contending issue. As evident in the literature, researchers are not aware of any study published invalidating the use of students as a matrix for measuring teachers' teaching effectiveness in the classroom, especially in physics teachers' use of instructional materials, instructional methods, and classroom management.

This current study is therefore considered apt as it provides empirical evidence of students' ratings of physics teachers in senior secondary schools in Ondo, Nigeria. This paper aimed to determine how physics students rate their teachers' use of instructional materials, instructional methods, and classroom management. To achieve this, researchers ask the following questions: i) How do physics students rate physics teachers' use of instructional materials?; ii) How do physics students rate physics teachers' use of instructional methods?; and iii) How do physics students rate physics teachers' use of classroom management? While the research hypothesis are: i) There is no significant difference between male and female physics students' rating of physics teachers' use of instructional materials (H01); ii) There is no significant difference between male and female physics students' rating of physics teachers' use of instructional methods (H02); and iii) There is no significant difference between male and female physics students' rating of physics teachers' use of classroom management (H03).

2. RESEARCH METHOD

This investigation adopted the descriptive research of the survey type. Nassaji [36] stated that the "goal of descriptive research is to describe a phenomenon and its characteristics." This type of research allows the use of survey tools to obtain data and it also allows the quantitative analysis of data using frequency count, percentages, means, and other statistical methods. Atmowardoyo [37]; Sofianidis and Kallery [38] have used it in their research and found it to be useful in answering "how" questions. The population of the study involved all senior secondary two students (SS2) in Ondo, Nigeria. The justification for using SS2 students was that they have learned secondary school physics for a minimum of five terms out of a total of seven terms before participating in this study. The assumption behind the sample used was that they are well informed about happenings in senior secondary school physics teaching and learning. A simple random sampling technique was used to select 1,256 physics students from the three senatorial districts in Ondo State, Nigeria.

A researcher-designed questionnaire titled 'Questionnaire on students' rating of physics teachers' (QSRPT) was used to obtain data for this study. The statements that make up the questionnaire were derived from six focus group interviews involving 124 students randomly selected from six secondary schools in Ondo, Nigeria. QSRPT was divided into two sections to accommodate both the demographic information of the respondents and the statements on physics teachers' teaching practices. Section A contained demographic data, while section B consist of 15 statements divided into three rating areas. QSRPT was validated by three experts in science education from a university in Nigeria and two senior secondary school physics teachers with over ten years of teaching experience. The observations and corrections of the validators were duly noted and corrected. Also, QSRPT was administered to SS2 students in a non-participating school and a reliability index of 0.82 was obtained using the test-retest method within a period of five weeks. The consent of the school administrators was sought to use their students as respondents.

After due permission had been given, QSRPT was administered to the respondents with the help of six research assistants. The administration of the questionnaires lasted a period of six weeks. The data collected were analyzed using descriptive and inferential statistics. The three research questions were answered using mean, while the null hypotheses were tested for acceptance or otherwise using a t-test at a significance level of 0.05. Table 1 shows the demographic information of respondents who took part in this research. The table reveals that 42.27% of the respondents were male, while 57.73% of the respondents were female. Altogether, 1,256 respondents took part in this study.

Table 1. Demographic information of respondents

Variable		Number	Percentage
Gender	Male	531	42.27
	Female	725	57.73
	Total	1256	100.00

3. RESULTS AND DISCUSSION

3.1. Research question 1: How do physics students rate physics teachers' use of instructional materials?

Table 2 reveals that physics teachers' use of relevant instructional materials to teach identified topics was rated first, while physics teachers' frequent use of instructional materials during physics lessons was rated second. Respondents rate physics teachers' use of improvised instructional materials when instructional materials are not readily available as third and physics teachers' use of objects and materials that can be seen, felt, and touched as instructional materials were rated fourth. Lastly, respondents rate physics teachers' use of instructional materials sourced from the environment fifth. In summary, respondents rated physics teachers' use of instructional materials low because the weighted mean value of 13.02 was the benchmark weighted mean value of 15.

