



STUDENTS' PERCEPTION OF THE UTILIZATION OF HUMOUR BY BIOLOGY TEACHERS AND THEIR ACADEMIC PERFORMANCE

BY

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Abstract

The purpose of this study was to investigate into students' perception of the utilization of humour by biology teachers and their academic performance. The study uses both quantitative and qualitative experimental method to collect data from 100 senior secondary school II biology students; the quantitative data were used to measure students' perceptions of the use of humour by biology teachers. Biology performance test was the instrument used to collect data from students, and a total of 10 biology teachers were interviewed. The findings shows that the control group and the experimental group had a significant difference with a p value less than 0.05. The research revealed that many students support the teachers utilizing humour in class because it is pleasant. The result also shows that when humour is used as a teaching strategy in biology lessons, students find it to be enjoyable, enhance good learning environments, makes difficult topics easier to comprehend, build teacher-student relationship and reduce stress. It is therefore concluded that humour should be utilized by biology teachers wisely, and the type of humour employed should be depending on the lessons being taught.

Keywords: Humor, Academic Achievement, Learning Environment, Biology

Introduction

Biology, with its terminology, complex processes and extensive memorization requirements poses a hurdle for many students which necessitate a more comprehensive and interactive learning approach. The following factors contributed to students' low biology achievement: a lack of teachers, an environment that is not favorable to learning, and inadequate teaching methods and educational resources (Ihekwoaba, Chinweuba-eze, and Nduji 2020). The teacher, the teaching

strategies, and the methodologies employed are the most significant factors that generally affect students' progress in science, particularly biology. This is so because teachers may influence their occupational skills and direct them to improving student engagement, interest, and academic achievement in the subject (Cimer, 2015). Biology, as a core science subject often presents abstract and technical concepts that require a high level of cognitive engagement. Many students perceive biology as challenging



due to its scientific terminology and conceptual nature (Audu and Samuel, 2021). Consequently, innovative teaching methods sustain students' interest are essential. Instead of employing the teaching strategy that has been shown to be effective in raising student achievement, the majority of biology teachers still use traditional methods of instruction like the lecture method, where the teacher does the majority of the talking during the teaching and learning process. Although the traditional approach to teaching biology characterized by a one-way flow of information has long been an aspect of education providing a framework, for conveying essential biological principles (Ademola et al., 2022; Onowugbeda et al., 2023). This may fall short in effectively addressing the unique challenges posed by biology. While it is important to acknowledge the benefits of this approach in facilitating the acquisition of knowledge, it must also be recognized by its limitations when it comes to promoting active participation, cultivating critical thinking abilities, and adapting to the ever-changing landscape of the biological sciences (Adam et al., 2023; Agbanimu et al., 2021;2022; Ajayi et al., 2023). Teachers are continuously looking for new and creative ways to engage students in the classroom, such as through the use of the internet, other media, and entertainment tools including photos, animation, videos, projectors, and movies (Shabiralyani, Hasan, Hamad, Iqbal, 2015). It's interesting to note that one aspect of human development and neurology that has been predicted to academic excellence but teachers frequently ignore is the use of humor. According to Gbeleyi (2022) and Okebukola et al., (2021), implementing effective teaching strategies is crucial for engaging students and facilitating knowledge acquisition.

Humour, as a pedagogical approach, possesses the capacity to reconfigure the educational milieu through the infusion of amusement and light-heartedness within the instructional setting. The cultivation and incorporation of humour within the educational setting can be strategically employed to cultivate an environment that promotes a sense of inclusivity and mutual regard among both students and educators. Educators today often employ various forms of humour, including jokes, anecdotes, and interactive activities, to enhance the overall learning experience and promote a dynamic and engaging classroom environment. According to the research of de Guzman and Arceo (2022), incorporating humour in the educational setting can greatly contribute to creating a positive and inclusive space for learning. By using humour strategically and appropriately, educators can break down barriers and foster a relaxing and comfortable atmosphere between themselves and their students, ultimately leading to a conducive learning environment. Students who feel supported and welcomed are more likely to actively participate in the learning process. Humour plays a vital role in fostering social interaction and promoting a shared camaraderie. Allowing students and teachers to connect through light-hearted moments, and facilitates positive relationships. The use of humour as a pedagogical tool is an effective way to ease tension in the classroom, as reported by Ogunyemi (2020), creating opportunities for emotional release in the classroom can have a positive impact on the overall learning environment. By providing a safe space for students to express and process their emotions, they can develop resilience. Creating a safe learning environment is crucial for students to fully engage in the learning process and form positive social relationships with their peers. The use of humour to approach difficult topics



demonstrates a high level of empathy and understanding, resulting in a nurturing atmosphere for students to thrive in.

