



Availability and Utilization Of Geography Learning Media in Public Senior High Schools in Bandar Lampung City

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ABSTRACT

The availability of learning media is crucial for supporting the learning process, as mandated by the Indonesian Government Regulation No. 19 of 2005 concerning National Education Standards. This study aimed to determine if there were differences in perception between teachers and students regarding the availability and utilization of geography learning media in Public Senior High Schools (*SMA Negeri*) in Bandar Lampung City during the 2022/2023 academic year. This was a descriptive research study employing a quantitative approach. The population comprised all teachers and students of *SMA Negeri* in Bandar Lampung City. The sample, totaling 44 teachers and 51 students, was determined using a purposive sampling technique. Data collection methods included questionnaires, observation, and documentation. The data analysis utilized the Chi-Square Test. The results indicated that significant differences were found between teacher and student perceptions regarding the availability and utilization of 7 out of 9 media: maps, atlases, globes, pictures, graphs/charts, slides, and films/videos. Conversely, no significant difference was found for the remaining 2 media: realia and handouts. These findings highlight crucial perception gaps that should be addressed to optimize the pedagogical environment for Geography education.

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INTRODUCTION

The rapidly evolving landscape of the 21st-century education system necessitates a paradigm shift from traditional, teacher-centric instruction to a dynamic, student-centered learning environment. The success of this transition hinges fundamentally on the effective integration of technology and pedagogical resources, collectively known as learning media (Heinich et al., 2002). Educational institutions are obligated not only to deliver curricula but also to ensure that the learning process is engaging, stimulating curiosity, and accommodating diverse learning styles, a principle deeply embedded in modern educational philosophies (Dewey, 1938). In Indonesia, this mandate is codified in the Law on National Education System No. 20 of 2003, Article 40, Paragraph 2, which emphasizes the need for creative, dynamic, and dialogue-based learning atmospheres.

The subject of Geography is unique in its inherent dependence on visual and spatial thinking. As a discipline that explores the earth's surface, its phenomena, and the complex interactions between humans and the environment, abstract concepts such as plate tectonics, climate patterns, and population distribution cannot be fully grasped through purely verbal exposition. Learning media in Geography—including maps,

globes, atlases, satellite imagery, and realia—serve as essential bridges between abstract theory and concrete reality (Krippendorf, 2008). These tools are instrumental in developing students' spatial literacy, critical thinking, and their ability to analyze complex interconnected systems (Bednarz, 2004). The failure to utilize appropriate media often leads to a reliance on rote memorization and oral instruction, resulting in passive student participation and a diminished depth of understanding (Haryono, 2017).

The importance of these resources is not merely pedagogical but is also a matter of institutional compliance. The Indonesian Government, through Regulation No. 19 of 2005 concerning National Education Standards, explicitly requires every educational unit to possess adequate facilities, including educational media, to support a continuous and structured learning process. This regulatory framework establishes the availability of media as a non-negotiable prerequisite for quality education. Following the provision of these resources, the responsibility then falls upon educators to master the utilization of the media, adapting their instructional techniques to maximize student engagement and learning outcomes (Anderson & Krathwohl, 2001). Therefore, the dual challenge facing secondary schools lies in ensuring that resources are sufficiently available and that they are subsequently utilized effectively and variedly by teachers.

Despite the clear mandates and established pedagogical necessity, preliminary observations conducted at Public Senior High Schools (*SMA Negeri*) in Bandar Lampung City revealed a significant practical gap. The learning process in many classrooms was found to be predominantly dominated by oral methods (lectures and recitations), with students often limited to recording brief summaries (Nadia Cahyarani Hargianto, 2023, p. 399). This method tends to make the classroom atmosphere less enjoyable and fails to tap into the full cognitive potential of the students (Sudjana & Rivai, 2013). The few media that are consistently employed are limited to basic *slides*, textbooks, and general pictures, indicating a lack of variation essential for a subject like Geography (Hargianto, 2023, p. 413).

