

BIOLOGY TEACHERS' CLASSROOM MANAGEMENT PRACTICES IN SECONDARY SCHOOLS IN ETCHÉ LOCAL GOVERNMENT AREA

MARTHA IJOK ADIBE NJOKU (PhD)

Department of Biology
Ignatius Ajuru University of Education
Rumuolumeni, Port Harcourt
Rivers State, Nigeria
Email: martha.njoku@iaue.edu.ng

ABSTRACT

The purpose of this study is to look into the classroom management strategies used by biology instructors in secondary schools in the Etché Local Government Area. The study was led by four research questions in order to achieve this. The study's design was a descriptive survey, and the sample size consisted of thirty-four (34) biology professors, representing the entire population (Census). Data was gathered using the Biology Teachers' Classroom Management Practices Questionnaire (QOBTCMP), which yielded a reliability index of 0.74 after data from a test re-test method was analyzed using Pearson Product Moment Correlation (PPMC) analysis. Research topics were addressed using the mean and standard deviation. The study's conclusions showed that: large class sizes have a negative impact on classroom management; teachers effectively manage their students during biology lessons; classrooms are set up properly during biology lessons; and students participate highly during biology lessons. The results led to several recommendations, one of which was that more classrooms be built in order to handle the steadily growing class sizes and support teachers in efficiently managing biology classrooms.

Keywords: Classroom, Biology, Management, Teachers, Practice.

Introduction

Biology is the study of living things, including their origins, distribution, behavior, structure, and interactions with their surroundings (Njoku and Nwagbo, 2020). It is a branch of natural science that examines both plant and animal life. The science of biology is imaginative, dynamic, and ever-evolving. Being a science, biology entails much more than just memorizing information. A biologist needs a variety of abilities to look at issues. According to Abugu (2017), biology is a natural science in which we study living things, including plants and animals. Like other disciplines, biology aims to improve effective training and learning of the subjects by making the theoretical information simpler. Since biology is a science, it entails much more than just memorizing information; this knowledge is acquired through classroom instruction along with additional practical exercises. The classroom serves as a gathering place for educators and learners, where educational activities are carried out. It is impossible to fully accomplish educational goals without a supportive school atmosphere. A network of interpersonal relationships aimed at achieving educational objectives characterizes the classroom. A well-designed classroom should have sufficient ventilation, be completely furnished with desks and chairs, have enough room for everyone, a sizable chalkboard, nice floors, attractive walls, and lighting (Okeke, 2015). The setting in which the teaching and learning process occurs is the classroom. It is the engine that sustains the teaching-learning process's success or failure (Wigwe, 2013).

It is impossible to overstate the significance of the classroom's function in education, because these tasks cannot be fulfilled in the absence of competent teachers managing classroom operations. Encouraging behavior and attitude among students, together with a well-equipped classroom, all contribute to improving their academic success. Such an environment gives teachers and students a place to engage. To reach a high degree of success in meeting educational objectives, these are handled well. The tasks assigned to the classroom teacher during the teaching and learning process are numerous. Controlling and managing the classroom is one of the hardest things a teacher must do. Numerous studies have indicated that one important factor influencing students' academic success is classroom management (Marzone, 2018). The most evident justification for this claim is that teaching and learning are facilitated by efficient classroom management. In order to facilitate effective teaching and learning, it establishes a classroom environment that draws students in (Marzone 2018). This claim is evident since it is extremely improbable that a disorganized and chaotic classroom due to poor classroom management can improve student learning or academic performance—in fact, it may even hinder it.

Idoprise (2014) claims that very little academic learning is possible in Chaos. As stated by Walter (2016). The personality, pedagogical approach, level of readiness, and student population of each teacher influence how their classroom is managed. When teaching and learning activities are centered, it is a prerequisite for meeting instructional goals and ensuring students' well-being. It is crucial to investigate the different classroom management patterns in our educational system since effective classroom management demands professional skills, aptitude, and competency for teaching Biology and other relevant subjects, not only bookish knowledge. As the name suggests, classroom management patterns, also referred to as classroom management styles, are the various ways that students might engage with the teacher and with one another in the classroom. It refers to clear methods of communicating with pupils and preset degrees of teacher supervision. In addition to accepting the students' impulsive actions, the teacher probably keeps an eye on their behavior. Among the patterns of classroom management are

