Journal of Educational Sciences
Journal homepage: https://jes.ejournal.unri.ac.id/index.php/JES
P-ISSN 2581-1657
E-ISSN 2581-2203

Correlation Analysis of the Need for Interactive Ethnographic Bumper Videos with Elementary School Students' Home Learning Activities

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ARTICLE INFO

Article history:

Received: 07 Feb 2026
Revised: 26 Feb 2026
Accepted: 27 Feb 2026
Published online: 05 March 2026

Keywords:

Interactive Ethnographic Media,
Bumper Videos,
Home Learning Activities,
Cultural Learning,
Needs Analysis

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Article Doi:

https://doi.org/10.31258/jes.10.3.p.579-594

A B S T R A C T

This study explores the relationship between the need to develop interactive ethnographic bumper videos and the home learning process related to cultural learning at the elementary school level. The method adopted was descriptive quantitative, involving the participation of 330 students and 12 teachers from three elementary schools in South Sumatra. Data collection tools included six dimensions of needs (pedagogical, technical, cognitive, aesthetic, socio-cultural, and evaluative) and 20 indicators of home learning activities. Data collection was conducted through surveys, observations, and interviews, which were then analyzed using percentages and Spearman correlation analysis. The findings of this study indicate that all dimensions are in the high to very high category, with a significant correlation value between media needs in the school environment and home learning activities ($r_s = 0.70$-0.75; $p < 0.01$). Aesthetic (88.1%) and cognitive (86.7%) aspects were identified as the main priorities in media development. These results emphasize that interactive ethnographic media has a significant role in integrating formal and non-formal learning experiences, as well as supporting the implementation of collaborative learning that is relevant to local culture. Practically, the results of this research form the basis for developing digital learning designs that focus on cultural values, theoretically, strengthening the concept.

1. Introduction

Education is the primary foundation for the formation of human character, identity, and civilization (Suriaman et al., 2024). Through a structured educational process, students develop not only cognitive capacity but also values, attitudes, and social competencies that enable them to actively contribute to social and national life (Setiawan, 2023). In the context of global development marked by the acceleration

of digital technology, the education system is required to adapt to ensure that learning remains relevant, contextual, and responsive to changing times. The integration of technology into learning is no longer merely an option, but a strategic necessity to create meaningful learning experiences (Nurhayati et al., 2025).

In line with this, the Independent Curriculum policy emphasizes the importance of student-centered learning, contextualized to real life, and encouraging active student involvement in the learning process (Lasterman & Sihotang, 2024). However, the implementation of learning in the field still faces fundamental challenges, particularly in connecting learning experiences between the school and home environments. Learning activities at home tend to be repetitive and static, limited to written assignments without the support of interactive media. This situation has the potential to create a gap in learning experiences that impacts low student engagement, motivation, and conceptual understanding (Balalle, 2024). A report (Kemendikbudristek, 2023) shows that approximately 70% of elementary and secondary students spend less than three hours per day studying during distance learning, indicating a weak connection between formal learning at school and learning activities at home. This finding reinforces the argument that learning strategies are needed that can integrate both learning contexts sustainably and meaningfully (Oller et al., 2024).

In cultural learning in elementary schools, these challenges become increasingly complex. Cultural learning plays a strategic role in instilling values, identity, and social awareness from an early age (Siti Irene Astuti Dwiningrum et al., 2020). However, various studies and field findings indicate that cultural materials are often delivered conventionally, textually, and with minimal support from interactive visual media (Bernard et al., 2024). As a result, students tend to understand culture only cognitively, without adequate affective and social engagement. However, the Cognitive Theory of Multimedia Learning emphasizes that learning is more effective when information is presented through the integration of visual, verbal, and interactive activities that simultaneously engage cognitive and emotional processes (Mayer, 2024). One approach deemed relevant to addressing these issues is the use of interactive digital media based on collaborative learning (Schulz et al., 2025). This approach allows students to collaborate, discuss, and construct knowledge together in a flexible learning environment, both at school and at home (Bilici & Yilmaz, 2024). Collaborative-based learning media also aligns with the principles of the Independent Curriculum, which emphasizes active, reflective, and contextual learning (Salbi, 2025).

