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RESEARCH ARTICLE

EXPLORING THE IMPACT OF DREAM OF THE RED CHAMBER VIDEO VIEWING ON JUNIOR HIGH SCHOOL STUDENTS' LEARNING ENGAGEMENT IN CHINESE LANGUAGE CLASSES

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Abstract

This study investigates the relationships among learning interest, flow experience, student engagement, and perceived utilitarian value in the context of multimedia-enhanced Chinese language instruction focusing on Dream of the Red Chamber. Guided by social cognitive theory and Csikszentmihalyi's flow theory, this research examined how instructional multimedia materials influence students' learning processes and outcomes. Using a purposive sampling method, 79 valid questionnaires were collected from junior high school students. The research employed Partial Least Squares (PLS) analysis via Visual PLS 1.04 to assess both measurement and structural models. Results indicate that students with higher flow experience exhibit greater learning engagement ($\beta = .342$, $p < .001$), and those with higher learning interest demonstrate more active engagement in the learning process ($\beta = .502$, $p < .001$). Furthermore, higher levels of learning engagement are positively associated with stronger perceptions of the practical value of learning ($\beta = .602$, $p < .001$). These findings provide empirical support for the effectiveness of multimedia integration in Chinese language education and offer practical insights for enhancing student motivation and engagement through technology-enhanced literary instruction.

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Introduction:-

In The Analects, Confucius once stated: "Those who know are not as good as those who love to learn; those who love to learn are not as good as those who take joy in it," and "I was not born with knowledge; I love antiquity and am diligent in seeking it." These phrases---such as "love to learn," "take joy in learning," and "love antiquity"---demonstrate that even over two thousand years ago, Confucius had already recognized the vital role of interest in the learning process. Interest is regarded as a powerful intrinsic motivation that drives individuals to engage in active learning.

In real classroom settings, factors that influence teacher-student interactions can be broadly categorized into subjective and objective dimensions. First, teachers must prioritize the creation of an effective learning environment---carefully arranging lesson timing, pacing, and providing appropriate teaching equipment and

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facilities to support instructional goals. Second, the selection of suitable and engaging teaching materials is crucial, as it directly impacts students' learning motivation and interest. Third, the creative and strategic use of instructional methods plays a key role; if teachers adopt innovative and interactive approaches, they can significantly enhance learning outcomes and promote the achievement of educational objectives.With the advancement of technology, multimedia instructional materials have been widely applied in education in recent years. Multimedia not only offers vivid and dynamic presentation but also provides learners with multiple channels of information through sensory stimulation. This can effectively increase learning motivation and improve learning outcomes by deepening students' understanding and memory of the content. For instance, in junior and senior high school classical literature classes, the chapter Granny Liu Visits the Grand View Garden from Dream of the Red Chamber is a required reading. Although the narrative is rich and intriguing, students unfamiliar with the novel may struggle due to its complex plotlines and numerous characters. Traditional text-based learning may lead to rote memorization and diminished interest. In contrast, incorporating video-assisted instruction can visually convey otherwise abstract scenes, helping students to more easily grasp plot developments and character relationships.Therefore, this study aims to investigate the relationships among four key constructs in the context of Chinese language learning: learning interest, flow experience, learning engagement, and perceived utilitarian value. By exploring whether these variables are significantly correlated, the study seeks to deepen our understanding of the factors influencing students' motivation and effectiveness in Chinese learning, and to provide empirical insights for classroom instruction.

2.Theoretical Framework and Literature Review

This study is grounded in two primary theoretical frameworks: Social Cognitive Theory (Bandura, 1986) and Flow Theory (Csikszentmihalyi, 1975, 1990). These complementary perspectives provide a comprehensive foundation for understanding how students engage with multimedia learning materials and how this engagement influences their learning processes and outcomes.

2.1 Social Cognitive Theory as a Foundation for Learning Interest and Engagement

Bandura's (1986) Social Cognitive Theory posits that learning occurs within a social context through observation, imitation, and modeling. This theory emphasizes the triadic reciprocal determinism among personal factors, environmental factors, and behavioral patterns. In educational settings, this translates to interactions between students' cognitive/affective states (learning interest), contextual elements (multimedia instructional materials), and observable responses (engagement behaviors).

Schunk and Zimmerman (2007) extended this framework by highlighting self-regulatory processes in learning, suggesting that students who can effectively regulate their motivation and cognition demonstrate greater engagement and achievement. When students find learning materials personally relevant and interesting, they are more likely to activate self-regulatory mechanisms that sustain attention and effort—even when faced with challenging content such as classical literature.

