

Utilization of Instructional Materials in Enhancing Mid-Term Performance of First Year BEED Students

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Abstract	Article Info
<p>This study investigates the utilization of instructional materials, particularly audio-visual resources, and their impact on the midterm performance of first-year BEED students at Central Philippines State University-Hinigaran Campus during the school year 2023-2024. The research employs a descriptive-correlational design, involving 6 teachers and 25 students, with data gathered through self-made questionnaires and secondary academic records. The findings reveal that both teachers and students generally have a high level of engagement with audio-visual instructional materials. Specifically, teachers' utilization of these materials shows a significant relationship with their teaching methodologies and correlates positively with students' midterm performance, which is rated as proficient. The study also finds that teaching strategies and the effective use of instructional materials play critical roles in enhancing student achievement. Notably, the level of student midterm performance indicates satisfactory learning outcomes. The analysis underscores that teachers' proficiency in employing audio-visual aids significantly influences students' academic success. Conversely, there is no significant relationship between teaching methodologies alone and students' utilization of instructional materials. Based on these results, the study recommends continuous professional development for educators, enhanced resource management, and active student participation in utilizing audio-visual tools to improve learning outcomes. The research emphasizes that effective integration of instructional materials, guided by skilled teaching practices, can foster more engaging and productive learning environments, ultimately contributing to better academic performance among BEED students.</p>	<p>Keywords: <i>Instructional materials audio-visual resources, midterm performance, teaching strategies, student achievement</i></p>

INTRODUCTION

In the field of education, instructional materials have played a vital role in facilitating effective teaching and learning processes. These resources, which include textbooks, visual aids, digital platforms, and interactive tools, serve to enhance students' understanding and retention of subject matter. Over recent years, technological advancements have significantly expanded the array of instructional materials available to educators. Online learning platforms, interactive textbooks, educational applications, and virtual laboratories are now commonly integrated into teaching strategies, making lessons more engaging, interactive, and adaptable to diverse learning styles. Midterm exams serve as important checkpoints within the academic calendar, providing both teachers and students with insights into progress and areas needing improvement.

Research has shown that the effective utilization of instructional materials is a key factor in improving students' academic performance. For instance, a study by Portana et al. (2021) highlighted the significant impact of instructional materials on student achievement. In the context of the current school setting, where audio-visual instructional materials are employed, it is essential to understand the challenges faced by teachers and students in their use, particularly among first-year BEED students for whom these resources are relatively new.

This study aimed to explore the utilization of instructional materials and their influence on students' midterm performance. By examining how these resources are used, the research sought to provide insights that could guide educators in selecting and implementing effective instructional materials, ultimately contributing to improved student outcomes. Additionally, UNESCO emphasizes the crucial role of textbooks and learning materials in enhancing learning quality and student performance (Smart and Jagannathan, 2018; GEM Report, 2016b). The findings of this study aim to support educators in fostering an engaging learning environment tailored to students' diverse needs.

LITERATURE REVIEW

Recent research underscores the pivotal role of academic performance as a key indicator of educational success, influenced by a multitude of factors such as cognitive abilities, motivation, study habits, and teaching methodologies. Studies by Friedrich and Cepeda (2014), Cepeda et al. (2015), and Pintrich and De Groot (2020) highlight that students with higher cognitive capacities tend to perform better academically; however, effective study habits and motivation can help mitigate disparities linked to cognitive differences. For instance, active learning strategies, including retrieval practice and collaborative activities, have been shown to improve exam performance regardless of students' innate cognitive abilities (Chi et al., 2014). Moreover, the adoption of metacognitive strategies, which involve students reflecting on and regulating their learning processes, further enhances academic achievement. These findings suggest that while cognitive abilities are influential, strategic learning approaches and engaging teaching methods can significantly boost student performance.

In addition to cognitive and motivational factors, instructional materials are essential components that impact learning outcomes. Literature by Yusuf (2016) and Raw (2016) emphasizes the importance of various instructional tools such as textbooks, chalkboards, science and mathematics kits, and audio-visual aids in facilitating effective teaching and learning. The integration of multimedia resources, including audio-visual aids and digital tools, has gained prominence with technological advancements. Studies by Zhyrun (2016), Suguladze et al. (2018), and others reveal that audio-visual materials enhance comprehension and retention, especially in language learning contexts. Empirical evidence suggests that multimedia inputs combining audio and visual elements are more effective than single-mode stimuli, as they activate multiple sensory channels and foster durable learning (Seeber et al., 2018; Hu and Zhang, 2013). However, some research also warns of potential distractions or cognitive overload caused by irrelevant or excessive multimedia content, indicating that the quality and relevance of instructional materials are crucial for maximizing their educational benefits.