When introducing humour approach into teaching, it's critical to consider both general and specific techniques to effectively engage students. In a general, understanding your target audience is crucial. Understand their backgrounds, interests, and cultural sensitivities to tailor your humour appropriately. Authenticity is vital; embrace a humour that aligns with your personality and teaching style to develop a true connection with your students. Timing plays a crucial role, so choose moments that enhance rather than disrupt the learning flow. Begin with icebreakers to set a positive tone and consider incorporating relatable

Statement of the Problem

Biology is one of the core science subjects in the secondary school curriculum, serving as a foundation for careers in medicine, nursing, pharmacy and other health-related professions. However, over the years, students' performance in Biology has remained relatively poor. As one of the core subjects that all science secondary students must take in the senior class, the subject teachers frequently use his well-known strategy to cover the syllabus within the allotted time and this does not give room for proper understanding of the subject, which makes some students tag some topics in biology as being difficult. The student's attitude toward the subject and the teaching method utilized to disseminate the material are two of the most frequently noticed issues in the teaching and learning of biology. Biology topics that have been deemed challenging may have an impact on students' academic achievement. Given the foregoing, every

examples from everyday life or popular culture. Encourage student participation by inviting them to share their own humorous experiences, fostering a collaborative and enjoyable learning environment. Lastly, self-deprecating humour can make you more approachable, breaking down barriers between you and your students. For specific humour approaches, consider incorporating wordplay, puns, or clever jokes related to the subject matter. Visual humour, such as memes or cartoons, can add a playful element to your teaching materials. Be cautious with sarcasm, using it sparingly and ensuring clarity to avoid potential misunderstandings.

Nigerian, including the researcher, should be concerned about this backwardness on a general level. The use of humour in the context of teaching has not received enough attention, according to earlier studies. This is a result of teachers' limited experience, training, and awareness of how to implement humorous teaching strategies, particularly while teaching biology. In addition, humour is still used sparingly and is regarded as being unimportant in the teaching process. In the earlier research, using humour in the classroom can benefit students' engagement, self-efficacy, motivation, concentration, and enthusiasm in learning as well as teachers' lesson plans. Teachers being funny or bringing in jokes to explain the concept of his teaching will be a good motivator for understanding and memory retention of the subject.

Aim and Objectives of the Study

This study aims to examine students' perception of the utilization of humour by biology teachers and their academic performance. Specifically, this study aimed to:



- i. Determine the Biology Achievement Test mean score.
- ii. Investigate student perceptions on the use of humour by biology teachers.
- iii. Assess biology teachers' views and adoption of humour for an improved academic performance.

Research Hypothesis

Null Hypothesis: There is no significant difference between teachers use of humour on student academic performance.

Methodology

Research Design: This study utilizes quasi experimental design for data collection inculcating quantitative method involving an experimental group and a control group; and a qualitative method involving the Biology teachers.

Population of the Study: The study targeted population consisted of Senior Secondary School Students and Biology teachers in schools within Ijebu Ode and Odogbolu Local Government, Ogun State.

Sample and Sampling Techniques: The total samples of this research work comprised of 100 students from Senior Secondary School II involving an experimental and control group; and 10 Biology teachers in Ijebu Ode and Odogbolu Local Government area. Two secondary schools were randomly selected for this study. A purposive sampling technique was used to select 50 students to the experimental class and 50 students in the control.

Students in the control group did not participate in any humorous activities from the teacher while Students in the experimental group were taught humorously.

Research Instruments: The research instruments that were used for the

quantitative method was a self-structured questionnaire on teachers' humor Usage in Biology and Biology Achievement Test (BAT) using a well-prepared lesson plan on a biology topic Hereditary Variation comprising of 20 multiple choice question base on lower level of Blooms taxonomy which was constructed by the researcher. The questionnaire's instrument was researcher-made using a Likert type scale with four ratings: 4-Strongly Agree (SA), 3-Agree (A), 2-Disagree (D), 1-Strongly Disagree (SD).

Method of Data Collection: The students were divided into experimental group and control group. A lesson plan was developed for the experimental group on Hereditary Variation reflecting the use of Humor while the lesson plan for the control group was without humor approach. Both groups were subjected to a posttest using the same achievement measures.

Method of Data Analysis: Data once collected is checked for errors and missing values. Tool for analysis included frequency analysis, Mean, Standard deviation and paired sample t-test performed using the SPSS version 22.

Result

Research Question 1: Biology Achievement Mean Score.