In the context of cultural learning, interactive ethnographic bumper videos emerge as a potential media innovation. This media presents local cultural content in the form of short, concise, and contextual videos, making it easily accessible and relevant to the characteristics of elementary school students (Raharjo et al., 2023) (Saputra et al., 2025). The visual ethnographic approach allows for authentic cultural representation, so that students not only learn about culture through text but also experience its cultural values through visual narratives that are close to everyday life (Ananda & Albina, 2025). Thus, interactive ethnographic bumper

videos have the potential to become a bridge connecting formal learning experiences at school with non-formal learning activities at home.

Several global studies have emphasized the crucial role of digital ethnography in learning. Jensen et al. (2022) demonstrated that digital ethnography provides a space for learners to construct meaning in online and hybrid learning environments. Borkovich (2022) also emphasized that integrating ethnography with digital platforms can enhance student engagement and empathy for socio-cultural contexts. Meanwhile, Bhatia et al. (2024) emphasized the importance of ethnography-based digital media in connecting learning practices at school with learning activities at home. However, these studies have not empirically examined the relationship between needs analysis for the development of interactive ethnographic media and students' learning activities at home, particularly in the context of cultural education in elementary schools.

To develop effective learning media that is appropriate to student characteristics, a comprehensive needs analysis is required. According to (Miftah, n.d.), media development must begin with a needs analysis to be effective and appropriate to student characteristics. Needs analysis is the initial stage in learning design to identify gaps between actual and ideal conditions (Yundayani et al., 2017). In this study, needs analysis was examined through six main aspects: pedagogical, technical, cognitive, aesthetic, socio-cultural, and evaluative, which are integrated into four learning components: students, teachers, media, and instructional design (Mayer, 2024). This multidimensional approach is strengthened by a correlation analysis between learning activities at home and learning media needs at school, to ensure the suitability between student learning behavior and the developed media design.

Based on a literature search, no research has been found that directly connects the analysis of interactive ethnographic media development needs with home learning activities in the context of elementary school cultural learning. Most previous research has focused on digital media development or the implementation of collaborative learning separately, without considering the relationship between school and home learning environments as a post-pandemic learning reality. Therefore, this study is novel in integrating the analysis of interactive ethnographic bumper video media needs with home learning activities using a descriptive quantitative correlational approach. The findings of this study are expected to provide theoretical contributions in strengthening culture-based multimedia learning as well as practical contributions in developing digital learning media that is relevant, collaborative, and based on local values.

2. Methodology

This study uses a quantitative descriptive approach to analyze the relationship between home learning activities and the need for interactive ethnographic video bumper media based on collaborative learning in cultural learning in elementary schools. This approach was chosen because it is relevant for systematically and

measurably describing the tendencies, perceptions, and levels of needs of students and teachers.(Creswell et al., 2021)(Usunobun & Ekakitie, 2020).

The analysis focused on four main components, namely students, teachers, learning media, and instructional design, which were evaluated through six aspects of needs: pedagogical, technical, cognitive, aesthetic, socio-cultural, and evaluative.(Mayer, 2024)The study was conducted from July to August 2025 in three elementary schools in South Sumatra Province, namely Az-Zahra Islamic Elementary School Palembang, Telang Kelapa 19 Public Elementary School, and Muara Telang 8 Public Elementary School Banyuasin. Respondents consisted of 330 students (160 male students and 170 female students) and 12 fourth-grade teachers selected using purposive sampling techniques based on their active involvement in project-based learning and digital media.

The research instruments consisted of questionnaires, observations, and semi-structured interviews. The questionnaire was structured based on six aspects of home learning activities and four components of media needs, with a total of 20 items using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Observations were used to map cultural learning practices in the classroom and at home, while interviews explored teachers' perceptions of the use of collaboration-based digital media. Content validity was determined through expert judgment by three educational technology experts. The validity test results showed that all items had an item-total correlation (r) between 0.45–0.78 (> 0.30), which was declared valid. The Cronbach's Alpha reliability value was 0.92 (media needs) and 0.89 (home learning activities). Both values were in the very high category (≥ 0.80), so the research instrument was considered appropriate and could be used consistently.

The collected data were analyzed using percentage techniques to describe the level of need for each aspect and Spearman Rank correlation (rs) to measure the relationship between home learning activities and learning media needs (Miles et al., 2020). The results of the analysis were used as an empirical basis in designing a digital learning media development model that is interactive, contextual, and appropriate to the characteristics of elementary school students. The grid for the needs analysis can be seen in Table 1 below.

