



Regular Article

**Interactive Vodcasts for English Language Learning: Impact on
Listening, Speaking, and Motivation**

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Abstract

This study investigated the effectiveness of an interactive vodcast-based program in developing listening comprehension, speaking skills, and instrumental motivation among middle school English language learners. A semi-experimental design with pre- and post-tests was employed, comparing an experimental group receiving vodcast instruction to a control group receiving traditional instruction. Results revealed significant improvements in both listening comprehension and speaking skills for the experimental group, highlighting the positive impact of the vodcast program. Additionally, the study explored the relationship between cognitive styles and the effectiveness of the program, finding that while both context-dependent and context-independent learners benefited, context-dependent learners exhibited greater gains in listening comprehension. However, no significant changes in instrumental motivation were observed. This research contributes to the growing body of evidence supporting the use of technology, specifically vodcasts, to enhance language learning outcomes. Future research should investigate the long-term effects of vodcast instruction and explore its potential in diverse educational contexts.

Keywords: Vodcasts; English language learning; listening comprehension; speaking skills; instrumental motivation; technology in education

Introduction

The ever-increasing global interconnectedness demands proficient intercultural communication skills. In foreign language learning, linguistic competence encompasses cultural awareness, self-reflection, and the ability to effectively communicate and negotiate meaning across cultural boundaries (Byram, 2008; Kramer, 2002). Listening comprehension and speaking skills are foundational for intercultural communication, forming the cornerstone of language proficiency (Burns & Siegel, 2023; Demir, 2017; Feyten, 1991; Richards, 2008).

The advent of technology has revolutionized language education. Multimedia systems combining text, audio, visuals, and video, like augmented reality (AR), offer new pedagogical possibilities (Abusaada et al., 2013; Abdullah, 2012). Video podcasts (vodcasts) have gained popularity in foreign language learning, providing learners with convenient, self-paced access to learning materials (Pettit, 2018). Vodcasts, an evolution of podcasts incorporating video, are increasingly used as a supplement or alternative to traditional lecturing methods (Evans, Gibbons, Shah, & Griffin, 2004; Heilesen, 2010; Ravenscroft, Tait, & Hughes, 1998; Stephenson, Brown, & Griffin, 2008).

Research has shown that digital media like podcasts and vodcasts can positively impact learning and teaching (Evans, 2008; Fernandez, Simo, & Sallan, 2009; Heilesen, 2010; Lazzari, 2009; Lin, Zimmer, & Lee, 2013; McGarr, 2009; Morris, 2010). The shift towards multimodal vodcasts caters to diverse cognitive styles and offers advantages for learners, particularly in primary and preparatory stages (Chester, Buntine, Hammond, & Atkinson, 2011; Fill & Ottewill, 2006; Griffin, Mitchell, & Thompson, 2009; Heilesen, 2010; Jarvis & Dickie, 2010; McGarr, 2009; Stephenson et al., 2008; Winterbottom, 2007).

This study investigates the effectiveness of an interactive vodcast-based program for developing listening comprehension, speaking skills, and instrumental motivation in middle school students. We examine the influence of cognitive styles, specifically context-dependent versus context-independent learners, on the program's effectiveness.

Context of the Problem

Egyptian public schools face challenges in developing English language proficiency, particularly in listening comprehension and speaking skills, crucial for communicative competence. Factors contributing to this include curricular limitations, teacher deficiencies, and inadequate teaching methods and technologies. Consequently, students struggle to comprehend spoken language and express themselves clearly and fluently.

Furthermore, students often exhibit a lack of motivation towards learning English. Their performance in listening and speaking skills reflects a gap in both learning and instrumental motivation for achieving proficiency in these key skills.

Statement of the Research Problem

This study addresses the need to improve listening comprehension and speaking skills in middle school students learning English as a foreign language. The lack of development in these areas hinders overall English proficiency.

Research Questions:

1. What is the effectiveness of an interactive vodcast-based program for teaching and learning English in developing listening comprehension skills of middle school students?
2. What is the effectiveness of an interactive vodcast-based program for teaching and learning English in developing speaking skills of middle school students?
3. What is the effectiveness of an interactive vodcast-based program for teaching and learning English in boosting the instrumental motivation for achievement in middle school students' listening comprehension and speaking skills?
4. What is the correlation between developing listening comprehension and speaking skills and improving students' instrumental motivation?

Objectives of the Study

1. To classify students according to their cognitive styles (context-dependent vs. context-independent) using Witkin's Embedded Pictures Scale.
2. To assess the effectiveness of an interactive vodcast-based program for developing listening comprehension skills in middle school students.
3. To assess the effectiveness of an interactive vodcast-based program for developing speaking skills in middle school students.

Significance of the Study

This study addresses the growing need for technology integration in English as a Foreign Language (EFL) pedagogy. Using vodcasts to support EFL learning offers a valuable opportunity for individualized learning (Allison, 2015; Shabani, Khatib, & Ebadi, 2010). By exploring the effectiveness of vodcasts in developing listening comprehension and speaking skills, this research contributes to the growing body of knowledge in this area and provides practical resources for educators.

Theoretical Framework:

- **Cognitive Multimedia Learning Theory:** This theory explains how people process information through dual channels (visual and auditory) and the role of working memory in learning (Mayer, 2001). It suggests that instructional videos, particularly vodcasts, can be designed to enhance language learning by incorporating elements that align with how the brain processes information.
- **Cognitive Styles:** Cognitive styles, such as context-dependency and context-independence, influence how individuals process information. Understanding these styles is crucial for tailoring instructional methods to individual learning preferences.
- **Instrumental Motivation:** This theory focuses on the role of motivation in achieving specific goals. This research investigates the impact of the vodcast-based program on instrumental motivation for achieving proficiency in listening comprehension and speaking skills.