Table 1 shows the mean score of the respondents Biology Achievement Test (BAT). The study found out the mean scores between the two groups after calculating their Biology achievement test score. The experimental group exhibited a higher mean achievement score of 11.54 ± 2.38 than the control group with an achievement mean score of 8.24 ± 2.47 .



Table 1: Biology Achievement Mean Score

	Mean	N	Std. Deviation	Std. Error Mean
Control	8.24	50	2.471	.349
Experimental	11.54	50	2.384	.337

Research Question 2: Student perceptions on the use of humour by biology teachers.

Table 2: The table shows the student perception on the use of humor by Biology teachers. To determine the level of agreement between each item, the mean score for each item was

determined. It was noted that the student has a positive perception on the use of humor by the teachers. Humor in the classroom is important since it creates a learning-conducive environment and improves the retention of material. It enables a relaxed classroom atmosphere with less stress and less fear among the students.

Table 2: Student perceptions on the use of humour by biology teachers.

No Items	Mean	S.D	Level of agreement
1 Humour in the classroom helps me connect with the teacher	3.17	.763	Agree
2 Teacher use of humour during lesson encourages class attendance	3.08	.938	Agree
3 Humour helps students to remember the gained knowledge	3.19	.841	Agree
4 If humour is well managed in the classroom, it is a good method of teaching	3.41	.734	Agree
5 Using humour in the classroom creates a positive learning environment	3.15	.857	Agree
6 Humour makes the relationship between teachers and students more open and flexible.	3.27	.766	Agree
7 Humour helps students overcome shyness and encourages them to interact with the teachers in the class	3.26	.901	Agree

Research Question 3: Biology teachers' views and utilization of humour for an improved academic performance.

Table 3: Every teacher surveyed agreed that using humour in the classroom is a smart move (F=10). Another argument made by educators in this subtheme is that humour keeps students from getting

bored in class (F=6). Additionally, the interviews with teachers found that they believe humour makes difficult ideas simpler to learn (F=3). Humour strengthens the bond between students and teachers, according to four teachers (F=4). The teachers who were interviewed also mention some drawbacks to adopting humour in the classroom. Time management is one of the adverse



impacts mentioned; if poorly handled, humor takes up more time (F=4). According to the interview, another detrimental effect of employing humour in schools is poor class management (F=2). The teachers list other examples of how they employ humour in the

classroom in the table above. The majority of the teachers use humour in their jokes and stories (F=6), whereas four teachers use imitation to bring humour into the classroom (F=4), drama (F=2), and cartoons (F=2).

Table 3: Biology Teachers views and utilization of humour for an improved academic performance.

Themes	Sub Themes	Frequency
Contributions	Humour is a good strategy for teaching	10
	It decreases boredom in class	6
	It makes complicated concepts easier to understand	3
	It helps develop Student-Teacher relationship	4
Negative effect	Time Management	4
	Classroom Management	2
Ways of using humor	Jokes/Funny stories	6
	Drama	2
	Imitation	4
	Cartoon	2

Null Hypothesis: There is no significant difference between teachers use of humour on student academic achievement.

Table 4: The control group received instruction using the conventional method whereas the experimental group received

instruction with Humour. The result shows a statistically significant difference between the experimental and control group with a P-value of less than 0.05. In contrast to the students' in the control group, those in the experimental group engaged more effectively and are reportedly satisfied with the teacher use of Humour

Table 4: Teachers' use of humour on student academic performance.

	Paired Samples Test					t	Df	Sig. (2-tailed)	
	Mean	Paired Differences			Lower				Upper
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
Control - Experimental	-3.300	3.803	.538	-4.381	-2.219	-6.137	49	.000	



Discussion of Findings

The aforementioned findings back up Afghari and Allami's (2017) assertion that humour in teaching and learning processes fosters a fun environment that is conducive to learning and allows students to express themselves freely without feeling stressed out or embarrassed.

In the control group, students' motivation, anxiety, and involvement were impacted by the lack of humour stimuli, none of the things that thrived in the experimental group happened. Not many students in the control group appeared to like the lessons and the class as a whole than in the experimental group.

Kavandi (2016) claims that humour have been used in teaching to help promote learning environments and also lead to a better academic achievement. Often when teachers or other classmates make a humorous speech in class, students' thoughts will suddenly get engaged. Humour sense can raise students' mental abilities and foster critical thinking (Rindfleisch, 2018). A sort of entertainment meant to make people laugh is humour (Erdogdu, 2021). It can be used to establish a pleasant learning environment and enhance group cohesion, creativity, and student motivation by breaking the rigidity and stillness of a serious environment (Bolkan, 2015). Teachers can ease tension in the classroom and relieve students' stress, exhaustion, and boredom by using humour. According to Abdulmojeed and Hameed (2017), when a teacher employs humour, students learn complicated topics more easily and perform better. It has the primary function of building relationships; thus, it is unsurprising that the use of humour by teachers in the classroom can improve the relationship between teachers and students. Students have also been reported to prefer teachers who laugh and tell jokes because they

perceive these teachers as being approachable and nice. However, if it is inappropriate, using humour as a teaching method could have the opposite effect of what the teacher intended.