Table 1. Needs Analysis grid

No	Sub-Aspects	Student	Teacher	Media	Instructional Design
				Statement No.	
I	Pedagogical	1-4	1-4	1-4	1-4
II	Technique	5-8	5-8	5-8	5-6
III	Cognitive	9-12	9-12	9-10	7-10
IV	Aesthetics	13-16	13-16	11-14	11-13
V	Socio-cultural	17-20	17-20	15-20	14-15
VI	Evaluation	21-24	21-24	21-24	16-17

(Modified, Raharjo, 2024)

Based on the previously compiled needs analysis, six important aspects—pedagogical, technical, cognitive, aesthetic, sociocultural, and evaluative—were

used as guidelines in creating the research tool. The researchers also included 20 additional statements to reflect students' home learning activities related to these six aspects. The aspects of home learning activities can be seen in Table 2 below.

Table 2. Aspects of learning activities at home

Aspect	Indicator	Statement number
Pedagogical	Learning strategies and independence	1-3
Technical	Device access and use	4-6
Cognitive	Conceptual understanding and reasoning	7-9
Aesthetics	Visual media interest	10-13
Socio-cultural	Local engagement and values	14-16
Evaluative	Reflection and feedback	17-20

Data Analysis Techniques:
The data was analyzed using two approaches, namely quantitative descriptive analysis and inferential correlation analysis. Descriptive Analysis (Percentage) Used to describe the level of need for each aspect with the formula:

$$P = \frac{f}{N} \text{x } 100\%$$

With :

P= percentage
f= total score obtained
N= maximum score.

The percentage results are then categorized according to the level of need (low, medium, high, very high), as shown in Table 5.

Correlation Analysis (Spearman Rank)
Used to measure the relationship between home learning activities and learning media needs with a significance level of 5% ($p<0.05$). The correlation value (rs) is interpreted based on the categories as in Tables 3 and 4.

Table 3. Categories of needs analysis scale

Score	Assessment Categories
1	Strongly Disagree
2	Don't agree
3	Undecided / Neutral
4	Agree
5	Strongly agree

Table 4. Correlation categories

Correlation Value Range (rs /r)	The Power of Relationships
0.00-0.19	Very weak
0.20-0.39	Weak
0.40-0.59	Currently
0.60-0.79	Strong
0.80-1.00	Very strong

Data was analyzed using percentage techniques using the formula:

$$P = \frac{f}{N} \text{x } 100\%$$

With :

P= percentage
f= total score obtained
N= maximum score.

The percentage results are then categorized according to the level of need (low, medium, high, and very high). The categories of need level can be seen in Table 5 below.

Table 5. Categories of level of need

Percentage (%)	Needs Category
0 – 25	Very Low
26 – 50	Low
51 – 75	Currently
76 – 100	Tall

(Arikunto, 2019)

The results of this study serve as an empirical basis for designing a digital learning media development model in the form of interactive, relevant, and appropriate ethnographic bumper videos that suit the character of students at the elementary school level.

3. Results and Discussion

The needs analysis was conducted by observing, interviewing, and distributing questionnaires to 330 fourth-grade students (160 male students and 170 female students) and 12 class teachers at SD Islam Az-Zahra Palembang, SDN 19 Talang Kelapa, and SDN 8 Muara Telang, located in South Sumatra Province. The data obtained were analyzed descriptively with a quantitative approach, using percentage techniques to identify the level of need for teaching media, and conducting a Spearman Rank (rs) correlation test to determine the relationship between learning activities at home and the need for learning media that support Collaborative Learning. The results of the analysis are presented in the following table.

Student Needs Analysis

Results The analysis results indicate that all elements related to student needs are in the high to very high category, with the highest percentage in the aesthetic element (88.1%), followed by cognitive (86.7%) and socio-cultural (85.6%). The technical element (81.9%) recorded the lowest number, although it remains in the needs category. The following table shows the 6 results of the student needs analysis that have been obtained:

Table 6. Results of the Student Needs Analysis Questionnaire

Aspect	Percentage (%)	Needs Category	Correlation (rs)	Interpretation
Pedagogical	84.4	Very Needed	0.72	Strong
Technical	81.9	Need	0.70	Strong
Cognitive	86.7	Very Needed	0.75	Strong
Aesthetics	88.1	Very Needed	0.73	Strong
Socio-cultural	85.6	Very Needed	0.74	Strong
Evaluative	83.3	Very Needed	0.71	Strong

This comparison shows that students need media that is visually appealing and can strengthen their understanding of local cultural concepts, compared to technical elements such as access and use of devices. The relationship between student needs and learning activities at home shows a value of rs = 0.70-0.75 ($p < 0.05$), which is included in the strong category and is statistically significant.