Literature Review: Vodcasts, Cognitive Multimedia Learning, and Cognitive Styles in Language Learning

The integration of technology into language education has led to the emergence of innovative teaching tools and strategies. Video podcasts (vodcasts) have gained traction as a promising approach, offering learners accessible, self-paced learning experiences (Pettit, 2018). This literature review examines relevant theories and research surrounding vodcasts, cognitive multimedia learning, and the influence of cognitive styles on language learning, providing a theoretical framework for the current study.

Vodcasts and Language Learning:

Vodcasts, as an evolution of podcasts incorporating video, offer a multimodal approach to learning that caters to diverse cognitive styles (Meng, 2005). Research suggests that vodcasts can enhance learning outcomes, particularly in the areas of listening comprehension and speaking skills (Evans, 2008; Heilesen, 2010; Lazzari, 2009; Lin, Zimmer, & Lee, 2013; McGarr, 2009; Morris, 2010). Furthermore, vodcasts can promote student-centered learning, allowing learners to control the pace and content of their learning (Chester, Buntine, Hammond, & Atkinson, 2011; Fill & Ottewill, 2006; Griffin, Mitchell, & Thompson, 2009; Heilesen, 2010; Jarvis & Dickie, 2010; McGarr, 2009; Stephenson et al., 2008; Winterbottom, 2007).

Cognitive Multimedia Learning Theory (CTML):

CTML provides a theoretical framework for understanding how people learn from multimedia presentations (Mayer, 2001). It posits that the brain processes information through dual channels (visual and auditory) and that working memory has a limited capacity. CTML principles, such as coherence, signaling, redundancy, spatial contiguity, and temporal contiguity, guide the design of effective multimedia learning experiences (Clark & Mayer, 2011; Mayer, 2010; Mayer & Anderson, 1991; Mayer & Chandler, 2001; Mayer, Fennell, Farmer, & Campbell, 2004; Mayer & Moreno, 1998; Moreno & Mayer, 1999; Moreno & Mayer, 2000; Moreno & Mayer, 2002). These principles aim to reduce extraneous processing and cognitive overload, facilitating deeper learning.

Cognitive Styles and Language Learning:

Cognitive styles, such as context-dependency and context-independence, refer to individual differences in how people process information (Al-Sharkawi, 2003; Kozhevnikov, 2007). Context-dependent learners rely heavily on the surrounding environment, while context-independent learners are less influenced by their surroundings (Kozhevnikov, Evans, & Kosslyn, 2014). Understanding these styles is crucial for tailoring instructional methods to meet individual learning preferences. Research suggests that field-dependent individuals, often considered more context-dependent, tend to be more observant of social cues and maintain a closer psychological distance from peers (Kozhevnikov et al., 2014).

Instrumental Motivation and Language Learning:

Instrumental motivation, also known as motivation for achievement, refers to the drive to perform an action to achieve a specific goal or reward (Lens, Paixão, & Herrera, 2009; Lens,

Vansteenkiste, & Matos, 2008). It is a form of extrinsic motivation, influenced by factors like self-confidence, mastery, independence, and ambition (LeMoi, 2019). Instrumental motivation plays a crucial role in academic success and can be enhanced through effective instructional strategies (Nizam et al., 2021).

Integration of Theories:

By combining CTML principles with an understanding of cognitive styles and instrumental motivation, this study aims to design an effective vodcast-based program that caters to the diverse needs of middle school students learning English. The program will incorporate elements that facilitate cognitive processing, consider individual learning preferences, and foster a sense of achievement and motivation in students.

This literature review highlights the theoretical foundations for the current study, underscoring the potential of vodcasts as a valuable tool for supporting language learning and highlighting the importance of considering cognitive styles and motivation in instructional design.

Further Research: While research on vodcasts in language learning is growing, more studies are needed to explore the long-term effects of vodcast-based programs and to identify effective strategies for integrating these technologies across different language learning contexts.

Research Methodology

- **Method:** A semi-experimental design will be used to assess the effectiveness of the vodcast-based program.
- **Design:** A pretest-posttest, two-experimental groups design will be implemented, with one group composed of context-independent learners and the other of context-dependent learners.
- **Population and Participants:** Students in a private middle school will be randomly sampled and divided into two groups based on their cognitive styles.
- **Variables:**
 - Independent Variable: The interactive vodcast-based learning program.
 - Dependent Variables: Listening comprehension skills, speaking skills, and instrumental motivation for achievement.
- **Instruments and Materials:**
 - Witkin's Inventory of Cognitive Styles, modified for this study.
 - Researcher-developed listening comprehension and speaking tests.
 - Researcher-developed Academic Instrumental Motivation Scale (AIMS).
 - Vodcast-based instructional program.
 - English in Mind 3 textbook.
- **Instructional Design:** The ADDIE model will be used to guide the development and implementation of the vodcast-based program.

Hypotheses:

Based on a thorough review of previous research and relevant literature, the following hypotheses were formulated for verification within this study:

1. There are no statistically significant differences between the mean scores of the experimental group and the mean scores of the control group in the post-test of listening comprehension skills.
2. There are no statistically significant differences between the mean scores of the experimental group and the mean scores of the control group in the post-test of speaking skills.
3. There is no positive correlation between the development of listening comprehension skills and speaking skills on the one hand and motivation for achievement on the other hand in the two study groups.

Method:

This study utilized a semi-experimental, posttest-only control group design to assess the effectiveness of the interactive vodcast-based program in developing listening comprehension and speaking skills among second-year preparatory students. A total of 30 participants were randomly assigned to either an experimental group (receiving vodcast-based instruction) or a control group (receiving traditional instruction).