1. Authoritarian classroom management pattern or styles: In this type of classroom management pattern, the teacher has a complete control over the classroom. students are not actively involved or responsive. it is the strictest form of classroom management pattern and it is quite likely that a student not following the set rules can be punished.
2. Authoritative classroom management pattern: This is characterized by behavioural principles, high expectations of appropriate behaviour, clear statement about why certain behaviour are acceptable and others not acceptable and warm student-teacher relationship.
3. Permissive classroom management pattern: it is characterized by low involvement of the teacher with student as well as a low degree of classroom regulation.
4. Indulgent classroom management pattern: it is characterized by high involvement with students, but a low degree of classroom regulations. It is an environment where there are few, if any, demands on students and the teacher actively support students in their effort to seek their own end.

Kelly (2017) stated that classroom management is when all the factors for conducive learning, such as physical- sensory element that is lighting colour, sound, space, furniture among others are put in place. It does not necessarily mean an empty room, it includes laboratories workshop among others, it is about creation of positive learning environment,

the absence of classroom management in a school system generates problems in a classroom setting.

There are numerous problems regarding classroom management in this research work;

1. **Class control:** Class control gives teachers the ability to manage students in their classroom. It provides the means and the assurance for teachers; it provides content access for their class. The teacher needs to have a better knowledge on how to control his or her class so as to ensure adequate teaching and learning process (Kyoshaba, 2019). The way you control any class, depend on what size class you have and also on the age of the students. Inability of the teacher to control his or her class result to indiscipline among students.
2. **Class arrangement:** Classroom arrangement refers to a layout of the physical set up of chairs, tables, materials in a school classroom. A thoughtful physical arrangement of the classroom helps the students anticipate and participate in the activity and adjust their behaviour in each area as well. An arranged classroom, support teachers in their overall management of the classroom and further support learning, when sit are arranged accordingly, it encourages and improve classroom management and well-behaved students. When there is absence of spatial class arrangement, there will be high level of noise, those at the front tends to concentrate more and distraction etc.
3. **Class size:** Class size refers to the number of students in a given course or classroom. It comprises of students being taught by teachers in a school, district or educational system. Large class size leads to poor classroom management, ineffective students' control. Large class size encourages disruptive behaviour among students and frustrate teacher's effort.
4. **Reactions and reinforcement of students:** It involve doing something or giving something to a student which include positive attention, time etc. it is an important element in teaching new skills. It encourages the learner to respond, interact and react to what the teacher is saying. Absence of reaction and reinforcement encourages discouragement and lack of concentration in the classroom. Some possible solutions to this problem are, the teacher should be well prepared, reward good behaviour, be consistent, change students' seat, if need be, the seats should be arranged accordingly. It becomes necessary to look at teachers' level of class control during Biology lessons.

In schools in the Ogidi Education Zone, Ezinwa (2013) conducted study on the degree of class control exercised by teachers during biology lessons. Three questions served as the research's compass while using a descriptive research approach. Data was collected using a 40-item questionnaire. The results showed that teachers use class codes and reinforcements to keep their classrooms under control, that they keep an eye on group work and practicals during biology lessons, that they regulate student movement and activities during those lessons, and that they punish misbehavior and reward good behavior. In Umunnochil G.A., Abia State, Okafor (2013) conducted research on the degree of classroom management possessed by secondary school teachers. The study aimed to determine the degree of classroom management exhibited by the instructors during Biology sessions in the secondary school located in Umunnochil G.A. of Abia state. The investigation was conducted using a descriptive survey. It was suggested that policy makers should make classroom control a

required course in teacher training colleges. The findings of the study indicate that teachers in Umunnochii L.G.A. do not allow students to do as they please during biology lessons, and students remain calm and cooperative throughout. Another issue that was taken into consideration was class arrangements.