Table 2. Physics teachers' use of instructional materials

Use of instructional materials	Mean	Ranks
Physics teacher frequently uses instructional materials during physics lessons	2.66	2nd
Physics teacher uses relevant instructional materials to teach identified topics	2.86	1st
Physics teacher uses objects and materials that can be seen, felt, and touched as instructional materials during physics lessons	2.52	4th
Instructional materials used by physics teachers are made from materials sourced from the environment	2.34	5th
Physics teacher improvises instructional materials when materials are not readily available	2.64	3rd
Weighted mean value (WMV)	13.02	

Decision rule: WMV<15=low; WMV≥15=high

Table 2 shows that students rate their teachers' use of instructional materials low despite the conviction that physics is a science that deals greatly with practical (X=13.02). This might be due to the persistent use of the teacher-centered method by physics teachers. The teacher-centered method puts the teacher in an active position while the students remain passive during teaching and learning. This passivity must have made the students rate their teachers low in the use of instructional materials since they were not actively engaged during teaching and learning. This situation was also recorded by Chimbi and Jita [20] who remarked that the use of a teacher-centered method for instruction was still popularly used in secondary schools. This result disagrees the findings of previous researchers [18], [33] who found that teachers scored a little average in their use of instructional materials and the laboratory as rated by their students.

3.2. Research question 2: How do physics students rate physics teachers' use of instructional methods?

Table 3 reveals that respondents rate physics teachers' tendency to give too many notes rather than explaining first, while physics teachers' efforts to make the class lively and interesting were rated second. Physics teachers' logical presentation of lessons was rated third, while physics teachers' use of several examples while explaining during physics lessons was rated fourth. Rated last were physics teachers' efforts at explaining concepts very well. In summary, respondents rated physics teachers' use of instructional methods low because the weighted mean value of 14.92 was the benchmark weighted mean value of 15.00.

Table 3. Physics teachers' use of instructional methods

Use of instructional materials	Mean	Ranks
Physics teacher explains concepts very well	2.46	5th
Physics teacher uses several examples to explain points during physics classes	2.58	4th
Physics teacher presents their lessons in a logical way that makes it easy for students to understand	3.12	3rd
Physics teacher gives too many notes than they explain	3.54	1st
Physics teacher always tries to make the class lively and interesting	3.22	2nd
Weighted mean value (WMV)	14.92	

Decision rule: WMV<15=low; WMV≥15=high

The weighted mean value of the use of instructional methods was the benchmark weighted mean value. The result in Table 3 reveals students' ratings of physics teachers' use of instructional methods. The table shows that physics students rate their teacher's use of instructional methods low (X=14.92). This perhaps might be responsible for the relatively negative attitude students have toward physics, especially through the constant use of teacher-centered approaches. These teacher-centered approaches do not allow for students' input; thus, limiting students' voices during teaching and learning. This finding disagrees with Akani [33], who found that students rate physics teachers as average in their use of instructional methods. The findings from this study also revealed that students did not differ in the rating of teachers' use of instructional methods.

3.3. Research question 3: How do physics students rate physics teachers' use of classroom management?

Table 4 shows how respondents to rate physics teachers' use of classroom management. Physics teachers' enforcement of silence during physics lessons was rated first by the respondents, while physics teachers' sensitivity to their students' demands during lessons was rated second. The good use of the time allotted to physics lessons was rated third, while students' ability to listen patiently during the lesson was rated fourth. Respondents rate the ability of their teacher to know all their students by name fifth. In summary, respondents rated physics teachers' use of instructional materials high because the weighted mean value of 15.52 is higher than the benchmark weighted mean value of 15. The weighted mean value for classroom management was greater than the benchmark weighted mean value.

Table 4 shows students' ratings of physics teachers' use of classroom management during physics instruction. The result in Table 4 reveals that students rate physics teachers' use of classroom management high (X=15.52). Good classroom management is crucial to ensure that meaningful learning takes place in the classroom. Good classroom management also plays great emphasis on the synergy between teachers' roles and students' roles. This would have great implications for teaching and learning because it encourages the achievement of classroom goals This finding agrees with previous studies [18], [32]–[34] which found out that students rate their teachers high in the area of good classroom management.

Table 4. Physics teachers' use of classroom management

Use of classroom management	Mean	Ranks
Physics teacher makes students keep silent during physics lessons	3.64	1st
Physics students listen patiently during physics lessons	2.58	4th
Physics teacher always makes good use of the time allotted to physics lessons	3.42	3rd
Physics teacher is sensitive to all students' demands during physics lessons	3.46	2nd
Physics teacher knows all their students by name	2.42	5th
Weighted mean value (WMV)	14.92	

Decision rule: WMV<15=low; WMV≥15=high

3.4. Research hypothesis 1

There is no significant difference between male and female physics students' ratings of physics teachers' use of instructional materials. Table 5 shows the independent sample t-test results of male and female respondents' mean rating of physics teachers' use of instructional materials. The t-test value of 2.24 was obtained at a significance level of 0.03. Since the calculated value of 0.03 is less than the table value of 0.05, hypothesis 1 is hereby rejected. This implies that there is a significant difference between male and female respondents' ratings of physics teachers' use of instructional materials in favor of the male respondents. Table 5 reveals that a significant difference existed between male and female students' ratings of their physics teachers in favor of the male physics students (X_m=14.36>X_f=13.89). This finding agrees with the findings of Ugwu, Fagbenro, and Akano [18] who found the difference in male and female students' rating of their teacher's use of instructional materials in favor of the male students.

