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LEARNERS' PERCEPTION TOWARDS AUDIO–VISUAL (AV) RESOURCES USED IN LECTURE CLASSES

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ABSTRACT

In the contemporary world, visual elements play a pivotal role due to the prevalence of virtual opportunities and information technology. Consequently, television and videos have not only become sources of entertainment but also tools that are actively harnessed across various domains of human activity, including education. The utilization of audio-visual aids has emerged as the most effective approach for enhancing teaching outcomes and facilitating the optimal dissemination of knowledge. Therefore, it is undeniable that technological devices wield a substantial influence, contributing to a dynamic and impactful information system. This research endeavour aimed to assess the efficacy of audio-visual aids in the educational process at the university level. To achieve this objective, a questionnaire was devised as the primary research instrument for gathering insights from students. The study was conducted within the context of lecture classes in the Moradabad district, UP. A total of one hundred two (102) students took part in the investigation, with male students comprising 47.05% and female students comprising 52.95% of the participant group. The study's findings strongly indicate that the incorporation of audio-visuals as a pedagogical approach stimulates cognitive engagement and enhances the learning environment within a classroom setting.

Keywords: Audio-Visual Aids, Over-Head Projector, Power Point

1. INTRODUCTION

Teaching constitutes a multifaceted endeavour with the goal of positively influencing students' behaviour. This objective is attainable through an approach that emphasizes simplicity, effectiveness, engagement, and achieving desired outcomes. Diverse teaching methodologies and strategies are available to enhance the instructive process, ensuring compelling and successful learning results. According to Rao's observations in 2006, the landscape of education has evolved into a complex sphere due to the infiltration of science and technology. This transformation has rendered classrooms akin to laboratories, integrating various

hardware and software tools to facilitate education. Notably, audio-visual aids (AV aids) play a pivotal role in this context, fostering a learning-conducive environment. The incorporation of AV aids fosters ingenuity and originality in teaching practices. By methodically employing a range of instructional aids, the presentation of subject matter can become captivating, lucid, and potent.

The use of audio-visual aids serves to stimulate students' curiosity and supports educators in conveying concepts with simplicity and efficacy. While it remains true that technology cannot substitute the human intellect, it can certainly contribute to its enrichment. The onus lies on teachers to judiciously employ AV aids that align with the subject matter, lesson, and the students' needs, as improper selection and application of teaching aids would result in fruitless expenditure of energy and time. **Mathew (2013)** stated that ***it is the responsibility of the teacher to use audio-visual aids to make the teaching-learning process effective.***

AV aids play an essential role within the educational framework. These tools are employed during lectures to stimulate students' learning experiences, rendering the process more engaging and accessible. These devices contribute to rendering instruction captivating, efficient, and conducive to knowledge sharing.

Research conducted by Cuban (2001) has demonstrated that learning occurs in various ways: 1% through taste, 1.5% through touch, 3.5% through smell, 11% through hearing, and a significant 83% through sight. Additionally, individuals tend to retain information differently: 10% from reading, 20% from hearing, 30% from visual stimuli, 50% from a combination of hearing and seeing, 70% from verbalizing, and an impressive 90% from engaging in hands-on activities while speaking. This underscores the evident influence and potent informational impact of technological devices within the educational landscape.

In recent times, there has been a growing trend in educational environments towards incorporating audio-visual (AV) elements into lecture-based teaching. These resources encompass a range of multimedia materials such as presentations, videos, animations, and interactive aids that complement the conventional lecture approach. The incorporation of AV resources is intended to enrich the learning journey by offering both visual and auditory stimuli, promoting active participation, and accommodating various learning preferences. This piece delves into the perspective of learners regarding the integration of AV materials in lectures, analyzing the advantages, obstacles, and consequences for both students and instructors.