Terry et al. (2016) investigated how students' perceptions of digital technologies were affected by various classroom spatial layouts at a secondary school located in the Awka South Local Government Area of Enugu State. The impact of two learning spaces—traditional classroom space (TCS) and new generational learning space (NGLS)—was isolated through a quasi-experimental approach made possible by a single subject design (SSRD). The findings showed that teachers assign seats to students so they can keep an eye on their participation and activities during biology classes, and that students are not permitted to sit wherever or however they please. The impact of varying spatial arrangements on students' perceptions of the usefulness of digital technology affordances was quantifiable, and improvements were frequently associated with NGLS. Evidence, however, also out that altering the learning environment may not always improve learning. A shift in layout will benefit educators who are willing and able to use technological affordances into their lessons. A study on the barriers to efficient classroom setups in secondary schools in Akwa South Local Government Area, Enugu State, was also conducted by Attamah and Azuroru (2014). After using arithmetic to analyze the data from the questionnaire, it was discovered that, among other things, secondary school classroom arrangements are negatively impacted by teachers who forbid students from sitting next to their playmates in class, cramped classrooms, a shortage of textbooks or seats, and ineffective teaching strategies.

Once more, at Njikoka L.G.A., Agu (2021) conducted research on the impact of classroom layout techniques on students' academic performance. Results indicate that professors do not assign homework in groups during biology classes, and they set up the classroom so that every student has the opportunity to participate fully in the subject matter. The way that pupils are taught in the classroom and how well they learn also affects their academic achievement at Njikoka L.G.A. The results suggested, among other things, that teachers step up their effective teaching and learning strategies and classroom setups to support their students' excellent academic achievement. The way a classroom is set up can have an impact on how engaged students are in biology classes. There is no denying the undeniable positive significant association between student participation and academic accomplishment, as evidenced by the numerous research that have examined this relationship. In order to better understand how much students in Ilorin, Nigeria's secondary schools participated in biology classes, Onasanya and Omosewo (2015) conducted a study. According to the analysis, learning achievement in biology increased when there was greater student interaction, when students asked and answered questions during class, and when students contributed insightful suggestions.

Martin (2019) carried out additional research on the degree of student involvement in biology classes in secondary schools in Lovin, Nigeria. The study used a descriptive survey research design, and its findings show that students pay attention in class, take notes during instruction, and that engagement levels increase with student proficiency. The impact of class size on classroom management was also very significant. Peter et al. (2013) looked at how student behavior and classroom management were affected by class size in a secondary school in Ebonyi State. The study compared how classroom management and teacher-pupil interaction affected students' attainment levels in primary and secondary school. Its conclusions were that students in large classes are inherently disorganized, teachers are

pressed for time, and classroom management suffers in larger settings. Yelkpiere et al. (2018) conducted research at Winneba Polytechnic on the impact of large class sizes on efficient teaching and learning. The aim of this study was to gather perspectives on big class sizes and how they impact teaching and learning at the polytechnic Winneba Campus from both lecturers and students. In this study, a cross-sectional sample survey was used. There were 342 students and 42 lecturers among the study's respondents. While lecturers and department heads were chosen using random sampling and purposive sampling, respectively, students were chosen using the stratified random sampling approach.

The study's main conclusions include the following: lecturers disagreed that their effectiveness as teachers is affected by their workload and that they don't become stressed out or strain vocally when teaching a large class. The research instrument used for data collection was a questionnaire, and direct observation was also employed. Conversely, the students concurred that although lecturers spend a lot of time with them in large classes, they are unable to provide remedial instruction or pay attention to the students who are less proficient. In keeping with the results, the authors suggested that the institution try to provide additional resources and facilities, like lecture halls and teaching and learning aids, to support efficient teaching and learning. They also suggested that more lecturers be assigned to the general courses. The current study on biology classroom management in secondary schools in the Etche local government area was inspired by the fact that effective classroom management is crucial and has a significant impact on biology teaching and learning. The study was guided by four research questions: i. How much influence do teachers have over their classes during biology lessons? ii. How does the configuration of the classroom impact the teaching and learning of biology? iii. To what extent do students participate in biology classes? and iv. How does the size of the class affect how the classroom is run?

Research Methods

The population of this study consists of all Biology teachers in public secondary schools in Etche Local Government Area of Rivers State. According to a digest from the department of statistics, Rivers State Ministry of Education, there are about 20 government owned schools in Etche local government area. The total number of Biology teachers in public schools was 34 and when the population is small, the entire population serves as the sample. On this note, census will be adopted since the population is small and manageable. Therefore, the sample for the study comprises of 34 Biology teachers teaching in public schools in Etche local government area. The research instrument used for collection of data for this study was a well-structured questionnaire titled "Questionnaire on Biology Teachers' Classroom Management Practices (QOBTCMP). The questionnaire was divided into two sections, the first section enquired about the responses demographic or personal data while the second sections were in line with the study objectives, aimed at providing answers to the research questions. Participants were required to respond by placing a tick at the appropriate column. The questionnaire was personally administered by the researcher. The questionnaire was designed using the four 4- point modified likert-type scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD). The Questionnaire on Biology Teachers' Classroom Management Practices (QOBTCMP) was submitted to two science educators for validation and they used their intellectual knowledge to critically, analytically and logically examine the instruments relevance of the contents and statements and then made corrections which were effected before administering the instrument.