Crucially, the problem appears to stem from both supply and practice. Initial findings suggested that the availability of a complete set of varied Geography learning media was perceived as incomplete or lacking in optimal condition, consequently restricting the potential for maximum utilization (Hargianto, 2023, p. 400). This points toward a potential structural issue in resource management and allocation within the schools. This practical dilemma sets the stage for a critical academic investigation: the potential divergence in viewpoints between the primary stakeholders—the teachers who utilize the media and the students who are the direct beneficiaries—regarding the actual state of these resources. Perceptual differences between teachers and students often highlight fundamental misalignments in the classroom environment. A teacher might perceive a certain medium as adequately utilized because it was displayed once, while students might perceive it as underutilized due to the lack of interactive engagement or poor visibility (Vygotsky, 1978). Understanding this perception gap is vital, as research has shown that when resource provision is perceived differently by educators and learners, it can negatively impact motivation, engagement, and ultimately, academic achievement (Schunk, 2012).

This study rigorously focuses on nine specific types of Geography learning media, encompassing both traditional and visual aids: maps, atlases, globes, pictures, realia, handouts, graphs/charts, slides, and films/videos. By examining both the availability (covering aspects such as type, quantity, and condition of the media) and the utilization (including variety of use, factors driving media choice, and student response) for each medium, the research aims to provide a granular and detailed assessment.

The findings are theoretically significant as they contribute empirical data to the field of Geography education, particularly concerning the practical implementation of national education standards in the realm of instructional technology. Practically, this research provides tangible information for key stakeholders: Teachers can gain awareness regarding the student perspective on resource use; School Administrators can use the findings as a basis for evaluating resource provision, maintenance, and allocation; and the Local Education Authorities can utilize the data to inform policy on educational media procurement and professional development programs for Geography teachers. The critical research question remains: Is there congruence or conflict between the perceptions of the educators and the learners regarding the resources intended to facilitate their interaction with the subject matter? A statistical comparison of these perceptions is necessary to pinpoint precisely where resource shortcomings or pedagogical limitations exist within the Public Senior High Schools of Bandar Lampung City.

Based on the issues identified concerning regulatory mandates, pedagogical necessity, and the observed empirical gap between media provision and utilization, the objective of this research is to determine whether there is a significant difference between the perceptions of teachers and students regarding the availability and utilization of Geography learning media in Public Senior High Schools in Bandar Lampung City during the 2022/2023 Academic Year.

METHOD

This study employed a descriptive quantitative research design. The descriptive method was chosen to obtain an accurate and factual picture of the existing conditions related to the availability and utilization of Geography learning media in senior high schools. The quantitative approach was used because it enables data to be collected systematically using standardized instruments and analyzed statistically to test hypotheses and describe relationships between variables.

The research was conducted at all public senior high schools (SMA Negeri) in Bandar Lampung City during the 2023 academic year. The population consisted of 17 public senior high schools, including all Geography teachers and students. The sampling technique used was saturated sampling for the schools, meaning that all schools in the population were included, while purposive sampling was applied to select teacher and student respondents based on their relevance to the research topic. The total sample involved 44 Geography teachers and 51 students, resulting in 95 respondents. The study focused on two main variables, namely the availability and utilization of Geography learning media. Each variable was defined operationally as follows:

Table 1.
Research Variable

Variable	Indicator	Description
Availability	Type	Variety of Geography learning media available at schools, such as maps, atlases, globes, pictures, realia, handouts, graphs/charts, slides, and videos.
	Quantity	Number of each type of media available at the school.
	Condition	Usability or state of the existing media, categorized as “Good” or “Not Good.”
Utilization	Media Variation	Frequency and diversity of media used in teaching, including teachers’ initiative in producing or combining different media.
	Driving Factors	Reasons behind media selection, such as lesson planning, relevance to material, teacher competence, and ease of use.
	Student Response	Students’ perception of media effectiveness, interest, motivation, and ease of understanding.

