

Instructional Videos and Student Engagement in Technology and Livelihood Education (TLE) in the Public Elementary Schools of Davao Occidental Division

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ARTICLE INFORMATION	ABSTRACT
Article history: Published: August 2026 Keywords: Instructional Videos Student Engagement Technology And Livelihood Education Descriptive-Correlational Davao Occidental Philippines	This study explored the relationship between the use of instructional videos and student engagement in the public elementary schools of the Davao Occidental Division, Philippines. Specifically, it determined the extent of the use of instructional videos and the extent of student engagement, the relationship between these variables, and the domains of instructional videos that significantly influence student engagement. Using probability sampling, 100 public elementary teachers were selected as respondents. Employing the descriptive-correlational survey method, the data gathered were analyzed using Mean, Pearson Product-Moment Correlation, and Regression Analysis. Results revealed an extensive use of instructional videos and an extensive level of student engagement. Furthermore, a significant relationship was found between the use of instructional videos and student engagement. Moreover, all domains of instructional videos, namely content quality, instructional design, learner interactivity, and technical quality, were found to significantly influence student engagement. Based on the findings, it is suggested that higher officials in the Department of Education and school heads identify means to strengthen the use of instructional videos, which would pave the way to further increase student engagement. Future researchers may further explore these variables by considering other factors and research methods.

1. Introduction

The integration of technology into teaching and learning has transformed classroom practice in the twenty-first century. Among the most accessible and widely adopted digital tools are instructional videos, which combine visual, auditory, and demonstrative elements to convey concepts that are difficult to communicate through text alone. In subjects that are inherently practical and skills-based, such as Technology and Livelihood Education (TLE), instructional videos hold particular promise. They allow learners to observe procedures, techniques, and processes repeatedly and at their own pace, bridging the gap between theoretical instruction and hands-on application.

Student engagement, understood as the degree of attention, curiosity, participation, and emotional investment that learners exhibit, is a critical determinant of learning success. Engaged students are more likely to persist, comprehend, and retain what they learn. In practical subjects like TLE, engagement is especially vital because the acquisition of livelihood skills depends heavily on active involvement and sustained interest. Instructional videos, when well-designed and purposefully deployed, have the potential to capture attention and stimulate the kind of active engagement that skills-based learning requires.

Despite the growing use of instructional videos in Philippine elementary classrooms, there remains a need for empirical evidence on how their use relates to student engagement in specific local contexts. In the public elementary schools of the Davao Occidental Division, teachers of TLE increasingly incorporate video-based materials, yet the extent of this use and its relationship to student engagement have not been systematically examined. Understanding this relationship is essential for guiding the effective integration of instructional videos into the teaching of practical subjects.

This study was therefore conducted to determine the extent of the use of instructional videos and student engagement in TLE, to examine the relationship between these variables, and to identify the domains of instructional videos that significantly influence student engagement in the public elementary schools of the Davao Occidental Division.

1.1 Statement of the Problem

This study sought to answer the following questions: (1) What is the extent of the use of instructional videos in terms of content quality, instructional design, learner interactivity, and technical quality? (2) What is the extent of student engagement in TLE? (3) Is there a significant relationship between the use of instructional videos and student engagement? and (4) Which domains of instructional videos significantly influence student engagement?

1.2 Significance of the Study

The findings of this study are expected to benefit several stakeholders. For the Department of Education and school heads, the results provide an evidence base for promoting and improving the use of instructional videos. For TLE teachers, the study offers guidance on the video attributes most strongly associated with engagement. For learners, it supports the design of more engaging and effective practical instruction. Finally, the study contributes local evidence to the literature on educational technology and student engagement in the Philippine elementary setting.

2. Literature Review

2.1 Instructional Videos in Education

Instructional videos are multimedia resources that present content through moving images, narration, text, and demonstration. Grounded in the cognitive theory of multimedia learning, well-designed videos leverage both visual and auditory channels to enhance comprehension while managing cognitive load. Key attributes that determine their effectiveness include content quality, the accuracy and relevance of the material presented; instructional design, the pedagogical structuring of the video; learner interactivity, the extent to which the video invites active participation; and technical quality, the clarity of audio, video, and production. In practical subjects, videos are especially valuable for modeling procedures that learners must later perform themselves.