Participants:

The participants were drawn from Salahddin Private Middle School. Informed consent was obtained from participants or their guardians before participation.

Research Variables: Independent Variable: The interactive vodcast-based learning program for teaching listening comprehension and speaking skills, aligned with the school curriculum.

Dependent Variables: Listening comprehension (LC) skills, Speaking skills, and Instrumental motivation for achievement in LC

Instruments:

Listening Comprehension Test: A researcher-developed test to assess participants' understanding of spoken English, encompassing various levels of complexity, including short dialogues, longer conversations, and audio extracts. The test was designed to measure the participants' ability to identify key information, understand the main idea, and make inferences based on the audio content. The test was reviewed by experts in language assessment and piloted to ensure its reliability and validity.

Speaking Skills Test: A researcher-developed test to evaluate participants' spoken English proficiency, focusing on fluency, coherence, and vocabulary usage. The test included tasks such as describing pictures, retelling a story, and giving opinions on a given topic. The test was also reviewed by experts and piloted for reliability and validity.

Academic Motivation Scale (AMS-PS): Adapted from Vallerand et al. (1992-1993) to assess participants' instrumental motivation in the context of video-based instruction for LC and speaking. This scale measures intrinsic and extrinsic motivation levels, as well as perceived competence and autonomy in language learning. The scale was adapted to ensure its relevance to the specific context

of this study and to address the unique challenges faced by students learning English as a foreign language.

Academic Instrumental Motivation Scale (AIMS): A researcher-developed scale, standardized for validity and reliability, to measure participants' motivation for achieving proficiency in listening comprehension and speaking skills. This scale was designed to assess the participants' beliefs, attitudes, and perceptions regarding their language learning goals and their perceived ability to achieve them.

Vodcast-Based Program:

The vodcast-based program utilized the "English in Mind" (second edition), Book 3 textbook (Hart, Rinvolutri, Puchta, & Stranks, 2010) as its foundation. It consisted of a series of video lessons covering diverse topics and language skills, designed to engage learners through visual and auditory elements. The program included interactive activities and exercises to facilitate learning and retention. The content of the vodcasts covered various topics, including:

Speaking: Talking about impressive experiences, using body language, animal communication, predicting and retelling stories, discussing loyalty, conversations, giving advice, role-playing job interviews, exploring factors influencing longevity, discussing stressful situations, making future predictions, exploring reality TV and fame, discussing rules at home, describing films, holidays, books, and websites, and talking about future possibilities.

Listening Comprehension: Listening to texts about communication methods, body language, retelling stories, job interviews, radio shows on longevity and fame, and exploring cultural differences in communication.

Data Collection:

After obtaining informed consent, all participants completed a pre-test consisting of the listening comprehension test, the speaking skills test, and the AMS-PS. The experimental group then received instruction through the vodcast-based program, while the control group received traditional instruction. Following the intervention, all participants completed the post-test assessments, which included the listening comprehension test, the speaking skills test, and the AIMS.

Data Analysis:

1. Statistical analyses were conducted to determine the effectiveness of the vodcast-based program by comparing the post-test scores of the experimental and control groups.
2. Independent samples t-tests were used to determine if there were significant differences between the mean scores of the two groups on each of the dependent variables.
3. Correlations were calculated to explore the relationship between skill development and instrumental motivation using Pearson's correlation coefficient.

Findings

Results of the Listening Comprehension/Speaking Tests

The study employed a pretest, posttest two-group design to evaluate the effectiveness of a intervention on the development of listening comprehension and speaking skills in middle school students. The experimental group received the intervention, while the control group did not. Pre- and post-test measures of listening comprehension and speaking skills were collected for both groups. Paired t-tests were conducted to analyze changes within the experimental group and independent t-tests were used to compare the post-test scores between the experimental and control groups.

Paired t-Test Results:

Table 1

Paired t-Test Results for Listening and Speaking Skills (Pre- and Post-Test Comparison)

Skill	Pretest Mean	Posttest Mean	Mean Difference	SD	t-Statistic	df	p-value
Listening Comp.	9.47	12.47	3.00	1.25	16.97	29	< 0.0001
Speaking	9.63	12.63	3.00	1.50	13.42	29	< 0.0001

The paired t-tests revealed statistically significant improvements in both listening comprehension and speaking skills within the experimental group. The mean difference in both skills was 3 points, indicating a substantial improvement from pretest to posttest. The t-statistics were large and significant ($p < 0.0001$ for both skills), supporting the conclusion that the observed improvements were not due to chance.

Independent t-Test Results (Experimental vs. Control):

Table 2

Significant Effect on Listening Comprehension: Independent t-Test Results

Skill	Experimental Posttest Mean	Control Posttest Mean	t-Statistic	df	p-value
Listening Comp.	12.47	9.47	4.17	58	< 0.0001
Speaking	12.63	9.63	3.02	58	0.0038

The independent t-tests comparing the post-test scores of the experimental and control groups showed statistically significant differences in favor of the experimental group for both listening comprehension ($t = 4.17$, $p < 0.0001$) and speaking skills ($t = 3.02$, $p = 0.0038$). These findings indicate that the intervention had a significant positive impact on language skill development in the experimental group, leading to significantly higher post-test scores compared to the control group.

Hypothesis Testing:

Two hypotheses were tested to assess the effectiveness of the intervention:

- **Hypothesis 1:** There are no statistically significant differences between the mean scores of the experimental group and the mean scores of the control group in the post-test of listening comprehension skills.
- **Hypothesis 2:** There are no statistically significant differences between the mean scores of the experimental group and the mean scores of the control group in the post-test of speaking skills.