Data were collected using three techniques: questionnaire, observation, and documentation. The questionnaire was designed using a Likert scale ranging from 1 (Never) to 4 (Always) to assess teachers’ and students’ responses regarding the utilization of media. Observation was conducted to record the real conditions of Geography learning media, including type, quantity, and condition. Documentation was used to support the observation results by collecting records or evidence of existing media in schools.

Before data collection, the research instrument was tested for validity and reliability. The validity test was conducted using the Pearson Product Moment correlation in SPSS 25.0, and all 15 items were found to be valid. The reliability test using Cronbach’s Alpha showed coefficients greater than 0.6, indicating that the instrument was reliable.

Data analysis was performed through two main stages. First, the variable tendency analysis was used to categorize the levels of availability and utilization of Geography learning media into three levels—high, medium, and low—based on the mean and standard deviation ideal scores. Second, a Chi-Square test was used to determine whether there was a significant difference in perceptions between teachers and students regarding the availability and utilization of learning media. The decision criterion was that the null hypothesis (H_0) would be rejected if the significance value (2-tailed) was less than 0.05. All statistical analyses were carried out using SPSS version 25.0.

RESULTS AND DISCUSSION

Instrument Validity and Reliability (Uji Validitas dan Reliabilitas Instrumen)

Before conducting the main data collection, the research instrument in the form of a questionnaire on the utilization of Geography learning media was tested for validity and reliability using responses from 30 participants outside the main sample. The validity test employed the Pearson Product Moment correlation with a significance level of 0.05 and a critical r value (r table) of 0.361 for $N = 30$. The results indicated that the calculated r values (r count) for all 15 items across the three indicators—media variation, driving factors, and student response—were higher than the critical r table value. This finding confirmed that all questionnaire items were valid and appropriate for further data collection.

The reliability test was conducted using Cronbach's Alpha (α) to measure internal consistency. The results showed that all indicators exceeded the reliability threshold value of 0.6, with $\alpha = 0.915$ for media variation, $\alpha = 0.893$ for driving factors, and $\alpha = 0.900$ for student response. These coefficients demonstrate that the instrument possessed a high level of reliability, meaning that it consistently measured the intended constructs across all respondents. Based on these findings, the questionnaire was declared both valid and reliable for use in the main research phase.

Descriptive Results on Media Availability and Utilization

The descriptive results reveal varying levels of availability and utilization of nine types of geography learning media across public senior high schools (SMA Negeri) in Bandar Lampung City. In general, the findings indicate that the quantity of most media types was low, whereas their physical condition was predominantly good.