2. BENEFITS OF AV RESOURCES IN LECTURE CLASSES

1) **Enhanced Understanding:** AV resources help to illustrate complex concepts, making abstract ideas more tangible and understandable to learners. Visual aids facilitate the visualization of information, enhancing students' understanding of the subject matter.
2) **Increased Engagement:** The use of AV resources can captivate students' attention and maintain their interest throughout the lecture. The dynamic and interactive nature of these resources encourages active participation, leading to higher levels of engagement in the learning process.
3) **Catering to Diverse Learning Styles:** Every student has a unique learning style, and AV resources offer various modalities for information processing. While some learners may grasp concepts better through visual cues, others may benefit from auditory or kinaesthetic inputs provided by AV materials.

4) **Memory Retention:** Visual representations and auditory reinforcement can aid in memory retention. When learners associate information with images and sounds, they are more likely to recall the content during assessments and beyond.
5) **Improved Information Retention:** Visual representations and auditory reinforcement can aid in memory retention. When learners associate information with images and sounds, they are more likely to recall the content during assessments and beyond.

3. CHALLENGES AND LIMITATIONS OF AV RESOURCES IN LECTURE CLASSES

1) **Technical Issues:** Technical glitches and malfunctions of AV equipment can disrupt the flow of the lecture and cause frustration among learners and educators.
2) **Distraction:** Poorly integrated AV resources or excessive use of multimedia can lead to distraction and decrease focus on the core content of the lecture.
3) **Over-reliance on AV Materials:** An over-reliance on AV resources may result in passive learning, where learners become dependent on visual aids rather than actively engaging with the material.
4) **Accessibility Concerns:** Not all students may have equal access to AV resources, especially in economically disadvantaged areas or regions with limited technological infrastructure.
5) **Creation and Selection of Quality Content:** Educators need to invest time and effort into creating or selecting relevant and high-quality AV materials that align with the curriculum and learning objectives.

4. OBJECTIVE

The research was structured to identify the favored audio-visual tools for teaching among the students. Consequently, the current investigation was initiated to assess how students perceive the utilization of AV aids during lecture classes.

5. LIMITATION OF THE RESEARCH

Because of limited resources, the researcher had to narrow down their research focus to the Moradabad district in Uttar Pradesh.

6. MATERIALS AND METHOD

A cross-sectional investigation was carried out in Moradabad district, Uttar Pradesh, involving 102 students, encompassing individuals of both male and female genders. The study employed a pre-structured, pre-tested, and pre-coded questionnaire. The questionnaire encompassed a socio-demographic profile section and was designed to gauge perspectives on the usage of audio-visual aids during lectures within the institution.

The audio-visual aids considered were smart boards, CT (chalk and talk), slide presentations, overhead projectors, and a mixture of aids. The questionnaire was developed based on a thorough review of literature and similar research conducted in other locations. Students were encouraged to provide impartial and independent

responses as they completed the questionnaires. Participants were instructed to choose suitable teaching aids for each questionnaire item and to express their overall preference for the most effective teaching aid. No personally identifiable data was acquired. The information was manually collected and confirmed, then processed using Statistical Package for Social Sciences (SPSS), version 20.

7. RESULTS

Table 1

Table 1 Socio-Demographic Profile of the Study Population (n = 102)

S.N.	Particular characteristics		No (=102)	Percentage (%)
1	Gender	Male	48	47.05
		Female	54	52.95
2	Type of school	Gov.	44	43.14
		Self- finance	58	56.86
3	Locality	Rural	52	50.98
		Urban	50	49.01
4	Stream	Science	49	48.03
		Humanities	53	51.96
5	Medium of education	Hindi	56	54.90
		English	46	45.09

8. DISCUSSION

A total number of 102 undergraduate learners were selected as sample for the current study. The above table shows the distribution of the demographic which were gender, type of college, locality, stream and medium of Education including their respective total percentage in the study. The above table shows that distribution of the demographic variables gender which consists of 48 male students and 54 female students who participated in filling the questionnaire for the present research study. The Majority of students belongs to gov. 43.14% and students belonging to private university were 56.86%. The above table revealed that 50.98% learners belong from the rural background and on the other hand 49.01 learners belong from the urban 48.03% students from science stream, 51.96% from humanities. The above table shows that 54.90 learners belong from Hindi medium and remaining learners belong from English medium.