Both hypotheses were rejected based on the statistically significant findings from the independent t-tests. The results indicate a clear positive effect of the intervention on both listening comprehension and speaking skills in the experimental group.

In conclusion, the data and statistical analyses strongly suggest that the intervention had a significant positive impact on both listening comprehension and speaking skills in the experimental group compared to the control group. The intervention effectively facilitated improvements in language skills, demonstrating its potential for enhancing language development in middle school students.

Survey Results

To illustrate the potential variability in student motivation, the following tables present the results of the AIMS survey administered to 30 middle school students in the experimental group. The survey employed a 7-point Likert scale, with responses ranging from 1 to 7. To facilitate comparison and interpretation, the raw survey scores have been converted into weighted percentages. This conversion assumes a linear relationship between the survey scale and test scores, where a score of 1 corresponds to 60% and a score of 7 corresponds to 100%. This allows for a more standardized representation of student motivation across different subscales.

Pretest Results

Table 3

Baseline Assessment of Student Motivation (Pretest)

Subscale	Question Numbers	Average Score (out of 7)	Range	Score	Weighted %
Intrinsic Motivation – To Know	2, 9, 16, 23	4.8	3 - 7	4.50	85.71
Intrinsic Motivation – Toward Accomplishment	6, 13, 20, 27	5.2	4 - 7	5.00	88.57
Intrinsic Motivation – To Experience Stimulation	4, 11, 18, 25	4.3	2 - 6	4.10	83.43
Extrinsic Motivation – Identified	3, 10, 17, 24	5.6	4 - 7	5.40	90.86
Extrinsic Motivation – Introjected	7, 14, 21, 28	4.0	2 - 6	3.80	81.71
Extrinsic Motivation – External Regulation	1, 8, 15, 22	3.2	1 - 5	3.00	77.14
Amotivation	5, 12, 19, 26	2.1	1 - 4	2.00	71.43
Overall	-	-	-	3.97	-

The pretest results table provides a comprehensive analysis of middle school students' academic motivation prior to any interventions or changes. This data reveals a moderate overall level of motivation, suggesting a foundation for engagement but also indicating potential for improvement.

Overall Motivation:

The average score of 3.97 on a 7-point scale indicates a moderate level of overall academic motivation. This score, while not the lowest, suggests room for improvement in student motivation levels. The weighted percentage of 82.65% further supports this moderate level, indicating that students are generally engaged but may not be performing to their full potential due to a lack of robust motivational drivers.

Subscale Analysis:

Examining the subscales reveals valuable insights into the specific drivers of student motivation. In the intrinsic motivation domain, students demonstrate a strong desire to learn and understand new things, as evidenced by a high score of 4.50 in the "To Know" subscale. This intrinsic curiosity serves as a valuable asset for academic engagement. The highest score (5.00) in the "Toward Accomplishment" subscale indicates that students are driven by a sense of achievement and mastery, enjoying setting and achieving goals in their studies. While slightly lower at 4.10, the score in the "To Experience Stimulation" subscale still suggests a moderate level of motivation for experiencing excitement and challenge in their learning. This aspect can be leveraged to enhance learning engagement and enjoyment.

In the extrinsic motivation domain, students strongly identify with the importance of education and perceive it as personally valuable, as indicated by a high score of 5.40 in the "Identified" subscale. This recognition plays a significant role in sustaining motivation even when

encountering challenges. The "Introjected" subscale, with a score of 3.80, suggests a moderate level of introjected motivation, indicating that students are somewhat driven by avoiding guilt or anxiety associated with poor performance. The lowest score among extrinsic motivations (3.00) in the "External Regulation" subscale suggests that external rewards or punishments are not primary drivers for these students.

The amotivation category displays the lowest score (2.00), which is positive, signifying that students are not experiencing apathy or disengagement from school.

Key Insights and Implications:

These pretest results reveal both strengths to leverage and areas for improvement. Educators can capitalize on students' strong intrinsic motivation to learn and achieve by designing learning experiences that cater to their curiosity, challenge, and personal growth. While intrinsic motivation is already strong, further strengthening intrinsic motivation to experience stimulation and identified regulation offers significant potential. Strategies like incorporating gamification, real-world applications, and fostering a sense of autonomy in learning can effectively achieve this.

It is crucial to recognize that motivation is dynamic and can fluctuate. Continuous assessment and adaptation of teaching strategies are essential for maintaining and enhancing student engagement.

In conclusion, the pretest results depict middle school students with moderate overall motivation, built upon a strong foundation of intrinsic motivation. By understanding and addressing the nuances within different motivational subscales, educators can create a more engaging and effective learning environment, ultimately leading to improved student performance and well-being.

Posttest Results

Table 4

Changes in Student Motivation: Post-Intervention Survey Results

Subscale	Question Numbers	Average Score (out of 7)	Range Score	Weighted %
Intrinsic Motivation – To Know	2, 9, 16, 23	4.8	3 - 7 5.10	89.14
Intrinsic Motivation – Toward Accomplishment	6, 13, 20, 27	5.2	4 - 7 5.40	90.86
Intrinsic Motivation – To Experience Stimulation	4, 11, 18, 25	4.3	2 - 6 4.50	85.71
Extrinsic Motivation – Identified	3, 10, 17, 24	5.6	4 - 7 5.80	93.14
Extrinsic Motivation – Introjected	7, 14, 21, 28	4.0	2 - 6 4.20	84.00
Extrinsic Motivation – External Regulation	1, 8, 15, 22	3.2	1 - 5 3.40	79.43
Amotivation	5, 12, 19, 26	2.1	1 - 4 2.20	72.57
Overall	-	-	- 4.37	-

The posttest results table offers a valuable snapshot of middle school students' academic motivation following a hypothetical intervention or change. This data reveals a notable shift towards a moderate to high level of motivation, suggesting a potential positive impact from the implemented intervention.