2.2 Student Engagement

Student engagement is a multidimensional construct commonly described in terms of behavioral, emotional, and cognitive dimensions. Behavioral engagement refers to participation and effort; emotional engagement involves interest, enjoyment, and a sense of belonging; and cognitive engagement concerns the investment in understanding and mastering material. Research consistently links higher engagement to better academic outcomes, greater persistence, and deeper learning. In skills-based subjects such as TLE, engagement is a prerequisite for the active practice through which competencies are developed.

2.3 Linking Instructional Videos and Student Engagement

A growing body of research indicates that instructional videos can enhance student engagement by making content more accessible, stimulating, and relatable. Videos capture attention through dynamic visuals, support diverse learners through repeated viewing, and can foster interactivity when paired with guided tasks. However, the strength of this effect depends on the quality of the videos and the manner of their integration. Poorly designed or passively consumed videos may fail to engage, whereas high-quality, interactive videos aligned with learning goals tend to promote sustained engagement. This study contributes context-specific evidence on this relationship within Philippine public elementary TLE instruction.

3. Methodology

3.1 Research Design

This study employed a quantitative, descriptive-correlational research design. The descriptive component determined the extent of the use of instructional videos and the extent of student engagement, while the correlational component examined the relationship between these variables and identified the domains of instructional videos that significantly influence student engagement. This design was appropriate because the study aimed to describe existing conditions and analyze associations among naturally occurring variables without manipulation.

3.2 Respondents and Sampling

The respondents were 100 public elementary teachers in the Davao Occidental Division, selected through probability sampling to ensure representativeness and to support the generalizability of the findings. Probability sampling provided each member of the target population a known, non-zero chance of selection, thereby reducing selection bias.

3.3 Research Instrument

Data were collected through a structured survey questionnaire composed of two parts. The first part measured the use of instructional videos across the four domains of content quality, instructional design, learner interactivity, and technical quality. The second part measured student engagement. Items were rated on a five-point Likert scale with corresponding descriptive interpretations. The instrument underwent validation and reliability testing prior to administration to ensure that it accurately and consistently measured the intended constructs.

3.4 Data Gathering Procedure

The researcher secured the necessary permissions from division and school authorities before administering the questionnaires. Informed consent was obtained from all respondents, who were assured of the voluntary nature of their participation and the confidentiality of their responses. Completed questionnaires were retrieved, screened for completeness, and encoded for analysis.

3.5 Data Analysis

Descriptive and inferential statistics were employed. The Mean determined the extent of the use of instructional videos and student engagement. The Pearson Product-Moment Correlation Coefficient tested the relationship between the two variables. Regression Analysis identified which domains of instructional videos significantly influence student engagement. The level of significance was set at 0.05.

3.6 Ethical Considerations

Ethical standards were observed throughout the study. Participation was voluntary and based on informed consent, and respondents retained the right to withdraw at any stage. Anonymity and confidentiality were maintained through secure handling of data, which were used solely for the purposes of this research.

4. Findings

4.1 Extent of the Use of Instructional Videos

The first objective determined the extent of the use of instructional videos in TLE. As shown in Table 1, the use of instructional videos was extensive, with an overall mean of 4.39. Among the domains, content quality obtained the highest mean (4.48), followed by technical quality (4.41), instructional design (4.35), and learner interactivity (4.32). These results indicate that teachers in the Davao Occidental Division make extensive use of instructional videos, with particular strength in the quality and relevance of the content presented.

Table 1: Extent of the Use of Instructional Videos in TLE

Domain	Mean	Descriptive Level
Content Quality	4.48	Extensive
Instructional Design	4.35	Extensive
Learner Interactivity	4.32	Extensive
Technical Quality	4.41	Extensive
Overall Use of Instructional Videos	4.39	Extensive

Source: Research Data, 2026

4.2 Extent of Student Engagement

The second objective examined the extent of student engagement in TLE. As presented in Table 2, student engagement was extensive, with an overall mean of 4.36. Behavioral engagement registered the highest mean (4.44), while cognitive engagement obtained the comparatively lower mean (4.28). This pattern suggests that learners are highly participative and attentive during video-supported instruction, while deeper cognitive investment presents an area for further strengthening.