Social Cognitive Theory also explains why multimedia presentations can enhance learning effectiveness: they provide vicarious learning experiences that allow students to observe and mentally rehearse complex narrative structures before engaging with the written text. This aligns with Mayer's (2001) cognitive theory of multimedia learning, which suggests that students learn more deeply when presented with both words and pictures rather than words alone.

2.2Learning Interest.

From a psychological perspective, interest and motivation, though not identical, are both considered intrinsic forces that drive individual behavior. Dewey (1913), in his work Interest and Effort in Education, emphasized that when learners develop an interest in the learning activity itself, they are more likely to engage actively, thereby enhancing both motivation and learning effectiveness. Furthermore, studies by Wigfield and Eccles (1992) and Zimmerman (2000) have shown that learners' perception of task value, self-efficacy, and goal orientation are all positively associated with their learning performance, level of participation, and effort.

Silvia (2001) proposed the interest-construction model, which argues that interest is not an innate and fixed trait, but rather a product of dynamic interaction between the individual and the environment. Interest is developed through a process of transformation and internalization of emotional learning experiences, shaped by personal traits and situational factors. When students fail to construct learning interest, it may result in psychological burden or resistance to learning.

In addition, Ainley and Ainley (2011) analyzed adolescents' emotional responses to science learning and found that emotional interest is a significant predictor of both learning engagement and comprehension, particularly in abstract or complex subject areas. Their findings highlight the mediating role of interest in reducing learning anxiety and enhancing focus and flow experience during the learning process.

In summary, previous research suggests that learning interest is strongly related to learning motivation, learning emotions, flow experience, and student engagement. Accordingly, this study proposes the following hypothesis:

H1: Learning interest is significantly associated with learning engagement.

2.3Flow Experience.

"Flow," also referred to as a state of concentration or immersive experience, is a psychological concept introduced(Csikszentmihalyi, 1970). He defined flow as an optimal psychological state in which individuals are fully absorbed in an activity, experiencing a high level of involvement and satisfaction (Csikszentmihalyi, 1975). This experience can occur in both static and dynamic activities. When individuals become completely engaged, they tend to block out external distractions, lose track of time, and enter a highly focused and self-transcendent mental state.

According to Freeman (1992), flow experiences typically occur during activities characterized by high intrinsic motivation, autonomy, and positive emotions—such as exploratory learning or leisure activities. Flow not only enhances individuals' sense of satisfaction and accomplishment but also contributes to skill development and a stronger sense of self-efficacy.

Csikszentmihalyi (1975, 1990) further illustrated flow theory through a graphical model, identifying challenge and skill as the two key components that determine the onset of flow. When the perceived level of challenge matches the individual's skill level, the flow state is likely to occur (as in Zones C1 and C4). In particular, Zone C4 represents a more complex and demanding form of flow, requiring higher levels of ability to meet higher challenges—making it a rich yet less stable state. In contrast, if the activity is insufficiently challenging (Zone C2), learners may feel bored; if the challenge is too great relative to their skills (Zone C3), they may experience anxiety. Therefore, achieving flow depends on the alignment between the perceived challenge and the individual's skill level.

In recent years, the concept of flow has been widely applied in educational contexts. Shernoff et al. (2014), using the Experience Sampling Method (ESM), found that students who entered a flow state during learning activities showed greater engagement and autonomy. Flow was especially likely to occur in learning environments that combined high levels of challenge with strong instructional support, fostering positive learning motivation.

In summary, flow plays a crucial role in enhancing students' engagement and sustained participation in the learning process. Based on the aforementioned literature, this study proposes the following hypothesis:

H2: Flow experience is significantly associated with learning engagement.

2.4Student Engagement

The term student engagement originates from the broader concept of engagement. Pascarella and Terenzini (1991) were among the first to apply this concept in the field of student learning, emphasizing that students' participation in campus learning activities contributes to the development of higher-order thinking and overall personal growth. Chapman (2003) defined student engagement as the willingness and actual behavior of students in participating in school courses and activities, including tasks such as completing assignments, engaging in class discussions, and following teachers' instructions. Skinner and Belmont (1993) further described engagement as sustained learning behavior accompanied by emotional involvement, distinguishing it from temporary or passive forms of participation. Glanville and Wildhagen (2007) viewed engagement as a psychological construct involving students' cognitive, behavioral, and emotional commitment to learning tasks, and noted its value as a key indicator of educational effectiveness.