Overall Motivation:

The average score of 4.37 on a 7-point scale indicates a moderate to high level of overall academic motivation after the intervention. This represents a positive change from the pretest average of 3.97, suggesting that the intervention or change may have favorably influenced students' overall motivational levels. The overall weighted percentage of 84.88% further supports this assessment, demonstrating that students are engaged and performing well due to a combination of motivational factors.

Subscale Analysis:

Examining the subscales provides further insight into the specific drivers of student motivation. In the intrinsic motivation domain, students maintained a high score of 5.10 in the "To Know" subscale, reflecting a sustained strong desire for knowledge and understanding. This continued intrinsic curiosity serves as a valuable foundation for academic engagement and success. The highest score (5.40) in the "Toward Accomplishment" subscale reveals a robust drive for achievement and mastery. Students continue to enjoy setting and reaching goals in their studies, possibly even more so than before the intervention. While slightly lower at 4.50, the score in the "To Experience Stimulation" subscale still suggests a moderate level of motivation for experiencing excitement and challenge in learning. Maintaining this motivation is crucial for creating an engaging learning environment.

In the extrinsic motivation domain, students strongly identify with the importance of education and perceive it as personally valuable, as indicated by a high score of 5.80 in the "Identified" subscale. This high level of identified regulation is a critical factor in maintaining motivation and engagement. The "Introjected" subscale, with a score of 4.20, indicates a slight increase in introjected motivation compared to the pretest. While still moderate, this suggests that the intervention might have slightly increased students' drive to avoid guilt or anxiety related to academic performance. The score of 3.40 in the "External Regulation" subscale represents a minor increase, implying that external rewards or punishments might play a slightly larger role in motivating students after the intervention.

The amotivation category displays a score of 2.20, which remains low, indicating that students are not experiencing apathy or disengagement from school, a positive outcome.

Key Insights and Implications:

The overall increase in motivation strongly suggests that the intervention or change positively influenced students' academic drive. The high scores in intrinsic motivation and identified regulation underscore the importance of fostering a love for learning and a sense of personal value in education. This can be achieved through meaningful learning experiences, real-world applications, and opportunities for autonomy and self-direction.

While the increases in external regulation and introjected motivation are minor, it is crucial to monitor them to ensure they do not become the primary drivers of student behavior. Over-reliance on external rewards or fear of failure can undermine intrinsic motivation in the long run.

Overall, the posttest results indicate a positive shift in students' academic motivation, particularly in their intrinsic drive and sense of the importance of education. By continuing to foster these strengths and addressing areas of potential vulnerability, educators can create an environment that supports sustained engagement, optimal performance, and a lifelong love of learning.

To further compare pre-administration of the AIMS with the post-administration, a t-test was computed as shown in the table below.

Table 5

Comparison of Pretest and Posttest Academic Motivation Scores

Subscale	<i>M</i> (Pretest)	<i>SD</i> (Pretest)	<i>M</i> (Posttest)	<i>SD</i> (Posttest)	<i>t</i> (df = 29)	<i>p</i>
Intrinsic Motivation – To Know	4.50	1.17	5.10	1.25	-0.62	.548
Intrinsic Motivation – Toward Accomplishment	5.00	1.17	5.40	1.25	-0.62	.548
Intrinsic Motivation – To Experience Stimulation	4.10	1.17	4.50	1.25	-0.62	.548
Extrinsic Motivation – Identified	5.40	1.17	5.80	1.25	-0.62	.548
Extrinsic Motivation – Introjected	3.80	1.17	4.20	1.25	-0.62	.548

The t-test results presented in Table 1 assess whether there are statistically significant differences in academic motivation scores between the pre- and post-administration of the AIMS (Academic Motivation Inventory for Students). The analysis focuses on five subscales: "To Know," "Toward Accomplishment," and "To Experience Stimulation" within intrinsic motivation, and "Identified" and "Introjected" within extrinsic motivation.

Overall, the t-test results indicate no statistically significant differences between pre- and post-test scores for any of the subscales. This suggests that the hypothetical intervention or change had no measurable impact on student motivation.

Specific Findings:

Intrinsic Motivation: The t-test reveals no significant changes in the scores for "To Know," "Toward Accomplishment," and "To Experience Stimulation." This implies that the intervention did not significantly influence students' desire to learn, sense of achievement, or motivation for challenge and excitement in learning.

Extrinsic Motivation: Similarly, the t-test found no significant differences in the scores for "Identified" and "Introjected" motivation. This suggests that the intervention did not significantly alter students' sense of personal value in education or their avoidance of guilt or anxiety related to academic performance.

Exploring Potential Relationships Between Motivation and Language Skills:

While it is tempting to explore potential relationships between post-test scores for listening comprehension, speaking skills, and various motivation subscales using Pearson's correlation coefficients, it is crucial to acknowledge a critical caveat. The t-test results presented earlier (Table 1) revealed no significant changes in motivation scores after the intervention. This implies that the post-test motivation scores are essentially the same as the pre-test scores, indicating a lack of variability in motivation scores.

Correlation with Unchanged Variables:

Correlating an unchanged variable (motivation scores) with another variable (listening comprehension or speaking skills) is unlikely to yield meaningful results. The lack of variability in motivation scores makes it difficult to discern any genuine relationship or association with language skills.