Table 2: Extent of Student Engagement in TLE

Dimension	Mean	Descriptive Level
Behavioral Engagement	4.44	Extensive
Emotional Engagement	4.37	Extensive
Cognitive Engagement	4.28	Extensive
Overall Student Engagement	4.36	Extensive

Source: Research Data, 2026

4.3 Relationship Between Instructional Videos and Student Engagement

The third objective tested the relationship between the use of instructional videos and student engagement. As shown in Table 3, the Pearson Product-Moment Correlation yielded a coefficient indicating a strong, positive, and statistically significant relationship between the two variables ($p < 0.05$). This means that as the use of instructional videos increases, student engagement likewise increases. The null hypothesis of no significant relationship was therefore rejected, empirically affirming that the effective use of instructional videos is associated with greater student engagement.

Table 3: Relationship Between the Use of Instructional Videos and Student Engagement

Variables	r-value	p-value	Decision
Use of Instructional Videos and Student Engagement	0.69	0.000	Significant

Source: Research Data, 2026

4.4 Influence of Instructional Video Domains on Student Engagement

The fourth objective identified which domains of instructional videos significantly influence student engagement. As presented in Table 4, the regression analysis revealed that all four domains, namely content quality, instructional design, learner interactivity, and technical quality, significantly influence student engagement ($p < 0.05$). Collectively, these domains accounted for a substantial proportion of the variance in student engagement. Among them, content quality and learner interactivity emerged as the strongest predictors, underscoring that relevant, high-quality content and opportunities for active participation are most effective in sustaining engagement.

Table 4: Regression Analysis of Instructional Video Domains on Student Engagement

Predictor Domain	Beta	p-value	Decision
Content Quality	0.30	0.000	Significant
Instructional Design	0.21	0.010	Significant
Learner Interactivity	0.27	0.002	Significant
Technical Quality	0.19	0.018	Significant

Source: Research Data, 2026

4.5 Discussion

The findings collectively demonstrate that instructional videos are used extensively in the teaching of TLE, that student engagement is high, and that the two are significantly and positively related. The significant influence of all four domains on student engagement reinforces the view that the effectiveness of instructional videos is multidimensional. The prominence of content quality and learner interactivity as predictors aligns with multimedia learning theory, which emphasizes that relevant content and active involvement are central to meaningful learning. The comparatively lower, though still significant, weight of technical quality suggests that while clear production matters, it is the substance and interactivity of the videos that most strongly drive engagement. These results affirm the value of instructional videos as a tool for enhancing engagement in practical, skills-based subjects.

5. Conclusion and Recommendations

5.1 Conclusion

This study concludes that instructional videos are used extensively and student engagement is extensive in the teaching of Technology and Livelihood Education in the public elementary schools of the Davao Occidental Division. A significant, strong, and positive relationship exists between the use of instructional videos and student engagement. Furthermore, all four domains of instructional videos, namely content quality, instructional design, learner interactivity, and technical quality, significantly influence student engagement, with content quality and learner interactivity exerting the strongest influence. These findings affirm that the effective use of well-designed instructional videos is a decisive factor in enhancing student engagement, and that strengthening their use is a viable pathway toward more engaging and effective practical instruction.

5.2 Recommendations

Based on the findings, the following recommendations are advanced. First, higher officials in the Department of Education and school heads are encouraged to promote and support the use of instructional videos, with particular emphasis on ensuring high content quality and building in opportunities for learner interactivity. Second, TLE teachers are encouraged to design or select videos that are pedagogically sound and interactive, integrating them with guided, hands-on tasks. Third, professional development programs may equip teachers with skills in producing and effectively using instructional videos. Fourth, schools may invest in the technical infrastructure needed to deliver instructional videos reliably. Finally, future researchers are encouraged to extend this inquiry by employing qualitative or mixed-methods approaches, examining learner outcomes directly, and exploring additional variables such as digital literacy and access to technology.

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