Scholars generally categorize student engagement into three core dimensions:Behavioral Engagement – the extent to which students actively participate in classroom activities and school-related opportunities;Cognitive Engagement – the use of deep learning strategies, goal-setting, and willingness to tackle academic challenges;Emotional Engagement – students' affective responses toward subjects, teachers, peers, and the learning environment (Chapman, 2003).Taken together, these studies suggest that student engagement is a multifaceted construct encompassing emotional, cognitive, and behavioral dimensions. When students exhibit high levels of engagement, they are more likely to participate meaningfully in class, internalize knowledge, and, importantly, perceive greater value and utility in what they learn. Therefore, this study proposes the following hypothesis:

H3: Student engagement is significantly associated with perceived utilitarian value.

2.5 Utilitarian Value.

From a psychological perspective, experience is considered a comprehensive process arising from the interaction between individuals and their external environment (Richardson, 1984). Pine and Gilmore (1998) categorized experiences into four types based on the degree of consumer participation and the nature of the experiential environment: entertainment, educational, escapist, and aesthetic experiences. When these types of experiences are effectively incorporated into instructional settings—especially through the design of multimedia materials—they can balance both enjoyment and educational value, thereby enhancing the utilitarian value of teaching.

Deighton and Grayson (1995) suggested that visual stimulation and contextual entertainment can provide users with a sense of enjoyment and satisfaction. Similarly, Day (1981) argued that fun can be embedded in any activity, stimulating excitement and intrinsic pleasure. Dempsey et al. (1996) further emphasized that games offer multiple functions such as entertainment, instruction, skill exploration, practice, self-esteem enhancement, and attitude change; when appropriately integrated into educational contexts, games can offer substantial pedagogical benefits.

Malone (1980) found that engaging and entertaining learning scenarios are effective in stimulating learners' cognitive interest and curiosity, thereby enhancing the attractiveness of information. Moreover, Ellington, Addinall, and Percival (1982) demonstrated through experimental research that game-based learning improves attention span and fosters the development of higher-order cognitive skills.

In the context of digital learning, Hamari et al. (2016) noted that when learning activities incorporate gamification and interactive digital interfaces, students tend to perceive a higher level of utilitarian value, which enhances their learning motivation and sustained engagement. Their findings indicated that students who believe that the learning content is beneficial to their academic performance or future goals tend to demonstrate higher levels of engagement and improved learning outcomes.

In summary, when learning activities are both enjoyable and practically beneficial, students are more likely to invest effort and develop a stronger sense of learning relevance. Based on the literature reviewed, this study proposes the following hypothesis:

H4: Utilitarian value is significantly and positively associated with students' engagement and outcomes in Chinese language learning.

3. Research Design

3.1 Research Model

This study includes four main variables: Learning Interest, Flow Experience, Student Engagement, and Utilitarian Value. The primary objective of this research is to investigate whether students' learning interest and flow experience in Chinese language classes significantly influence their level of learning engagement, and to further examine the predictive effect of learning engagement on perceived utilitarian value.

Based on theoretical foundations and empirical findings from previous literature, it is inferred that learning interest and flow experience serve as antecedents of student engagement. In other words, when students find learning activities enjoyable and are fully immersed in them, they are more likely to display proactive learning behaviors and attitudes. Furthermore, student engagement is expected to positively influence students' perception of the practical value of the learning content.

In summary, the proposed research model, as illustrated in Figure 1, outlines the hypothesized relationships among the four constructs under investigation.