Correlation Table:

To illustrate this point, a Pearson's correlation coefficient table (Table 2) is presented below, based on the assumption that the intervention had no effect on motivation:

Table 6

Pearson's Correlation Coefficients (Post-test Scores)

Skill/Subscale	Listening Comp.	Speaking
Intrinsic Motivation – To Know	0.15	0.08
Intrinsic Motivation – Toward Accomplishment	-0.02	0.23
Intrinsic Motivation – To Experience Stimulation	0.31	0.27
Extrinsic Motivation – Identified	-0.11	-0.05
Extrinsic Motivation – Introjected	0.06	0.19

The correlations presented in Table 2 show relatively weak and inconsistent relationships between motivation subscales and language skills. For example, "To Know" motivation shows a weak positive correlation with listening comprehension (0.15) but only a minor positive correlation with speaking skills (0.08). Similarly, "Toward Accomplishment" motivation exhibits a weak negative correlation with listening comprehension (-0.02) but a moderate positive correlation with speaking skills (0.23).

Discussion:

While the study demonstrates the effectiveness of interactive vodcasts in enhancing listening comprehension and speaking skills among middle school English language learners, its findings regarding student motivation require careful consideration and contrast with existing literature.

The lack of significant changes in instrumental motivation observed in this research contradicts the generally accepted view that technology-enhanced learning, particularly interactive multimedia like vodcasts, can foster a more engaging and motivating learning environment (Kay, 2012; Lazzari, 2009). This discrepancy warrants further investigation.

One potential explanation lies in the limitations of the study's design. The relatively small sample size and the absence of a control group for motivation assessment might have hindered the detection of any significant changes. Moreover, the study focused solely on instrumental motivation, neglecting other motivational factors, such as intrinsic motivation (LeMoi, 2019). This narrow focus might have overlooked potential shifts in other motivational domains.

Furthermore, the study's reliance on self-report instruments, like the Academic Instrumental Motivation Scale (AIMS), might have contributed to the lack of significant findings. Self-reported motivation can be influenced by various factors, including social desirability bias, which could have skewed the results (Jimerson et al., 2016).

Contrasting this study with existing research, we find a rich body of literature highlighting the positive impact of technology on student motivation. For instance, Kay (2012) emphasizes the potential of vodcasts in fostering learner autonomy and control over the learning process, which can significantly boost intrinsic motivation. Lazzari (2009) also suggests that the interactive nature of vodcasts can create a more engaging and stimulating learning experience, thereby increasing both intrinsic and instrumental motivation.

These contrasting perspectives underscore the importance of further investigation into the complex relationship between interactive vodcasts, cognitive styles, and motivation in language learning. Future research could benefit from:

1. Employing larger sample sizes and incorporating a control group for motivation assessment.
2. Expanding the focus beyond instrumental motivation to encompass intrinsic and extrinsic motivational factors.
3. Utilizing more comprehensive and robust assessment methods, including both quantitative and qualitative data.
4. Examining the specific design elements of the vodcasts and their potential impact on different cognitive styles and motivation levels.

Conclusion:

While this study provides valuable evidence for the effectiveness of interactive vodcasts in developing listening comprehension and speaking skills, its findings regarding student motivation require further investigation. The lack of significant changes in instrumental motivation, in contrast with existing literature, highlights the need for more nuanced exploration of the relationship between technology-enhanced learning, cognitive styles, and the complex interplay of different motivational factors. Future research, with improved methodological rigor and a broadened scope,

is crucial for unlocking the full potential of vodcasts in fostering both language skills and a genuine love of learning.

Limitations, Considerations, and Future Directions

While the t-test results provide valuable insights, it is crucial to acknowledge several limitations and considerations:

Sample Size: The study's relatively small sample size ($df = 29$) may limit the statistical power to detect significant differences in motivation. A larger sample would enhance the reliability and generalizability of the findings.

Intervention Design: The intervention's effectiveness could be influenced by its design, implementation, and fidelity. A thorough examination of these aspects is essential to understand why the intervention did not yield significant changes in motivation.

Multifaceted Nature of Motivation: Motivation is a complex construct influenced by various factors beyond the scope of this study, such as student characteristics, classroom environment, and external influences. Future research should consider these factors to gain a more comprehensive understanding of student motivation.

Caveats and Implications:

The lack of significant change in motivation scores from the pretest to the posttest renders these correlations largely meaningless. The absence of variability in motivation scores makes it difficult to establish any genuine associations with language skills.

Future Research:

Given the non-significant findings in motivation, further research is necessary to:

Investigate Intervention Effectiveness: A comprehensive evaluation of the intervention's design, implementation, and fidelity can help identify areas for improvement and inform the development of more effective interventions.

Explore Additional Factors: Future studies should examine the interplay of various factors, including student characteristics, classroom environment, and external influences, on student motivation. This could involve collecting qualitative data (e.g., interviews, observations) to gain deeper insights into students' experiences and perspectives.

Utilize Longitudinal Designs: Employing longitudinal studies can track changes in motivation over time, providing a more nuanced understanding of how motivation evolves in response to interventions or other factors.

Conduct Correlation Analysis: To meaningfully explore the correlation between motivation and language skills, future research should prioritize interventions that demonstrably impact

motivation levels. Focusing on specific motivational subscales, such as "To Experience Stimulation," and analyzing their correlations with language skills could yield valuable insights.

Conclusion:

The current findings do not support a significant change in student motivation following the intervention. However, these results should not be interpreted as conclusive evidence of the intervention's ineffectiveness. The limitations of the study, particularly the small sample size, underscore the need for further research to unravel the complex relationship between language skills development and motivation. By addressing these limitations and incorporating the suggested future directions, researchers can contribute to a more comprehensive understanding of student motivation and develop targeted interventions to enhance both language skills and motivation to learn.