For the reliability, instrument for data collection was administered to 10 Biology teachers outside the study area, the two sets of data collected using test re-test method were analyzed using Pearson Product Moment Correlation (PPMC) to obtain a correlation (r) value of 0.74, which is a good reliability index. Due to the number of respondents, the researcher personally administered the reliable and valid questionnaire to all the biology teachers in Etche secondary schools. The filled questionnaires were retrieved from the teachers on the spot. Descriptive statistics - Mean and standard deviation were used to answer the research questions.

Results

Research Question 1: What is Teachers' level of class control during Biology Lesson?

Table 1: Mean and Standard Deviation showing the level of Teachers' class control during Biology lessons

S/N	Item	Mean	Std. Deviation	Decision
1	Students are always calm and quiet during Biology lessons	3.20	0.44	Accepted
2	Teachers allow the students do whatever they like during Biology lessons	1.85	0.50	Not Accepted
3	Teachers don't control the movement and activities of students during Biology lessons	1.73	0.51	Not Accepted
4	Teachers give room for chorus answers to questions during Biology lessons	1.74	0.51	Accepted
5	Teachers reward positive behavior and punish bad behavior during Biology lessons	3.40	0.54	Accepted
6	Teachers use only verbal communications during Biology classes	1.60	0.54	Not Accepted
7	Teachers monitor group work and practical during Biology lessons	3.40	0.54	Accepted
8	Teachers do other irrelevant activities during Biology lessons	1.40	0.54	Not Accepted

Most of the respondents agreed that Students are always calm and quiet during Biology lessons. The respondents did not agree that teachers allow the students do whatever they like during Biology lessons. Teachers always control the movement of students during biology classes. Students are not given room for chorus answers. Most of the respondents agreed that positive behaviours are rewarded while bad behaviours are punished. When teaching biology teachers don't only use verbal communications. Group work and practical are monitored during biology lessons.

Research Question 2: What is the effect of class arrangement on Biology teaching and learning?

Table 2: Mean and Standard Deviation showing the Effect of class arrangement on Biology teaching and learning

S/N	Item	Mean	Std. Deviation	Decision
9	Students are allowed to sit anyhow and anywhere they want during Biology lessons	1.40	0.54	Not Accepted
10	Teachers allow the unintelligent students seat at the front row during Biology classes	1.73	0.51	Not Accepted
11	Teachers allow students sit alongside their playmates during biology classes	1.80	0.44	Not accepted
12	Teachers create a sitting arrangement for the students that enables him/her monitor the activities and participation of the students during Biology lessons	3.40	0.54	Accepted
13	Teachers arranges the class in groups during Biology lessons	1.85	0.50	Not Accepted
14	Teachers arranges the class in a way whereby all students are entitled to be actively involved during Biology lessons	3.40	0.54	Accepted

Majority of the respondents did not agree to the fact that students are allowed to sit anyhow and anywhere. Respondents did not agree that unintelligent students' seat at the front row during Biology classes. Teachers do not allow students sit alongside their playmates during biology classes. In order to monitor the activities and participation of the students during Biology lessons, Teachers create a sitting arrangement for the students. Teachers do not arrange the class in groups during Biology lessons. Lastly, majority of the respondents agreed that teachers arrange the class in a way whereby all students are entitled to be actively involved during Biology lessons.

Research Question 3: What is the level of students' participation during biology lessons?

Table 3: Mean and standard deviation showing level of students' participation during biology lessons

S/No	Item	Mean	Std.dev	Decision
15	Students ask and answer questions during biology classes	3.51	0.68	Accepted
16	Students take note during lessons	3.74	0.44	Accepted
17	Students finish and submit their class work promptly	3.15	0.87	Accepted
18	Students pay apt attention during biology lessons	2.92	0.89	Accepted
19	Students contribute meaningful ideas during biology lessons	3.02	1.03	Accepted
20	Students are always excited to learn during biology lessons	3.07	0.83	Accepted

The table above shows that all the items had mean score above the criterion mean of 2.50. This applies that students participate during biology lessons.