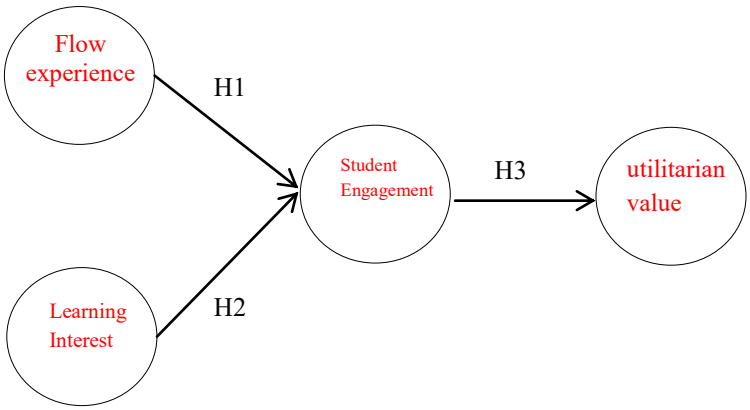

Figure1 Structural model diagram

3.2 Research Method and Procedure

This study employed a quantitative research design using survey methodology to examine the relationships among the key variables. The research addresses gaps in previous studies by specifically examining how multimedia resources affect student engagement in Chinese language learning contexts, particularly when working with classical literary texts.The participants in this study were first-grade junior high school students. The instructional content focused on the Chinese literature unit Granny Liu Visits the Grand View Garden from Dream of the Red Chamber. Multimedia resources were incorporated into the teaching process through a multi-phase approach:

(1) Pre-class preparation phase: Students were asked to watch a selected online video from the "Hotline Tracking: Dream of the Red Chamber" series, which provided visual context for the complex narrative.
(2) In-class instruction phase: Teachers facilitated guided discussions about the video content, made connections to the written text, and clarified complex character relationships and plot elements.
(3) Post-instruction assessment phase: After completing the instructional unit, students filled out structured questionnaires measuring their learning interest, flow experience, engagement, and perceived utilitarian value.

This methodological approach allowed for a comprehensive examination of how multimedia integration affects multiple aspects of the learning process, from initial interest through to perceived value of the learning experience.

3.3 Participants

The study sample consisted of first-grade junior high school students selected from a public school in the Taoyuan area of Taiwan. A purposive sampling method was employed to ensure participants had comparable exposure to the curriculum materials. A total of 88 questionnaires were distributed. After removing 9 invalid responses due to incomplete or inconsistent answers, 79 valid questionnaires were retained for analysis, resulting in a valid return rate of 89.8%. Among the valid participants, there were 40 male students (50.6%) and 39 female students (49.4%). The gender distribution was nearly equal, minimizing potential gender bias in the results.

4. Research Instrument

4.1 Instrument Content

This study employed a questionnaire as the primary data collection tool. The questionnaire consisted of two parts. The first part gathered basic demographic information—specifically, the respondent's gender—to support descriptive and group comparison analyses. The second part measured the study's core variables using a five-point Likert scale. Responses were scored from (5) "Strongly Agree" to (1) "Strongly Disagree," with higher scores indicating a higher level of agreement with the given item.

The second part of the questionnaire focused on four key constructs: Learning Interest, Flow Experience, Student Engagement, and Utilitarian Value. Items were developed based on existing literature and were designed to assess students' cognitive perceptions and behavioral engagement in the context of Chinese language learning.

4.2Reliability and validity analysis

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（1）Reliability Analysis

Two indicators were used to assess internal consistency: Cronbach's alpha and Composite Reliability (CR). According to Nunnally (1978), Cronbach's alpha should exceed 0.70 to be considered acceptable. Fornell and Larcker (1981), as well as Hair et al. (1998), similarly recommend a CR value above 0.70. As shown in Table 1, all Cronbach's alpha coefficients exceeded 0.70, and CR values ranged from 0.886 to 0.945, indicating strong internal

consistency and good reliability of all constructs.

（2）Validity Analysis

Convergent validity was assessed using two criteria:Factor Loadings: Nunnally (1978) suggested that standardized loadings should be greater than 0.50. Average Variance Extracted (AVE): Fornell and Larcker (1981) proposed that AVE should exceed 0.50 to indicate sufficient convergent validity.

As presented in Table 2, all factor loadings exceeded the 0.50 threshold, and the AVE values of each construct were also above 0.50, confirming that the measurement model demonstrated adequate convergent validity. Overall, the measurement tool exhibited good psychometric properties and was deemed appropriate for use in the subsequent structural model analysis.

Overall, the measurement tool exhibited good psychometric properties and was deemed appropriate for use in the subsequent structural model analysis.