Figure 1

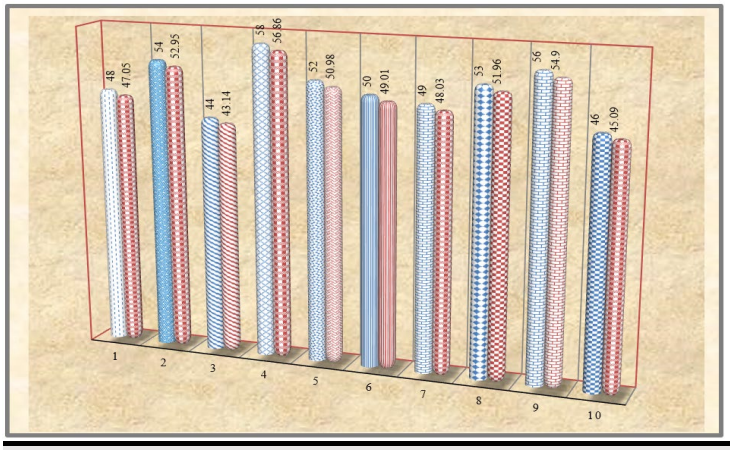

Figure 1 Socio-Demographic Profile

Figure 2

Sr. No.	Statement	CT	S/P	OHP	Smart Board	Mix of Aids
1	AV resources used in lecture	47 (46.07)	33 (32.35)	2 (1.96)	17 (16.66)	3 (2.94)
2	Preference for using AV resources in lectures	9 (8.82)	31 (30.39)	8 (7.84)	13 (12.74)	41 (40.19)
3	The greatest way to comprehend lecture topics is	6 (5.88)	12 (11.76)	16 (15.68)	24 (23.52)	44 (43.13)
4	Large numbers of facts and conceptual clarity can be provided by	8 (7.84)	16 (15.68)	18 (17.64)	21 (20.58)	39 (38.23)
5	AV aids preferred for better perception of diagrams & flow charts	5 (4.90)	28 (27.45)	46 (45.09)	6 (5.88)	17 (16.66)
6	The most effective approach for note-taking was discovered in the teaching method.	5 (4.90)	16 (15.68)	17 (16.66)	24 (23.52)	40 (39.21)
7	It's simpler to replicate flow charts by copying.	7 (6.86)	42 (40.19)	21 (20.58)	24 (23.52)	8 (7.84)
8	If note-taking isn't favored, what method is optimal for effective listening and comprehension?	8 (7.84)	28 (27.45)	12 (11.76)	12 (11.76)	42 (40.19)

CT = Chalk Talk S/P = Slide PPT OHP = Over Head Projector

Figure 2 Lerner's Preference for Teaching Aids to Various Parameters (n = 102)

Figure 3

Sr. No.	Statement	Overall preference					
1	Preference in taking notes during lecture classes.	Total (n= 102)		Male (n=48)		Female(n=54)	
		Yes	No	Yes	No	Yes	No
		89 (87.25)	13 (12.74)	22 (21.56)	7 (6.86)	67 (65.68)	6 (5.88)

Figure 3 Overall Preference in Taking Notes During Lecture Classes (n = 102)

9. DISCUSSION

The current study revealed that the majority of the learners favored taking notes during the lecture. The table above shows that 89.25 learners preferred taking notes during the lecture, while 12.74 learners were not in favor of it.