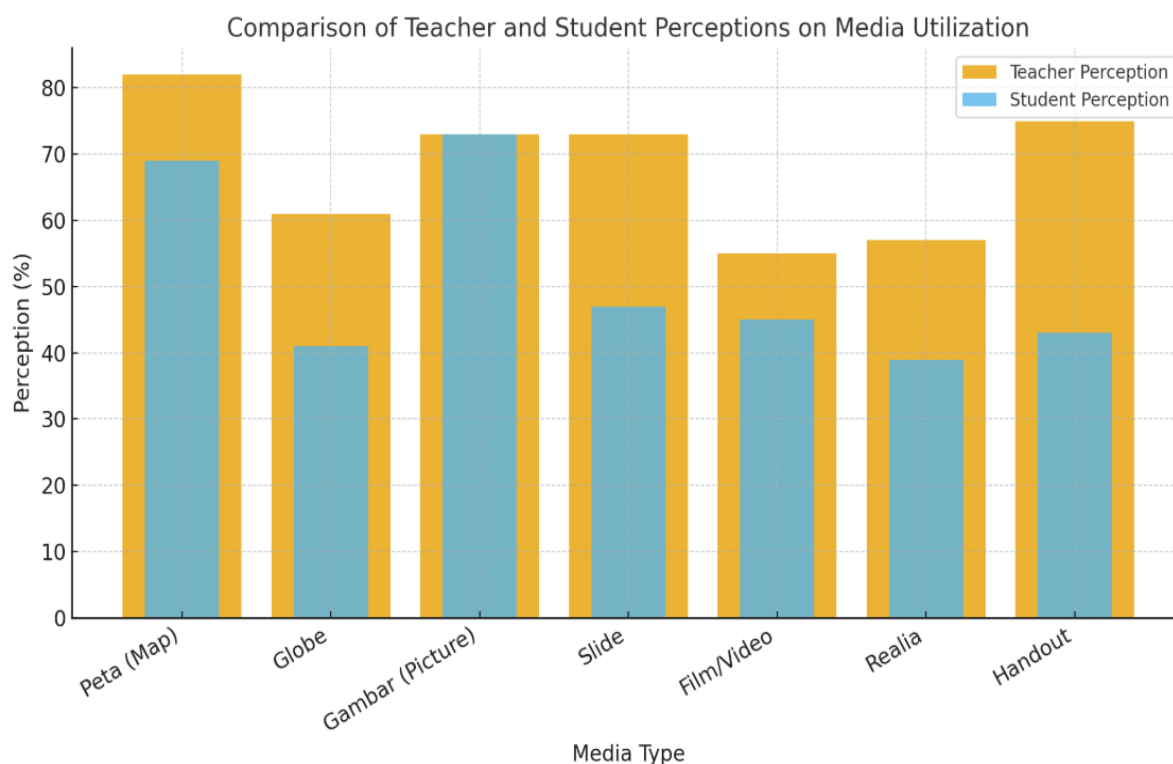


Figure 1.
Teacher and Student Perceptions on Media Utilization

For instance, maps were reported to be available in low quantities by both teachers (95 percent) and students (59 percent), yet their condition was rated high by almost all respondents (teachers 100 percent, students 96 percent). Similar trends were observed for atlases with low quantity (teachers 68 percent, students 59 percent) and for globes with low quantity (teachers 64 percent, students 80 percent). Both media types were reported to be in good condition. Meanwhile, film or video media showed the lowest levels of availability (teachers 91 percent, students 92 percent), although their condition was still considered adequate.

Regarding media utilization, teacher and student perceptions often differed, with teachers generally rating utilization higher than students. For example, map media were perceived as highly utilized by both teachers and students (82 percent and 69 percent, respectively). Globes, however, displayed a disparity because teachers reported high use (61 percent), while students perceived it as low (41 percent). Similar contrasts appeared in slide and video media, where teachers reported high utilization (73 percent and 55 percent), but students rated them lower (47 percent and 45 percent). Conversely, both teachers and students agreed that pictures were among the most frequently used media (73 percent for both groups).

Overall, these findings suggest that while the availability and physical condition of geography learning media are relatively good, the actual utilization, particularly of digital and audiovisual media, remains limited. Teachers appear more optimistic about media use compared to students, indicating a perceptual gap that may stem from differences in classroom experience or engagement levels.

Chi-Square Test Results: Difference in Perception (Hasil Uji Chi-Square: Perbedaan Persepsi)

The Chi-Square test was conducted to determine whether there were significant differences in perceptions between teachers and students regarding the availability and utilization of geography learning media. The hypotheses were stated as follows: **H0**: there is no difference in perception between teachers and students; **Ha**: there is a difference in perception between teachers and students. The significance level used was **alpha = 0.05**. The decision rule was to reject **H0** if the Asymptotic Significance (2-sided) value (*p*) was less than 0.05.