Teacher Needs Analysis

The results of the teacher needs analysis questionnaire data that have been obtained can be seen in table 7 below.

Table 7. Results of the Teacher Needs Analysis Questionnaire

Aspect	Percentage (%)	Needs Category	Correlation (rs)	Interpretation
Pedagogical	86.5	Very Needed	0.76	Strong
Technical	83.7	Very Needed	0.73	Strong
Cognitive	85.8	Very Needed	0.75	Strong
Aesthetics	87.4	Very Needed	0.74	Strong
Socio-cultural	84.9	Very Needed	0.73	Strong
Evaluative	82.8	Very Needed	0.72	Strong

The results for teachers showed a significant need for learning aids across all dimensions, with the highest rating for the aesthetic aspect (87.4%) and the lowest for the evaluative aspect (82.8%). This confirms that teachers perceive the importance of visual, interactive aids that support the learning reflection process. Spearman's correlation coefficient was recorded at rs = 0.72-0.76 ($p < 0.05$), indicating a strong and significant positive relationship between teachers' perceived needs and students' learning activities at home. Specifically, the pedagogical and cognitive aspects showed the highest correlation values, indicating that teachers have a crucial role in shaping students' independence in learning through the application of collaborative digital media.

Media Needs Analysis

The results of the media needs analysis with 12 class teacher respondents, table 8 below highlights the results of the media needs analysis. The results of the media needs analysis, the visual aspect (88.7%) and the cognitive aspect (87.5%) are at the top of the list, which shows that the ideal media should not only be visually appealing but also able to improve students' conceptual understanding.

Table 8. Results of the Media Needs Analysis Questionnaire

Aspect	Percentage (%)	Needs Category	Correlation (rs)	Interpretation
Pedagogical	85.9	Very Needed	0.73	Strong
Technical	83.4	Very Needed	0.71	Strong
Cognitive	87.5	Very Needed	0.75	Strong
Aesthetics	88.7	Very Needed	0.74	Strong
Socio-cultural	85.2	Very Needed	0.73	Strong
Evaluative	83.7	Very Needed	0.72	Strong

The technical aspect (83.4%) and evaluation (83.7%) show high demand, but remain below the previous two aspects. The correlation value rs = 0.71-0.75 ($p < 0.05$) indicates a significant and strong positive relationship between the need for learning media and learning activities at home, especially in the cognitive and pedagogical dimensions.

Instructional design needs analysis

The results of the instructional needs analysis with 12 class teacher respondents. The results of the Instructional Design Needs Analysis Questionnaire can be seen in Table 9 below.

Table 9. Results of the Instructional Design Needs Analysis Questionnaire

Aspect	Percentage (%)	Needs Category	Correlation (rs)	Interpretation
Pedagogical	85.2	Very Needed	0.74	Strong
Technical	83.1	Very Needed	0.71	Strong
Cognitive	86.6	Very Needed	0.75	Strong
Aesthetics	88.3	Very Needed	0.74	Strong
Socio-cultural	84.8	Very Needed	0.73	Strong
Evaluative	83.5	Very Needed	0.72	Strong

The results of the instructional design reflected high demand across all areas, with the highest scores in aesthetics (88.3%) and cognitive aspects (86.6%). Comparative analysis across areas showed that engaging, effective, and relevant learning approaches were prioritized over a focus solely on technical aspects. The correlation measured by rs = 0.71-0.75 ($p<0.05$) indicated a significant positive relationship between the various aspects, particularly between teaching methods and visual learning experiences. This emphasizes the need for instructional designs that can harmoniously integrate learning experiences in the home and school environments.A summary of the correlation between media needs and home learning activities can be seen in table 10 below.