METHODOLOGY

Research Design

This study employed a mixed descriptive-correlational research design to comprehensively explore the variables involved. The descriptive component aimed to profile the respondents—covering demographic variables such as age, sex, employment status, educational qualifications, years of teaching experience, and current BEED course level—to provide contextual background. The correlational component focused on examining the relationship between teachers' utilization of audiovisual instructional materials and students' midterm performance. This approach allowed for the identification of potential associations and insights into how instructional practices may influence academic outcomes.

Locale of the Study

The research was conducted at Central Philippines State University, Hinigaran campus, situated in Sitio. Headquarters, Barangay Gargato, Hinigaran, Negros Occidental. The campus is approximately 350 meters from the main university premises. The geographical setting provided a relevant context for exploring instructional practices within a specific local environment, ensuring the findings are applicable to similar educational settings in the region. A map illustrating the location of the study further contextualizes the geographical scope.

Respondents of the Study

The study targeted two main groups of respondents: six COTED teachers and 25 first-year BEED students enrolled at Central Philippines State University, Hinigaran campus, for the school year 2023-2024. These respondents were selected to gather relevant data on instructional practices and student performance, ensuring the sample accurately represents the teaching and learning dynamics within the specific academic year and setting.

Sampling Techniques

A combination of purposive and random sampling methods was employed. Initially, purposive sampling was considered to select relevant respondents; however, the researchers ultimately utilized random sampling to ensure proportional representation of both teachers and students. This technique involved randomly selecting participants from the population, maintaining the same proportions of COTED teachers and first-year BEED students to ensure sufficient and representative data collection. This approach enhances the generalizability and validity of the findings.

Research Instrument

Data collection was conducted using a self-constructed questionnaire divided into three main sections: (1) socio-demographic profile of teachers, (2) teaching and learning methodologies—including 10 questions related to instructional practices—and (3) utilization of audiovisual instructional materials, also comprising 10 questions. Student midterm performance data were obtained as secondary data directly from subject teachers. The questionnaire was administered personally on February 19, 2024, with prior permission obtained from the relevant authorities. The instrument aimed to capture both qualitative and quantitative data relevant to the research objectives.

Validity and Reliability of the Instrument

Since the instrument was self-made, rigorous validation procedures were implemented. Content and face validity were ensured by consulting the research adviser and a panel of experts who reviewed each item for relevance and clarity. To establish reliability, the questionnaire was pre-tested among 20 first-year BEED students and 4 COTED teachers at Central Philippines State University, Hinigaran campus. The split-half method was used for analysis, yielding a high Cronbach's alpha coefficient of 0.93, indicating excellent internal consistency across 18 items. This process assured the instrument's accuracy and consistency in measuring the targeted constructs.

Data Gathering Procedure

The researchers followed a systematic process to collect data. First, permission letters were sent to the university's research coordinator and the school administrator. Clear instructions were provided to respondents to facilitate understanding, and adequate time was allocated for answering the questionnaires. Confidentiality and anonymity were maintained throughout, with responses treated with strict privacy. After completion, questionnaires were collected, tallied, and analyzed statistically to address the research questions. Assistance from university officials, statisticians, and the adviser ensured proper data handling and interpretation.

Data Analysis

Data were analyzed using appropriate statistical tools aligned with the research objectives. Descriptive statistics (frequency, percentage, mean, and standard deviation) were employed to profile respondents and assess the level of utilization of audiovisual materials. To evaluate the students' midterm performance, mean and standard deviation scores were calculated. Inferential statistics, including Spearman's Rho correlation coefficient and p-values, were used to determine the significance of relationships and differences between variables, such as the correlation between teachers' utilization of instructional materials and student performance. The grading scale was applied to interpret performance levels, ranging from Beginning (<75) to Advance (90-100).

RESULTS & DISCUSSION

Socio-Demographic Profile of the respondents

Below is the result of the socio-demographic profile of the respondents in terms of age, sex, status, educational qualification, number of years in teaching, Beed course currently teaching and the position.

In terms of age, it was found that 3 or 12% ages below 30 years old, 3 or 12% ages 30 years old and above. In terms of sex, it was found that there are 3 or 12% male and 3 or 12% are female respondents. In terms of status, it was found that 4 or 16% are single and 2 or 8% are married. In terms of number of years in teaching, it was found that 1 or 4% is teaching 36 years and above, 1 or 4% is teaching 5-10 years, 4 or 16% are teaching 4 years and below. In terms of Beed course level currently teaching, it was found that 3 or 12% are teaching first year, 2 or 8% are teaching 2nd year, 1 or 4% is teaching 3rd year. In terms of position 2 or 8% are part-time, 3 or 12% are instructor, 1 or 4% is associate.