Table 2.
Results of Chi-Square Test on Perception Differences

Media Type	Pearson Chi-Square	Asymp. Sig. (2-sided)	Decision	Conclusion
Map (Peta)	34.345	0.000	$p < 0.05$	Difference exists
Atlas	7.494	0.024	$p < 0.05$	Difference exists
Globe	9.986	0.007	$p < 0.05$	Difference exists
Picture (Gambar)	6.787	0.034	$p < 0.05$	Difference exists
Graph/Chart (Grafik)	10.824	0.004	$p < 0.05$	Difference exists
Slide	7.648	0.022	$p < 0.05$	Difference exists
Film/Video	10.951	0.004	$p < 0.05$	Difference exists
Realia	5.402	0.067	$p > 0.05$	No difference
Handout	3.291	0.193	$p > 0.05$	No difference

The Chi-Square analysis indicates that **seven of nine media types** (maps, atlases, globes, pictures, graphs/charts, slides, and films/videos) show statistically significant differences in perception between teachers and students regarding their availability and utilization ($p < 0.05$). In contrast, **realia and handouts** do not show significant differences ($p > 0.05$), suggesting concordant perceptions between the two groups for these media. These results imply that perceptions diverge more for certain visual and technology-based media, possibly due to differences in access, familiarity, or patterns of classroom use.

Discussion

Based on the results of data analysis of students' understanding in geography learning in classes that do not apply crossword puzzle learning media (control class), it shows that there are 2 students out of a total of 31 students who have achieved the Minimum Completeness Criteria (KKM), and 29 students who have not achieved minimum completeness criteria (KKM) with an average value of 52.17. In other words, the level of students' understanding seen from learning outcomes in geography learning in classes where crossword puzzle learning media is not implemented is still relatively low.

Furthermore, the results of data analysis of students' understanding of geography learning in the classroom where the crossword puzzle (posttest) learning media was applied showed that there were 26 students out of a total of 30 students who had reached the Minimum Completeness Criteria (KKM) and 4 students who did not reach the Completeness Criteria. Minimum (KKM) with an average value of 77.00. In other words, the level of students' understanding seen from the learning outcomes in geography learning in classes where crossword puzzle learning media is applied is relatively high. Because there is an increase in classes that do not apply crossword puzzle media.

The research results also show that the crossword puzzle learning media can influence students' understanding of geography learning. This is supported by research (Dewi et al., 2021) which explains that there are differences in the learning outcomes of class Where in this hydrological cycle material, students are required to be able to translate, interpret and extrapolate according to indicators of understanding. Students are able to translate and retell the hydrological cycle.

Apart from that, the results of inferential statistical analysis based on the results of hypothesis testing using SPSS 22 obtained a significance value from hypothesis testing of 0.000 with a significance rate of 0.05. Because the significance value is smaller than 0.05, it is rejected and accepted. $H_0 H_\alpha$

So it can be concluded that there is an influence of crossword puzzle learning media on students' understanding of class X geography learning at SMA N 1 Matur and students' learning outcomes have improved after being given treatment. This is strengthened by research by Khorunnisa et al (2021) which explains that the experimental class pretest results with an average of 66.38 increased to 80.31 after treatment (posttest). It can be concluded that the application of the Crossword Puzzle learning model can help students improve students' understanding abilities in learning geography.

Discussion

The results of the Chi-Square test revealed significant differences in perception between teachers and students in public senior high schools in Bandar Lampung regarding the availability and utilization of seven out of nine geography learning media, namely maps, atlases, globes, pictures, charts, slides, and films or videos. In contrast, no significant difference was found in perceptions regarding realia and handouts. These findings indicate a substantial perceptual gap between teachers and students, reflecting differences in how the teaching and learning process is experienced and understood by both groups.

The predominant differences observed in the seven media types, particularly visual and technological ones, suggest a communication gap in pedagogical practices. According to Schramm's Communication Theory (1977), media serve as channels that carry messages from the teacher (sender) to the student (receiver). For communication to be effective, messages must be received and interpreted as intended. Teachers may perceive that they have effectively utilized the media simply because they have displayed a map or shown a video in class, while students may evaluate utilization based on the degree of engagement and interactivity they experience. This aligns with Sudjana and Rivai (2013), who emphasized that the effectiveness of instructional media depends not only on their presence but also on how actively they are used to support student learning.