Table 5. Teachers' use of instructional materials based on gender

Gender	N	Mean	Std	Df	T	Sig. (2-tailed)	Remarks
Male	532	14.36	3.75				
				1254	2.24	0.03	*S
Female	725	13.89	3.63				

*S=Significant

3.5. Research hypothesis 2

There is no significant difference between male and female physics students' ratings of physics teachers' use of instructional methods. Table 6 shows the independent sample t-test results of male and female respondents' mean rating of physics teachers' use of instructional methods. The t-test value of 1.71 was obtained at a significance level of 0.08. Since the calculated value of 0.08 is greater than the table value of 0.05, hypothesis 2 is hereby accepted. This implies that there is no significant difference between male and female respondents' ratings of physics teachers' use of instructional methods. The finding agrees with Du Plessis [22], who opined that there was no gender bias in physics students' rating of physics teachers' effective use of instructional methods.

Table 6. Teachers’ use of instructional methods based on gender

Gender	N	Mean	Std	Df	T	Sig. (2-tailed)	Remarks
Male	532	16.85	3.56	1254	1.71	0.08	NS
Female	725	16.51	3.44				

NS=Not significant

3.6. Research hypothesis 3

There is no significant difference between male and female physics students’ ratings of physics teachers’ use of classroom management. Table 7 shows the independent sample t-test results of male and female respondents’ mean rating of physics teachers’ use of classroom management. The t-test value of 13.39 was obtained at a significance level of 0.00. Since the calculated value of 0.00 is less than the table value of 0.05, hypothesis 3 is hereby not accepted. This implies that there is a significant difference between male and female respondents’ ratings of physics teachers’ use of classroom management in favor of the male respondents. Table 7 however shows that male and female physics students differ in their rating of physics teachers' use of classroom management in favor of the male students (X_m=18.45>X_f=14.62). This finding agrees with the previous researchers [18], [32] who found a significant difference between male and female physics students’ rating of physics teachers’ classroom management in favor of the male students.

Table 7. Teachers’ use of classroom management based on gender

Gender	N	Mean	Std	Df	T	Sig. (2 tailed)	Remarks
Male	532	18.45	5.89	1254	13.39	0.00	*S
Female	725	14.62	4.25				

*S=Significant

4. CONCLUSION

This study investigated secondary school students' ratings of their physics teacher’s use of an instructional method, instructional materials, and the use of classroom management. It can be concluded from the data available and analyzed in this study that students’ rating of their physics teachers was average in the areas of instructional method and instructional materials even though gender was significant in students' rating of their teacher’s use of instructional materials. It appears that despite the popular advocacy for the use of the learner-centered approach for instruction, the use of teacher-centered still persists. This must have been responsible for the low rating of the teacher’s instructional method because students’ engagement with their teachers must have been low. This might probably be the current situation in senior secondary schools in Ondo, Nigeria where the use of the teacher-centered method is still dominant. Also, it can be concluded that secondary school physics teachers might not be using adequate instructional materials despite the fact that physics is a physical science that relies greatly on practicality. This study however concludes that teachers' use of classroom management was considered high by the students.

The findings from this study have great implications for teaching and learning especially during the teaching of senior secondary school physics hence, the following recommendations. First, physics teachers should endeavor to make use of appropriate instructional material(s) that are relevant to the content being taught in class. This would ease the stress of having to explain and reexplain on the part of the teacher, and it would also facilitate better learning, easy comprehension, and understanding on the part of the students. Second, physics teachers should be encouraged to continue to adopt best classroom control practices in order to ensure the realization of the best results from the teaching-learning process. The use of these best classroom practices can go a long way in making the achievement of classroom aims and objectives easy thus making teaching and learning less cumbersome. Finally, physics teachers should endeavor to provide equal chances to both male and female physics students, especially in the use of instructional material(s). This would go a long way in making the learning of physics meaningful and impactful for the students because physics is a science that places a strong emphasis on practicality.

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