Figure 4

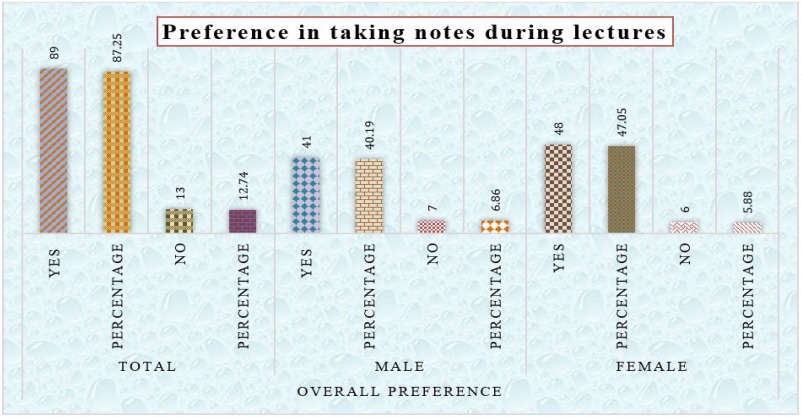

Figure 4 Preference in Taking Notes During Lectures

Table 2

Table 2 Overall Preference (n = 102)

S.N.	Statements	Overall preference		
		Total (n= 102)	Male (n=48)	Female (n=54)
1	Only listening to lecture	0	0	0
2	Listening lecture with visual aids	14 (13.72)	9 (8.82)	5 (4.90)
3	Listening & taking notes	11 (10.78)	4 (3.92)	7 (6.86)
4	Listening with visual aids & taking notes	77 (75.49)	33 (32.35)	44 (43.13)
5	**Total**		**102**	

A notable drawback of traditional lectures is that the audience tends to absorb the content passively, leading to feelings of disinterest and drowsiness. Teaching is a skill, and by employing effective instructional tools, educators can facilitate comprehension, retention, and effective recall among students, ultimately enhancing their academic achievements.

Figure 5

PARAMETERS	Preferred A-V aid in present study		Comparison of A-V aid of present study with various authors' observations with percentage (%)			
	Audio-Visual aid	Number / Percentage	Kumar A et al.13 (%)	Hemalatha NR et al.7 (%)	Mohan L et al.11 (%)	Giri PA et al. 12(%)
AV resources used in lecture	White board	47 (46.07)	-	-	-	74.4
Preference for using AV resources in lectures	Mix of aids	79 (77.45)	58.8	-	54.9	48.8
The greatest way to comprehend lecture topics is	Mix of aids	44 (43.13)	41.1	11.5	42.4	51.2
Large numbers of facts and conceptual clarity can be provided by	Mix of aids	39 (38.23)	-	-	-	-
AV aids preferred for better perception of diagrams & flow charts	Mix of aids	46 (45.09)	63.5	14.9	50.9	0.8
Optimal media for enhancing diagram comprehension	PPT	41 (40.19)	23.5	14.9	15.6	65.6
The most effective approach for note-taking has been discovered through teaching methods.	Mix of aids	49 (48.03)	32.9	0	20.5	24
If you don't have a preference for note-taking, what is the most effective method for listening and comprehending?	Mix of aids	43 (42.15)	27		6.3	25

Figure 5 Contrast Between the Audio-Visual Aid(s) Favoured by Students in the Current Study and the Observations Made by Different Authors.

The viewpoint of learners regarding diverse active teaching methods indicated that the utilization of audio-visual materials is the most favored approach. Research conducted by Garg A et al. found that students express a desire for teachers to incorporate audio-visual aids into their lectures. However, it remains uncertain whether this inclusion actually improves their comprehension or enhances their performance in examinations.

The present study demonstrates that a significant proportion of learners prefer a combination of aids. A notable 77.45% of students indicated a preference for

incorporating a blend of audio-visual resources during lectures. This aligns with the findings of previous studies conducted by Kumar et al. (2013) and Mohan et al. (2010) and Garg A et al.[3], who similarly reported results of 58.8%, 54.9% and 48.8% respectively, to the present study. Learners predominantly perceive audio-visual aids as pivotal for effective lecture delivery and suggest adapting these aids based on subject matter and topic.

Prior research implies that the most comprehensive understanding of subjects is achieved through a fusion of AV aids. This parallels the findings in the current study, which highlight the benefits of utilizing a mix of aids. [6.7]

At times, learners favored Chalk Talk (CT) due to its potential to foster interaction between educators and students. In the current research, a significant number of students expressed the view that emphasizing essential points could be achieved through the use of a CT (Chalk-Talk) whiteboard. This finding aligns with the outcomes of Hemalatha's study[3].