Level of teacher's utilization of audio-visual instructional materials when grouped by profile.

Table 2 shows the findings indicating that teachers' utilization of audio-visual instructional materials varies across different profiles, with notable implications for instructional practices and professional development.

Teachers aged 30 and above report higher levels of both positive teaching methodologies and audiovisual utilization compared to younger teachers. This trend suggests that more experienced or older educators may feel more confident and comfortable integrating multimedia resources into their teaching. Both male and female teachers reported similar levels of utilization, indicating that gender does not significantly influence the adoption of instructional technology. The comparable means suggest that gender is not a primary factor affecting audiovisual resource use in this context. On the other hand, Married teachers tend to report higher engagement with audio-visual materials than their single counterparts. This could imply that maturity, stability, or increased professional development over time enhances their capacity to utilize such resources effectively.

Results also reveals that teachers with master's degrees show higher utilization levels than those with only bachelor's degrees. Interestingly, teachers with 5-10 years of experience report the highest levels of utilization, possibly indicating a period of professional growth where teachers are both confident and receptive to incorporating multimedia. This emphasizes the importance of continuous professional development to sustain technological integration across all experience levels.

Furthermore, teachers instructing second-year courses and part-time teachers show higher utilization levels, potentially reflecting curriculum demands or greater exposure to newer teaching modalities. In particular, part-time teachers' higher engagement could be driven by their need to demonstrate innovation or adapt quickly to diverse teaching environments.

These variations suggest that professional development initiatives should be tailored considering teachers' profiles. For example, targeted training could help less experienced or older teachers increase their comfort and proficiency with audiovisual tools. Additionally, institutional policies should foster a culture of continuous learning to bridge gaps across different demographic groups. Supporting teachers' confidence and providing accessible resources can promote more consistent utilization of audio-visual materials, ultimately enhancing student engagement and learning outcomes.

These recent study of Kim, et.al., (2024) support the idea that while individual characteristics (such as age, experience, or qualification) play a role, the broader contextual factors—like institutional support, access to resources, and ongoing professional development—are crucial in mediating and enhancing the effective use of audio-visual instructional materials.

Table 2. Level of teacher's utilization of audio-visual instructional materials when grouped by profile.

PROFILE OF THE RESPONDENTS	Teachers TALM		Teachers UOIM	
	Mean	SD	Mean	SD
Age				
Below 30	4.100	.173	4.033	.153
30 and above	4.500	.500	4.233	.603
Sex				
Male	4.300	.173	4.066	.208
Female	4.300	.608	4.200	.600
Status				
Single	4.225	.206	3.950	.288
Married	4.450	.778	4.500	.424
Educational qualification				
Masters' degree	4.500	.500	4.233	.603
Bachelors' degree	4.100	.173	4.033	.153
No. of Years in Teaching				
36 years and above	4.000	.000	3.600	.000
5-10 years	5.000	.000	4.800	.000
4 years and below	4.200	.245	4.100	.182
BCLCT				
1 st year	4.233	.252	3.967	.351
2 nd year	4.450	.778	4.500	.424
3 rd year	4.200	.000	3.900	.000
Position				
Part-time	4.600	.566	4.350	.636
Instructor	4.200	.300	4.166	.153
Associate	4.000	.000	3.600	.000

Level of student mid-term academic performance

The results presented in Table 3 indicate that the mid-term academic performance of BEED students at Central Philippines State University-Hinigaran Campus during the academic year 2023-2024 is categorized as proficient, with a mean score of 88.3. This suggests that students are achieving very satisfactory performance levels overall, reflecting a solid grasp of the coursework and mastery of the learning objectives at this point in the semester.

This finding aligns with the notion that mid-term academic performance serves as a critical indicator of students' understanding and engagement with their coursework. A proficient level, as indicated by the mean score, implies that students are effectively absorbing and applying the material, which is essential for their overall academic success. Such performance levels are often associated with positive educational outcomes and can be predictive of future academic achievements and readiness for more advanced learning (Kuncel et al., 2015).

Table 3. Level of student mid-term academic performance

INDICATORS	SD	MEAN	INTERPRETATION
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Students' performance	Mid-term	2.209	88.300	Proficient
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Relationship between students utilization of instructional materials when group

The table indicates that there is no significant relationship between students' utilization of instructional materials and the teachers' use of teaching methodologies, as well as the utilization of audio-visual instructional materials. Specifically, the Spearman Rho correlation coefficients for teaching and learning methodologies ($r = 1.000$) with a p-value of 0.308, and for audio-visual instructional materials ($r = 0.552$) with a p-value of 0.276, both suggest that these variables do not significantly influence students' utilization of instructional materials. Consequently, the null hypothesis, which states that there is no relationship between these variables, cannot be rejected.