Table 10. Summary of Correlation between Media Needs and Home Learning Activities

Analysis Components	RS range	Relationship Category	Significance
Student	0.70-0.75	Strong	$p<0.05$
Teacher	0.72-0.76	Strong	$p<0.05$
Media	0.71-0.75	Strong	$p<0.05$
Instructional Design	0.71-0.75	Strong	$p<0.05$

Each element demonstrates a strong and significant positive correlation between the need for interactive ethnographic media and home learning activities. The highest correlations are found in the cognitive and aesthetic dimensions, and this is consistent across all four categories of analysis. These results confirm that interactive ethnographic learning media plays a crucial role in connecting formal and non-formal education, while also supporting the implementation of contextual and culturally informed collaborative learning.

Discussion

Figure 1 presents a visualization of the results of the correlation analysis between the need for interactive ethnographic learning media and students' learning activities at home in each component (students, teachers, media, and instructional design).

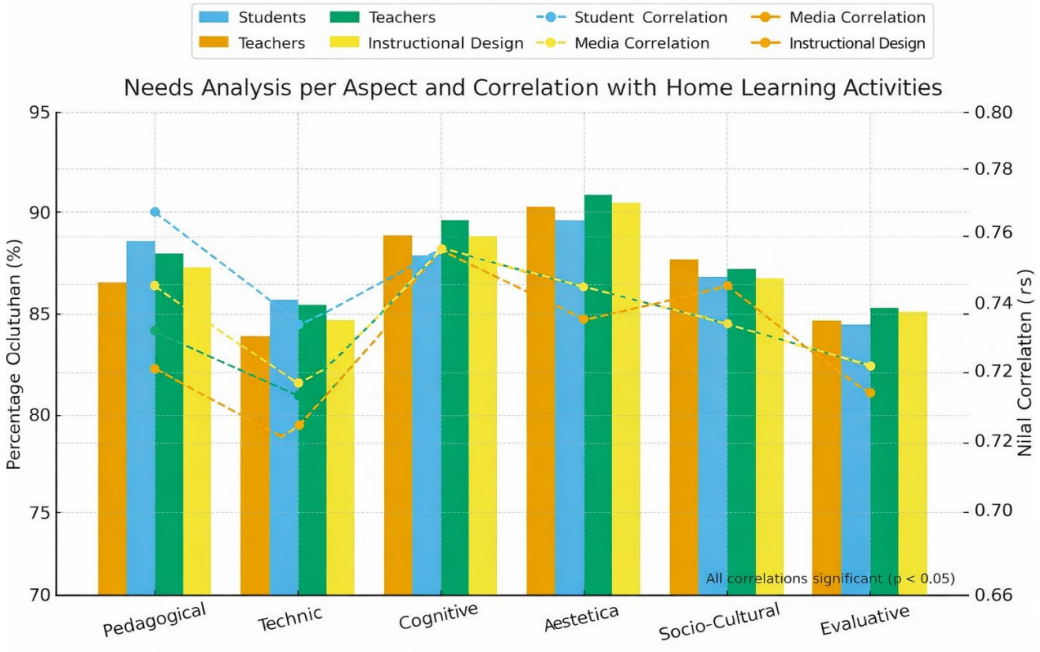

Figure 1. Analysis of media needs correlation with learning activities

The results of the study indicate that all elements of the needs analysis—students, teachers, learning media, and instructional design—are in the high to very high category, with a strong and significant correlation (r_s = 0.70–0.75; $p < 0.05$) between home learning activities and learning media needs at school. This finding indicates that learning media needs cannot be separated from students' non-formal learning contexts, particularly learning at home. These results align with the Academic Communities of Engagement framework, which emphasizes the importance of connecting learning support in school and outside of school in digital and hybrid learning (Borup et al., 2020). Globally, continuity between formal and non-formal learning is also emphasized as a prerequisite for meaningful learning in the digital era (OECD, 2021). In the context of cultural learning, this connection becomes increasingly crucial because cultural understanding is not only cognitive,

but also affective and social, which demands contextual and meaningful learning experiences (Giráldez et al., 2022; Abdalla & Moussa, 2024; Yildiz, 2021).