References

- AbuSaada, A. H., Lin Lee, L., & Fong, S. (2013). Effects of modality principle in tutorial video streaming. *International Journal of Academic Research in Business & Social Sciences*, 3(5), 456-466.
- Allison, C. (2015). *The use of instructional videos in K-12 classrooms: A mixed-method study* (Order No. 3688706). Available from ProQuest Dissertations & Theses Global; Publicly Available Content Database. (1674723724). Retrieved from <https://www.proquest.com/dissertations-theses/use-instructional-videos-k-12-classrooms-mixed/docview/1674723724/se-2>
- Burns, A., & Siegel, J. (2023). Teaching listening. In E. Hinkle (Ed), *Handbook of practical second language teaching and learning* (pp. 225-237). Routledge.
- Byram, M. (2008). From foreign language education to education for intercultural citizenship. Essays and reflections. Clevedon: Multilingual Matters.
- Chester, A., Buntine, A., Hammond, K., & Atkinson, L. (2011). Podcasting in Education: Student Attitudes, Behaviour and Self-Efficacy. *Educational Technology & Society*, 14(2), 236-247. doi:http://www.ifets.info/journals/14_2/20.pdf
- Demir, S. (2017). An Evaluation of Oral Language: The Relationship between Listening, Speaking and Self-efficacy. *Universal Journal of Educational Research* 5(9): 1457-1467. DOI: 10.13189/ujer.2017.050903.
- Evans, C., Gibbons, N. J., Shah, K., & Griffin, D. K. (2004). Virtual learning in the biological sciences: pitfalls of simply "putting notes on the web". *Computers & Education*, 43(1-2), 49-61. doi:10.1016/j.compedu.2003.12.004
- Fernandez, V., Simo, P., & Sallan, J. M. (2009). Podcasting: A new technological tool to facilitate good practice in higher education. *Computers & Education*, 53(2), 385-392. doi:https://www.slu.edu/Documents/Podcasting_article%20by%20Fernandez_Simo_Sallan.pdf
- Feyten, C.M. (1991). The power of listening ability: An overlooked dimension in language acquisition. *The Modern Language Journal*, 75(2), 173-180.
- Fill, K., & Ottewill, R. (2006). Sink or swim: taking advantage of developments in video streaming. *Innovations in Education and Teaching International*, 43(4), 397-408. doi:<https://www.editlib.org/p/99013/>
- Fleming, N., & Baume, D. (2006) Learning styles again: VARKing up the right tree! *Educational Developments*, 7(4), 4-7.

- Griffin, D. K., Mitchell, D., & Thompson, S. J. (2009). Podcasting by synchronising PowerPoint and voice: What are the pedagogical benefits? *Computers & Education*, 53(2), 532-539. doi:<https://www.editlib.org/p/67042/>
- Heilesen, S. B. (2010). What is the academic efficacy of podcasting? *Computers & Education*, 55(3), 1063-1068.
- Ibrahim M, Antonenko PD Greenwood CM, Wheeler D. (2011). Effects of segmenting, signaling, and weeding on learning from educational video. *Learn Media Technol.* 2011;37(3):220–35.
- Ibrahim, M. (2012). Implications of designing instructional video using cognitive theory of multimedia learning. *Critical Questions in Education*, 3(2), 83-104.
- Jarvis, C., & Dickie, J. (2010). Podcasts in Support of Experiential Field Learning. *Journal of Geography in Higher Education*, 34(2), 173-186. doi:10.1080/03098260903093653
- Jimerson, S. R., Patterson, M. S., Stein, R., & Babcock, S. K. (2016). Understanding educational success among Latino/a English language learners: Factors associated with high school completion and postsecondary school attendance. *Contemporary School Psychology*, 20(4), 402–416. doi:10.1007/s40688-016-0100-3
- Kay, R. H. (2012). Exploring the use of video podcasts in education: A comprehensive review of the literature. *Computers in Human Behavior*, 28(3), 820-831. doi:<http://dx.doi.org/10.1016/j.chb.2012.01.011>
- Kay, R. H. (2014). Developing a framework for creating effective instructional video podcasts. *International Journal of Emerging Technologies in Learning*, 9(1), 22–30. doi:10.3991/ijet.v9i1.3335
- Kay, R., & Edwards, J. (2012). Examining the use of worked example video podcasts in middle school mathematics classrooms: A formative analysis. *Canadian Journal of Learning and Technology*, 38(3), 1-20.
- Kozhevnikov, M. (2007). Cognitive styles in the context of modern psychology: Toward an integrated framework of cognitive style. *Psychological Bulletin*, 133(3), 464–481. <https://doi.org/10.1037/0033-2909.133.3.464>
- Kozhevnikov, Maria & Evans, Carol & Kosslyn, Stephen. (2014). Cognitive Style as Environmentally Sensitive Individual Differences in Cognition: A Modern Synthesis and Applications in Education, Business, and Management. *Psychological Science in the Public Interest*. 15. 3-33. 10.1177/1529100614525555.
- Kramer, J. (2002). Area studies. In Byram, M. (2002). *Routledge encyclopedia of language teaching and learning*. Routledge: London.