The findings imply that while teachers' utilization of audio-visual instructional materials may be important, it does not directly translate into increased student utilization in a statistically significant way within this context. Interestingly, the data shows that the use of audio-visual materials by teachers has a more notable, though still non-significant, correlation compared to teaching methodologies, indicating potential areas for further exploration.

Supporting literature (Suguladze et al., 2015) emphasizes that audio-visual input engages both visual and auditory perceptions, making learning more multi-modal and potentially more effective. Audio-visual materials often enhance the retention and durability of information (Chao et al., 2015), as they stimulate multiple senses simultaneously—images, sounds, subtitles, and actions—leading to richer cognitive processing. This multi-modal approach can significantly improve comprehension, especially in listening tasks, where students process and interpret complex auditory and visual stimuli. Listening comprehension, in particular, involves intricate brain functions that are influenced by external factors, including the mode of input presentation.

In this context, although the statistical analysis indicates no significant relationship, the theoretical and empirical evidence suggests that the integration of audio-visual instructional materials could still play a vital role in enhancing student engagement and understanding. External factors such as the quality, relevance, and delivery of these materials may influence their effectiveness, and thus, future research might explore these dimensions more deeply.

Table 4. Relationship between students' utilization of instructional materials when group.

INDICATORS	Spearman Rho Correlation Coefficient	p-value	INTERPRETATION	DECISION
Teaching and learning methodologies	1.000	0.308	Not significant	Reject HO
audio-visual instructional materials	0.552	0.276	Not significant	Reject HO

Relationship between teachers' utilization of audio-visual instructional materials.

Table 5 shows the utilization of instructional materials that teaching and learning methodologies (Spearman Rho Correlation Coefficient 1.000 and p-value of 0.538) and utilizing of audio-visual instructional materials (Spearman Rho Correlation Coefficient 0.638 and p-value of 0.042) was found to have significant relationship with student utilization of instructional materials which meant that it failed to reject the null hypothesis.

It implies that utilizing of audio-visual instructional materials of teachers has a significant relationship between teachers' utilization of instructional materials, and teaching and learning methodologies of teachers has no significant relationship of utilization of instructional materials.

In support according to Raw (2015) It provides guidance to teachers about the matters regarding teaching learning process completely. Raw (2015) also said that Audio-visual aids are the teaching aids use for the teaching learning process. It assists in the teaching-learning processes. It can be used to encourage teaching and learning activities. It can also help to reduce the rate of forgetting example of this, include maps, graph, diagrams among others. Computer is also used as an instructional material, and it serves as tool for learning.

Table 5. Relationship between teachers' utilization of audio-visual instructional materials.

INDICATORS	Spearman Rho Correlation Coefficient	p-value	INTERPRETATION	DECISION
Teaching and learning methodologies	1.000	0.538	Not significant	Reject HO
Utilizing audio-visual instructional materials	0.638	0.042	Significant	Failed to Reject HO

CONCLUSION

Based on the findings of this study, it is evident that teachers play a vital role in enhancing student performance through the effective and strategic use of audio-visual instructional materials, which foster a more engaging and dynamic learning environment. Students have shown proficiency in utilizing these resources, reflecting a positive growth in digital literacy and active learning. Additionally, a significant relationship exists between teachers' use of audio-visual tools and students' ability to benefit from them, highlighting the importance of deliberate integration of these materials to improve educational outcomes. Therefore, ongoing professional development for teachers in the effective use of audio-visual instructional materials is essential to maximize their impact on student motivation, knowledge acquisition, and overall academic performance.

RECOMMENDATIONS

Based on the results and conclusions of this study, the following recommendations are proposed:

1. School administrators should prioritize ongoing professional development by organizing seminars, training sessions, and workshops for faculty members at Central Philippines State University-Hinigaran Campus to enhance their skills in effectively utilizing audio-visual instructional materials, recognizing their significant impact on teaching and learning. Teachers are encouraged to actively improve their use of instructional materials, particularly audio-visual tools, to create more engaging and effective classroom experiences.
2. Students, especially BEED students, are advised to identify, study, and utilize relevant audio-visual resources to support their academic performance and become more resourceful in their learning approaches, preparing them for future teaching roles.

3. For future researchers, it is recommended to explore strategies for further enhancing the mid-term performance of first-year BEED students, contributing to the body of knowledge on effective instructional practices. Collectively, these recommendations aim to foster a collaborative effort among school administrators, teachers, and students to optimize the use of audio-visual instructional materials, thereby making discussions more engaging and learning processes more efficient and effective.

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