The predominance of aesthetic (88.1%) and cognitive (86.7%) aspects in student needs indicates that effective cultural learning media must be able to balance visual appeal and conceptual clarity. This finding supports the Cognitive Theory of Multimedia Learning, which states that learning will be more meaningful when students are able to select, organize, and integrate visual and verbal information simultaneously (Mayer, 2024). Furthermore, Cognitive Load Theory asserts that structured and relevant visual design plays a role in reducing cognitive load, thereby improving retention and conceptual understanding (Sweller, 2022). A recent comprehensive study on video-based learning showed that learning videos equipped with interactive features such as segmentation, pause control, and reflective quizzes significantly improved learning effectiveness and student conceptual understanding (Navarrete et al., 2025). Thus, the aesthetic aspect of learning media cannot be viewed merely as a decorative element, but rather as a trigger for cognitive processes that support deeper cultural learning.

The findings of this study also support the effectiveness of collaborative learning in the context of digital learning. The significant positive relationship between home learning activities and the need for learning media indicates that collaborative learning enables students to actively engage, discuss, and reflect on cultural understanding independently and collectively (Bilici & Yilmaz, 2024; Schulz et al., 2025). International meta-analytic evidence indicates that the integration of interactive elements and gamification in digital learning has a positive impact—albeit at a small to moderate level—on student learning outcomes, motivation, and engagement. This strengthens the argument that the development of interactive ethnographic video bumpers has the potential to be a medium that bridges formal learning in schools and non-formal learning at home through visual, contextual, and collaborative cultural narratives.

Regarding the teacher aspect, the study results show that all dimensions of needs are in the very high category, with an emphasis on aesthetic (87.4%) and pedagogical (86.5%) aspects. This indicates that teachers need media that is not only visually appealing but also supports the effectiveness of learning strategies. The strong relationship between pedagogical and technical aspects ($r_s = 0.72–0.76$) confirms the importance of mastering Technological Pedagogical Content Knowledge (TPACK) in implementing digital media (Mishra et al., 2023). This finding is supported by a national systematic review showing that mastery of TPACK contributes significantly to improving the skills of elementary school teachers in designing and implementing technology-based learning effectively (Mimbar Sekolah Dasar, 2024).

In line with these findings, the use of technology-enhanced assessment is a crucial element in supporting adaptive digital learning. A systematic review by Børte et al. (2023) emphasized that the use of technology in formative assessment requires alignment between teachers' pedagogical competencies, digital tool utilization, and data literacy. With ongoing training and adequate digital infrastructure, teachers can

utilize interactive ethnographic media as a means to create collaborative and flexible learning experiences, both in the classroom and in home-based learning.

In the dimension of learning media needs, aesthetic (88.7%) and cognitive (87.5%) aspects again emerged as top priorities. This finding confirms that effective media must be designed based on evidence-based multimedia design principles to optimally facilitate student knowledge construction. A systematic literature review in the elementary school context shows that interactive learning media consistently improves student learning outcomes, motivation, and engagement (Mimbar Sekolah Dasar, 2025). This reinforces the position of interactive media as an essential need in elementary school learning.

In an ethnographic context, learning media that highlight local culture have the potential to strengthen students' identity and social awareness. Cultural representation through authentic visuals and narratives enables students not only to cognitively understand culture but also to internalize social and moral values. This finding aligns with research by Dwiningrum et al. (2020), which emphasized the importance of school strategies in building student character and resilience, and research by Maritasari et al. (2025), which showed that learning design and strategies significantly influence elementary school students' motivation and learning outcomes.

The analysis of instructional design needs shows that aesthetic (88.3%) and cognitive (86.6%) aspects are again the dominant dimensions, with a strong correlation between the various need aspects (rs = 0.71–0.75). This confirms that effective instructional design must holistically integrate pedagogical strategies, visual design, and sociocultural contexts (Sirait & Dewi, 2024). Alignment between learning objectives, methods, and media has been shown to enhance learning effectiveness and student learning experiences, as emphasized in contemporary instructional design literature. The high demand for socio-cultural and evaluative aspects demonstrates the urgency of implementing Culturally Responsive Teaching and technology-based assessment in cultural learning in elementary schools. This approach enables learning rooted in local values while providing adaptive and authentic formative evaluation mechanisms (Abdalla & Moussa, 2024; Børte et al., 2023). Thus, instructional design is oriented not only toward academic achievement but also toward the formation of students' character, identity, and emotional engagement (UNESCO, 2022; Laksana et al., 2021).