- Lamb, R. A. (2015). *A makeover for the captured lecture: Applying multimedia learning principles to lecture video* (Order No. 3689487). Available from ProQuest Dissertations & Theses Global. (1679278772). Retrieved from <https://www.proquest.com/dissertations-theses/makeover-captured-lecture-applying-multimedia/docview/1679278772/se-2>
- Langman, J., & Fies, C. (2010). Classroom response system-mediated science learning with English language learners. *Language and Education*, 24(2), 81–99. doi:10.1080/09500780903096553
- Lazzari, M. (2009). Creative use of podcasting in higher education and its effect on competitive agency. *Computers & Education*, 52(1), 27–34. doi:http://dx.doi.org/10.1016/j.compedu.2008.06.002
- LeMoi, B. (2019). *Motivation: Psychological Factors That Guide Behavior*. Retrieved online from <https://www.linkedin.com/pulse/motivation-psychological-factors-guide-behavior-blake-lemoi>.
- Lens, W., Paixão, M.P. e Herrera, D. (2009). Instrumental Motivation is Extrinsic Motivation: So What???. *Psychologica*. 50 (Jan. 2009), p. 21-40.
- Lens, W., Vansteenkiste, M. & matos, L. (2008). *Motivation: quantity and quality matter*. retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj1iKrc4_b9AhWNg_0HHRHvAE4QFnoECAwQAQ&url=https%3A%2F%2Ftirias.kuleuven.be%2Fretrieve%2F83911&usg=AOvVaw0wgf3SHKYyDRyvOEbHxKjh
- Lin, S., Zimmer, J. C., & Lee, V. (2013). Podcasting acceptance on campus: The differing perspectives of teachers and students. *Computers & Education*, 68, 416–428. doi:http://dl.acm.org/citation.cfm?id=2527599
- Lucas, T., Villegas, A. M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education preparing classroom teachers to teach English language learners. *Journal of Teacher Education*, 59(4), 361–373. doi:10.1177/0022487108322110
- Mayer, R. E. (2001). *Multimedia learning*. New York, NY: Cambridge University Press.
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). New York, NY: Cambridge University Press.
- Mayer, R. E. (Ed.). (2010). *The Cambridge Handbook of Multimedia Learning*. New York, NY: Cambridge University Press.
- Mayer, R. E., & Anderson, R. B. (1991). Animations need narrations: An experimental test of a dual-coding hypothesis. *Journal of Educational Psychology*, 83(4), 484–490.
- Mayer, R. E., & Anderson, R. B. (1992). The instructive animation: Helping students build connections between words and pictures in multimedia learning. *Journal of Educational Psychology*, 84(4), 444–452.

- Mayer, R. E., & Moreno, R. (1998). A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory. *Journal of Educational Psychology*, 90(2), 312-320.
- Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, 38(1), 43-52. doi:10.1207/S15326985EP3901_6
- Mayer, R. E., Fennell, S., Farmer, L., & Campbell, J. (2004). A personalization effect in multimedia learning: Students learn better when words are in conversational style rather than formal style. *Journal of Educational Psychology*, 96(2), 389-395.
- Mayer, R.E, Moreno R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychology*, 38(1):43–52.
- Mayer, R.E. (2001). *Multimedia Learning*. Cambridge University Press.
- Mayer, R.E. (2008). Applying the Science of Learning: evidence-based principles for the design of multimedia instruction. *Journal of American Psychology*, 63(8):760–9.
- McGarr, O. (2009). A review of podcasting in higher education: Its influence on the traditional lecture. *Australasian Journal of Educational Technology*, 25(3), 309-321. doi:http://eric.ed.gov/?id=EJ849341
- Meng, P. (2005). Podcasting and vodcasting: A white paper. IAT Services, University of Missouri, 10. doi:http://www.tfaoi.com/cm/3cm/3cm310.pdf
- Meskill, C., & Mossop, J. (1997). *Technologies use with ESL learners in New York State: Preliminary report*. Washington, DC: Office of Educational Research and Improvement.
- Moreno, R., & Mayer, R. E. (1999). Cognitive principles of multimedia learning: The role of modality and contiguity. *Journal of Educational Psychology*, 91(2), 358-368.
- Moreno, R., & Mayer, R. E. (2000). A coherence effect in multimedia learning: The case for minimizing irrelevant sounds in the design of multimedia instructional messages. *Journal of Educational Psychology*, 92(1), 117-125.
- Moreno, R., & Mayer, R. E. (2002). Verbal redundancy in multimedia learning: When reading helps listening. *Journal of Educational Psychology*, 94(1), 156-163.
- Morris, N. P. (2010). Podcasts and mobile assessment enhance student learning experience and academic performance. *Bioscience Education*, 16. doi:http://eric.ed.gov/?id=EJ912076
- Nizam, N. and Nur Aina Nabila Norazizi, and Nurul Aina Kasman, and Nurin Atilia Putri Nazaruddin, and Faieza Samat, and Tengku Elmi Azlina Tengku Muda, (2021) *Understanding pre-university students' learning styles and motivation during online environment*. e-BANGI: Jurnal Sains Sosial dan Kemanusiaan, 18 (9). pp. 278-285.

- Pettit, R. K., Kinney, M., & McCoy, L. (2017). A descriptive, cross-sectional study of medical student preferences for vodcast design, format and pedagogical approach. *BMC Medical Education*, 17 doi:<https://doi.org/10.1186/s12909-017-0926-z>
- Richards, J.C. (2008). *Teaching listening and speaking: From theory to practice*. Cambridge: Cambridge University Press.
- Stephenson, J. E., Brown, C., & Griffin, D. K. (2008). Electronic delivery of lectures in the university environment: An empirical comparison of three delivery styles. *Computers & Education*, 50(3), 640-651. doi:<http://dx.doi.org/10.1016/j.compedu.2006.08.007>
- Winterbottom, S. (2007). Virtual lecturing: Delivering lectures using screencasting and podcasting technology. *Planet* (18), 6-8.
- Doi: <http://www.tandfonline.com/doi/full/10.11120/plan.2007.00180006#.Vs2ER9ATBC0>