The students' agreement with the notion that humour makes tough subjects easier to understand and aids in memory of learned information is another finding from the study. Humour inspires students to participate in class activities.

The majority of participants' comments on the influence of humour on teaching were favorable. The use of humor in the classroom, according to all participants, helped foster a positive learning environment, lower student tension, and stimulate more open dialogue. Participants shared their conviction that including appropriate humour in the classroom improved student motivation and engagement. Humour was also used to increase students' willingness to take chances in the classroom, encouraging them to speak up during discussions, participate in experimental activities, and ask questions. Participants agreed that humour in the classroom helped students learn the material better. Additionally, humor-based teaching can create a psychologically safe environment in the classroom that facilitates students learning (Friedman & Friedman, 2019; Kumar & Dhiman, 2019).

Time management and classroom management are the biggest drawbacks of employing humour in the classroom as stated by some teachers. It is believed that inappropriate humour use, which does not follow a predetermined plan, may result in these harmful effects. In the Control group, the students only pay attention to the teacher as she explains the material; however, it was noticed in the experimental group that, after the teacher uses humour to explain a concept, most of the students want to add their own jokes and engage in conversation with one another. This



makes it occasionally difficult for the teacher to call the class back to order and this takes up some of the time allotted for the lesson and disrupts the class.

An interviewed teacher stated that, "Humour is a good method of teaching but some teachers make jokes in the class to the extent that they run out of time making them unable to finish the lesson content which will also result in the student not understanding anything for that period, so humour should be well managed and teachers must also be able to maintain a serious tone."

Conclusion

The result from this study revealed that when humour is included in biology lessons, students find it enjoyable and stress free. This is because humour helps close the communication gap between teachers and students, it also helps enhance good learning environment and reduce stress.

Moreover, the humour used must be subject and topic related which will be able to bring out the course objectives. It was therefore observed that the inappropriate use of humour as an effect on time management and Classroom management but conclusion was made that if humour is used wisely and in an appropriate way it won't waste time and will as well hasten comprehension of what is being taught.

Students' anxiety levels can be lowered by an enjoyable learning experience made possible by the use of humour in the class. The result shows that when humour is included in biology lessons, students find it to be enjoyable. Despite this, it is true that biology teachers do not regularly use humour in the classroom. Teaching using humour supports and promotes the teaching and

learning processes among biology students. This is because humour may be used to show emotion, communicate with students and teachers, and enhance learning environments and reduce stress. Humor in the classroom will make students feel more at ease and help close the communication gap between teachers and students. This is because a humorous lesson will increase students' levels of involvement. Therefore, incorporating humour into the classroom can help students feel more motivated, satisfied and interested in studying. This research, which indicates that the use of humour can make the class pleasant demonstrated by the students' laughter therefore generating an enjoyable learning environment, is supported by a number of prior studies. Students who engage in this activity report feeling happier and paying attention in class more. Additionally, prior research has demonstrated that the use of humour engages students and boosts their desire to learn. As a result, their anxiety will decrease as the issue of learning biology shifts from a negative to a positive one. Not only that, but humour can help students pay attention to the lesson and comprehend a challenging or complex concept. This is due to the fact that employing humorous analogies or explanations will help students understand the material, inspire them to seek solutions to problems, and elevate their moods.

However, depending on the target's emotion and the sort of humour used, the effect of humour on the target may change. As a result, it's crucial to intentionally use humour. Teachers can therefore use humour as an additional method to boost higher order cognitive abilities and material retention.



Recommendations

The following recommendations were made in light of findings from the study;

1. Teachers should have sense of humour and not be embarrassed to use it. Humour won't waste time if utilized wisely, infrequently, and controlled properly; instead, it will hasten comprehension of what is being taught.
2. The type of humor that should be used should be based on the lessons that the teacher is teaching. It should be topic and subject-related so that students may create connections quickly and effectively for good recall of what is taught.

3. Humour should be carefully planned with a few key goals in mind. In light of how it can help students learn, love studying, and provide students another reason to attend class.
4. When choosing the type of humour to include in the learning process, it is important to take into account both the course objectives and the students' developmental needs.
5. Teachers should be encouraged to pursue formal training on the use of humour in the classroom. Learning about how to use humour effectively exposes teachers to new methods of teaching and managing students.

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