The results of the study indicate that all aspects of needs are in the high to very high category, with a strong correlation between media needs and home learning activities. However, the most striking finding is the consistent dominance of aesthetic and cognitive aspects across the four components of the analysis (students, teachers, media, and instructional design). This dominance not only indicates a preference for visually appealing media, but also reflects the developmental characteristics of elementary school students who are at the concrete operational stage, where conceptual understanding is more effectively achieved through visual, symbolic, and contextual representations.

Theoretically, these findings reinforce the Cognitive Theory of Multimedia Learning framework, which emphasizes the integration of visual and verbal information to facilitate the selection, organization, and integration of information. The high demand for aesthetics can be interpreted as a need for visual design that is not merely decorative but also functions to optimize cognitive processing and reduce cognitive load, as explained in Cognitive Load Theory. Thus, aesthetics in this context is functional-instructional, not ornamental.

The difference in percentages between aspects also has theoretical implications. The relatively lower importance placed on technical aspects compared to aesthetic and cognitive aspects suggests that for elementary school students, the quality of the learning experience is determined more by the relevance of meaning and visual appeal than by the complexity of the technology itself. This suggests that culture-based learning design should prioritize meaningful engagement over mere technological innovation. In the socio-cultural context of South Sumatra, the representation of local culture through interactive ethnographic media strengthens students' identity and affective dimensions toward the learning material. This means that the high demand for aesthetic and cognitive aspects cannot be separated from the cultural context in which students live and learn. Media that showcases visual narratives of local culture has the potential to build emotional connections while deepening conceptual construction.

The novelty of this research lies in the integration of interactive ethnographic media needs analysis with home learning activities using a correlational approach in the context of elementary school cultural learning. Unlike previous studies that examined digital media, collaborative learning, or ethnography separately, this study shows that the need for learning media in schools has a strong empirical relationship with students' non-formal learning activities at home. This finding expands the application of Cognitive Theory of Multimedia Learning and Collaborative Learning by positioning the local cultural context as a connecting element between formal and non-formal learning.

Overall, the findings of this study confirm the alignment between teacher preparedness, student needs, and the role of digital learning media in strengthening the connection between learning activities at school and at home. The high average need (85.3%) and consistently strong correlation indicate that the integration of collaborative learning and local culture is a real need in primary education (Borup et al., 2020; OECD, 2021).

4. Conclusion

This research demonstrates that the development of interactive ethnographic media has strategic potential in supporting the continuity of learning between school and home environments. All dimensions of learning—pedagogical, technical, cognitive, aesthetic, sociocultural, and evaluative—demonstrate a strong connection to the needs of students, teachers, learning media, and instructional design. This confirms that an effective learning process depends not only on content

but also on how media is designed meaningfully, contextually, and in harmony with the cultural characteristics of learners. The emphasis on the cognitive and aesthetic dimensions indicates the importance of media that is not only informative but also visually appealing and able to facilitate optimal information processing. On the other hand, the pedagogical and technical needs of teachers emphasize the urgency of strengthening competencies in adaptively integrating technology, pedagogy, and content. Thus, interactive ethnographic media has the potential to bridge formal and non-formal learning experiences while strengthening cultural reflection in learning. However, because this research uses a descriptive correlational design, the findings obtained should be understood as a description of the relationships between variables, not as evidence of causality. Therefore, the results of this study are more appropriately positioned as an initial conceptual and empirical foundation for the development of a culture-based learning model. Further research using experimental or quasi-experimental designs is needed to test the effectiveness of the media in more depth and expand its implementation across different contexts and regions.

Acknowledgement

The author expresses his gratitude to the lecturers who have guided him, provided academic guidance, and provided valuable suggestions during the preparation and refinement of this research. He also thanks the elementary schools of SD Islam Az-Zahra Palembang, SD Negeri 19 Talang Kelapa, and SD Negeri 8 Muara Telang Banyuasin for their permission, assistance, and collaboration during the information gathering process. He also extends his sincere appreciation to the teachers and students who have actively participated in this research. The assistance and contributions of all parties have been instrumental in the successful implementation of this research, which has resulted in its successful completion.

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How to cite this article:

Fatahillah, D. N., Raharjo, M., & Aswasulasikin. (2026). Correlation Analysis of the Need for Interactive Ethnographic Bumper Videos with Elementary School Students' Home Learning Activities. *Journal of Educational Sciences*, *10(3)*, 579-594.