A significant majority (87.25%) of respondents expressed a preference for auditory input accompanied by visual aids, along with note-taking to encourage subsequent reading.

Nonetheless, both male and female learners predominantly favored a combination of aids for note-taking during classes.

Mohan L et al.[6] noted that students favored PowerPoint as the most effective approach for improving diagram understanding. In the current investigation, the chosen medium for enhancing diagram perception was overhead projection 46 (45.09%). The CT (Chalk / Talk) was discovered to be the least favored medium, with only 5 (4.90) of respondents expressing a preference for it.

In research carried out by Hemalatha NR et al [5], Mohan L et al[6], Giri PA et al[3], and Kumar A et al[7], it was consistently observed that students showed a clear preference for using audio-visual aids, particularly PowerPoint presentations (PPT), which had the highest percentage. Similarly, in the present study, students had a stronger perception of flow charts and found them easier to reproduce when using Mix aids (45.09%).

The majority of students (75.49%) opt for a combination of listening to lectures with the assistance of visual aids and taking notes, which serves as a catalyst for encouraging additional reading. Variations were observed in the attitudes toward comprehending and grasping a specific subject. Female students exhibited a preference for Listening with visual aids and the practice of note-taking during lectures.

A majority of students (48.03%) favored a combination of aids for enhancing their listening and comprehension skills, even if they were not inclined to take traditional class notes. The majority of both male and female respondents showed a preference for using a combination of aids when taking notes in their classes.

In the current investigation, it was observed that a higher percentage of female students (65.68%) exhibited a preference for taking notes during lecture classes, whereas this preference was slightly lower among male students (21.56%) It was notable that a majority of both male and female respondents preferred using a combination of aids when taking notes in their classes.

The full advantage of visual aids is realized when they are integrated into a well-organized lecture. Both visually and verbally delivered lecture content has demonstrated that visual information surpasses verbal information in terms of both immediate and lasting retention. Achieving the utmost advantage from audio-visual aids requires their optimal utilization.

10. CONCLUSION

The perspective of students regarding the integration of audio-visual materials within lecture sessions holds crucial importance in shaping contemporary education. While the advantages of utilizing these resources are apparent in terms of improved comprehension, engagement, and accommodating various learning preferences, there are also challenges associated with technical issues, accessibility, and maintaining an interactive learning environment. By effectively addressing these challenges and harnessing the benefits of audio-visual tools thoughtfully, educators can establish an enriched learning atmosphere that optimizes student understanding and memory retention. As technology continues to evolve, students' viewpoints on audio-visual resources are likely to play an increasingly pivotal role in influencing effective and innovative teaching methodologies. The current study revealed that lectures delivered using a combination of audio-visual aids were better received by students. These findings provide valuable insights into students' perceptions, aiding in the identification of their expectations and needs.

11. RECOMMENDATIONS

- Based on the findings of this study, the following recommendations are put forth:
- Teachers should consider the students' opinions when it comes to understanding the use of visual aids.
- Institutions, colleges, universities, and administrative bodies should engage in discussions about the utilization of audio-visual aids to enhance the learning environment.
- Organizing workshops, refresher courses, and seminars for educators could be beneficial in honing their proficiency in employing audio-visual aids effectively.
- Institutions and government bodies should arrange Information and Communication Technology (ICT) training sessions for teachers, enabling them to enhance their teaching abilities.
- Teachers in this field should establish a regular gathering where they can come together to evaluate the success of their teaching methods, particularly those involving instructional and educational technology. This assessment should focus on how well these methods align with the organization of the curriculum in high schools, colleges, and universities.
- The Ministry of Education ought to request support from non-governmental organizations, private businesses, individuals, and industries to help enhance and replace outdated educational materials and instructional resources such as audio-visual materials and software packages.
- The authorities responsible for managing educational institutions, such as schools, colleges, and universities, should seek input from students on the use of visual aids to improve the learning experience.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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