The discrepancy in perception also reflects the gap between the implementation of pedagogical policy and classroom reality. The National Education System Act (Law No. 20 of 2003, Article 40 Paragraph 2) mandates that learning should be creative, interactive, and dialogical. If visual media such as maps and globes are used merely as static displays rather than tools for inquiry and exploration, their pedagogical potential is underutilized. Trianto (2010) argued that visual media enhance retention only when learners interact with them actively, rather than passively observing them. Therefore, differences in perception are likely caused by the extent to which teachers transform these media into interactive learning experiences.

Although the general condition of media availability was reported as "adequate," the data also show that the quantity of certain media, especially costly ones such as globes and video equipment, remains limited. This limitation directly contradicts the Government Regulation No. 19 of 2005, which requires educational institutions to provide adequate infrastructure. Limited availability inevitably restricts frequency of use, leading to divergent perceptions. Teachers may claim to have used the available media effectively, while students perceive monotony and lack of innovation in classroom instruction (Mulyasa, 2009).

Interestingly, both teachers and students shared similar perceptions of realia and handouts. This consistency can be explained by the inherent characteristics of these media. Handouts are simple printed materials that are easy to produce and distribute, resulting in uniform experiences among users. When a teacher provides a handout, students use it directly, leaving little room for interpretive differences (Sadiman,

2011). Meanwhile, realia—actual objects or models used in learning—facilitate concrete experiences. Bruner’s Cognitive Learning Theory (1966) explains that real experiences, classified as enactive representations, produce consistent cognitive impressions for both teachers and students. When realia are used, both parties recognize their tangible learning value, and when absent, the lack is similarly perceived.

These findings are consistent with previous research highlighting the role of media in shaping learning engagement. Dale’s Cone of Experience (1969) emphasizes that learning becomes more effective when experiences are concrete and direct. Media such as realia and films occupy the lower, more concrete levels of the cone. However, the significant perceptual gap in film and video use implies that, despite their potential, these media may not be fully integrated into core learning activities but used merely as supplementary materials. Conversely, static visual media like maps and charts, which are easier to misinterpret in their use, tend to generate greater perceptual differences.

The results also reaffirm the teacher’s role as a key determinant of media effectiveness. As noted by Sardiman (2011) and Hamalik (2011), media are only as effective as the teacher’s ability to integrate them into meaningful instruction. The wide perceptual gap observed in most media indicates that professional competence in instructional design and media integration must be strengthened. Teachers may meet formal teaching requirements yet fail to create meaningful interaction through media-based learning. Constraints such as limited facilities may exacerbate the issue, but the core problem often lies in insufficient pedagogical variation.

In conclusion, the findings suggest that the main issue in geography learning within public senior high schools in Bandar Lampung is not the absence of media, but the difference in perceptions caused by suboptimal utilization and limited quantities of relevant media. The significant differences observed across most essential media indicate that teachers need to enhance the quality of media use by incorporating them actively into inquiry, analysis, and dialogue. At the same time, schools should ensure that available media, such as maps and slides, are presented with sufficient visual quality and interactivity to engage all students.

CONCLUSION

This study investigated perceptual differences between teachers and students regarding the availability and utilization of Geography learning media in public senior high schools (SMA Negeri) in Bandar Lampung City during the 2022/2023 academic year. The Chi-Square test results revealed significant differences in perception for seven out of nine types of instructional media, specifically maps, atlases, globes, pictures, charts, slides, and films or videos. These findings indicate that teachers and students perceive the use and accessibility of these media differently, suggesting a gap between how teachers deploy learning resources and how students experience them in classroom practice. Such differences are likely related to the degree of interactivity, integration, and meaningful engagement created through these media. In contrast, no significant perceptual differences were found for realia and handouts, showing that both teachers and students generally agree on their use and availability. This similarity may result from the straightforward and low-technology nature of these media, which allow for clear and consistent use in the teaching process. Overall, the results suggest that the main issue lies not in the absence of learning media, but in the differences in perceived quality and intensity of their utilization, particularly for visual and digital media that play a crucial role in developing spatial understanding in Geography education.

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