Research Question 4: What is the Effect of class size on classroom management?

Table 4: Mean and Standard Deviation showing the Effect of class size on classroom management

S/N	Items	Mean	Std. Deviation	Decision
21.	Teachers are able to teach very effectively in a very large class	1.40	0.54	Not Accepted
22	Students are always disorganized in a large class size	3.80	0.44	Accepted
23	Teachers carry all the students along in a large class size	1.60	0.54	Not Accepted
24	Teachers strain their voices while teaching a very large class	3.40	0.54	Accepted
5	Teachers don't act seriously when teaching a large class	3.60	0.54	Accepted
6	Teachers spend much time with students in a large class	1.40	0.54	Not Accepted
7	Teachers don't go through stress and strain when making and assessing student in a large class	1.40	0.54	Not Accepted

Most of the respondents agreed to the fact that students are always disorganized in a large class size, teachers strain their voices while teaching a very large class, teachers don't act seriously when teaching a large class. However, they did not agree that Teachers are able to teach very effectively in a very large class, all students are carried along in a large class size, teachers spend much time with students in a large class and teachers don't go through stress and strain when marking and assessing students in a large class.

Discussion of Findings

Teachers' level of class control during Biology lessons

The result on table 1, presents result on teachers' level of class control during Biology lesson like students are always calm and quiet, teachers allow the students do whatever they like during Biology lessons, teachers don't control the movement and activities of students during Biology lessons, teachers monitor group work and practical during Biology lesson, teachers give room for chorus answer to question during Biology lessons, teachers reward positive behavior and punish bad behavior during Biology lessons, teachers use only verbal communication during Biology lessons, teachers do other irrelevant activities during Biology lessons. which recorded a mean of 1.40,1.60,1.74,1.73,1.85,shows that the respondent did not agree teachers allow the student do whatever they like during Biology lessons, teachers don't control the movement and activities if students during Biology lessons, teachers use only verbal communications during Biology lessons, teachers do other irrelevant activities during Biology lessons, with a grand mean of 2.50 and above the respondent agreed that students are always calm and quiet during Biology lessons, teachers give room for chorus answer to question during Biology lessons, teachers reward positive behavior and punish bad behavior during Biology lessons, teachers monitor group work and practical during Biology lessons. These Findings are in line with Okafor (2013) who revealed that the teachers do not allow student do whatever they like during Biology lessons and students are always calm and quiet during Biology lessons. This is in agreement with, Ezinwa (2013) who posited that teachers monitor group work and practicals during Biology lessons and teachers control the movement and activities of students during Biology lessons.

Effect of class arrangements on Biology teaching and learning

The result on table 2 presents result on the effect of class arrangements on Biology teaching and learning, in items 9-14 which includes, students are allowed to sit anyhow and anywhere they want during Biology lessons, teachers allow the unintelligent students seat at the front row during Biology classes, teachers allow student sit alongside their playmates during Biology lessons, teachers create a sitting arrangement for the students that enables him/her monitor the activities of participation of the students during Biology lessons, teachers arrange the class in groups during Biology lessons, teachers arrange the class in a way whereby all students are entitled to be actively involved during Biology lessons with mean of 1.40,1.73,1.80,1.85,3.40 respectively. As seen in item 9,10,11 and 13 it shows that the respondent did not agree that students are allowed to sit anyhow and anywhere they want during Biology lessons, teachers allow the unintelligent students seat at the front row during Biology classes, teachers allow student sit alongside their playmates during Biology lessons and teachers arrange the class in groups during Biology lessons, with a grand mean of 2.5 above the respondent agreed that teachers create a sitting arrangements for the students that enables him/her monitor the activities and participation of the students during Biology lessons and teachers arrange the class in a way whereby all the students are entitled to be actively involved during Biology lessons. These findings are in line with Terry et al (2016) who revealed that teachers create a sitting arrangement for the students that enables him/her monitor the activities and participation of the students during Biology lessons and students are not allowed to sit anyhow and anywhere they want during Biology lessons. In corroboration, this study agrees with Agu (2021) who posited that teachers do not arrange the class in group during Biology lessons and teachers arrange the class in a way whereby all students are entitled to be actively involved during Biology lessons.

Level of students' participation during Biology lessons

Table 3 present result on the level of students' participation during Biology lessons. In item 15-20, which includes; students ask and answer questions during Biology classes, student take note during lessons, students finish and submit their class work promptly, students pay apt attention during Biology lessons, student contribute meaningful ideas during Biology lessons, students are always excited to learn during Biology lessons with mean of 3.51,3.74,3.15,2.92,3.02,3.06 respectively, As seen in item 15-20, all the item had mean score above the criterion mean of 2.50.This applies that student participate during Biology lessons. These findings are in line with Onasanya and Omosewo (2015) who revealed that students ask and answer questions during Biology lessons, students contribute meaningful ideas during Biology lessons. This is in Agreement with Martins (2019) who posited that students take note during lessons, students finish and submit their class work promptly.

Effect of class size on classroom management

The results on table 4 present results on the effect of class size on classroom management. In item 21-27, these include teachers are able to teach very effectively in a very large class, students are always disorganized in a large class size, teachers carry all the students along in a large class size, teachers strain Their voices while teaching a very large class, teachers don't act seriously when teaching a large class, teachers spend much time with students in a large class, teachers don't go through stress and strain when marking and assessing students in a large class with mean of 1.40,3.80,1.60,3.60,1.40,1.40 respectively, item 21,23,26 and 27 shows that the respondent did not agree that teachers are able to teach very effectively in a large class, teachers carry all the students along in a large class size,

teachers spend much time with students in a large class, teachers don't go through stress and strain when marking and assessing student in a large class, with a grand mean of 2.50 and above the respondent agreed that students are always disorganized in a large class size, teachers strain their voices while teaching a large class and teachers don't act seriously when teaching a large class. These findings are in line with Peter et al (2013) who revealed that teachers are always disorganized in a large class size and teachers are not able to teach effectively in a large class size. This corroboration with Yelkpiere et al (2018) who posited that teachers strain their voices in a large class size and teachers do not spend quality time with students in a large class size.

Based on the findings of this research, the following conclusions were drawn:

1. That teachers effectively control their students during Biology lessons.
2. It was found out that the classroom is properly arranged during Biology lesson.
3. There is a high level of students' participation during Biology lessons.
4. Class size negatively influences classroom management

Educational Implications of Findings

The Government should ensure that teachers receive training on how to effectively manage their classrooms, including how to create positive learning environments and encourage student participation. The Biology teachers should ensure that Classrooms are arranged in a way that promotes student participation and learning, such as having desks arranged in a way that encourages group work and collaboration. The number of students in a class should be taken into consideration when developing classroom management strategies, as larger classes may require different strategies than smaller classes.

Recommendations

The following are recommendations for further study on this research work;

- 1: The government in the federal, state and local government areas should organize educational conferences and seminars for teachers to learn and acquire new effective classroom management skills.
- 2: Teachers should assign responsibilities to students to make them have full participation in the learning process.
- 3: Teachers should be cautious while using punishment in class control during Biology lessons.
- 4: Teachers should create a sitting arrangement for the students in order to monitor the activities and participation of the students during Biology lessons.
- 5: There should be a minimum of 30 students and maximum of 40 students in the classroom, so that teachers can be able to manage their classes effectively.

Summary of the Study

The purpose of the study was to determine the Biology classroom management in secondary school in Etche Local Government Area: Problems and Prospect. Based on the purpose of this study, research objectives were stated, Literature were reviewed. The design adopted for the study was descriptive survey research design. The study was carried out in Etche Local Government Area, Rivers State. The population of the study consisted of thirty-four (34) Biology teachers in Etche Local Government Area. The sample size of the study consists of thirty-four (34) respondents and a simple random sampling techniques was used. The instrument used for data collection was a questionnaire developed by the researcher. Validity and reliability of the instrument were established. The data was collected directly by

the researcher during school hours. The data was analyzed using mean and standard deviation. The finding from the study are: teachers control their students during Biology lessons, classroom is properly arranged during Biology lessons, there is a high level of students' participation during Biology lessons and large class sizes are difficult to manage as there is a negative relationship between class size and classroom management.

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