Table1 Mean, standard deviation, Cronbach's Alpha, AVE, CR of each dimension

	Number of questions	Mean	Standard deviation	Cronbach's Alpha	AVE	CR
Learning Interest	4	3.537	0.715	0.846	0.684	0.896
Flow Experience	6	3.532	0.918	0.927	0.741	0.945
Student Engagement	4	3.231	0.727	0.831	0.661	0.886
utilitarian value	4	3.434	0.867	0.854	0.698	0.902

Table2 Mean, standard deviation, and factor loading of each question

Item	M	SD	loading
Learning Interest			
1. I think attending Chinese class is enjoyable.	3.164	0.926	0.845
2. I think the content of Chinese class is rich and engaging.	3.759	0.950	0.735
3. I think the teacher's teaching style is vivid and lively.	3.620	1.004	0.855
4. I really like the way the teacher conducts the class.	3.633	1.028	0.865
Flow Experience			
1. I was very focused while watching the Dream of the Red Chamber video.	3.683	1.044	0.873
2. I felt attracted by the video content.	3.544	1.035	0.882
3. I was completely immersed in the scenes while watching the video.	3.481	0.985	0.880
4. I found it interesting to learn related concepts through the Dream of the Red Chamber video.	3.519	0.918	0.878
5. I did not feel sleepy during the discussion after watching the video.	3.544	1.141	0.775
6. I could concentrate easily when watching the video.	3.481	0.998	0.872
Student Engagement			
1. I actively participated in the discussion after watching Dream of the Red Chamber.	3.291	0.850	0.872
2. The discussion after watching the video sparked more ideas in me.	3.342	0.918	0.828
3. I was willing to answer the teacher's questions during the discussion.	3.228	0.876	0.792
4. I was eager to express my opinions during the discussion.	3.063	0.925	0.754
utilitarian value			

Item	M	SD	loading
1. The discussion after watching Dream of the Red Chamber helped me complete the worksheet.	3.570	1.046	0.783
2.The discussion after watching the video inspired me to read Dream of the Red Chamber more deeply.	3.228	1.062	0.837
3. The discussion helped me imagine the story more vividly.	3.367	1.064	0.843
4. The discussion expanded my perspective on literary appreciation.	3.570	0.983	0.876

5. Research Results

This study utilized Visual PLS 1.04 statistical software and adopted the Partial Least Squares (PLS) method to analyze both the measurement and structural models. To enhance the stability and robustness of the estimates, the Bootstrap resampling method (with 500 resamples) was employed to assess the significance of parameter estimates and model paths.

The PLS analysis procedure was conducted in two major stages. The first stage involved evaluating the measurement model, which focused on testing the reliability and validity of each construct to ensure the questionnaire had acceptable psychometric quality. The second stage assessed the structural model, analyzing the hypothesized relationships among latent variables and examining the model's explanatory and predictive power.

This sequential approach is based on the principle that structural path analysis should only proceed after confirming the adequacy of the measurement model. The results for each model component are presented below.

5.1 Structural Model Analysis

After confirming reliability and validity through PLS, the structural model was examined to evaluate causal relationships among the latent variables and the overall predictive power of the model. The strength and significance of each hypothesized path were determined by the standardized path coefficients (β) and corresponding t-values, calculated through the Bootstrap procedure (500 samples).

As shown in Table 3, all three hypothesized paths in the proposed model reached statistical significance, supporting the research hypotheses: Learning Interest → Student Engagement: Learning interest had a significant positive effect on student engagement ($\beta = .502$, $t = 3.43$, $p < .001$), indicating that students who found the Chinese language course more interesting were more likely to demonstrate active learning behaviors and attitudes. Flow Experience → Student Engagement: Flow experience also had a significant positive effect on student engagement ($\beta = .342$, $t = 5.04$, $p < .001$), suggesting that when students were immersed in the learning process, they tended to focus more and invest greater effort in their studies. Student Engagement → Utilitarian Value: Student engagement positively predicted perceived utilitarian value ($\beta = .602$, $t = 2.76$, $p < .01$), implying that higher engagement levels led to stronger perceptions of the practical usefulness of the learning content.

In terms of explanatory power: The R^2 value for Student Engagement was 57%, indicating that learning interest and flow experience together explained more than half of the variance in engagement. The R^2 value for Utilitarian Value was 35%, representing a moderate level of explanatory power, suggesting that engagement significantly influenced students' perceptions of the learning's practical value.

In summary, the proposed model demonstrated strong predictive capability and statistical validity. These findings provide empirical support for the interconnected psychological processes involved in students' learning experiences and offer insights into the dynamics of motivation, immersion, and perceived value in the context of Chinese language instruction.

Table3 Path coefficient,T-Statistic,R^2

path	Path coefficient (Beta)	t	R^2
Flow Experience→Student Engagement	.342***	5.04	
Learning Interest→Student Engagement	.502***	3.43	.57
Student Engagement→utilitarian value	.602***	.76	.35

註：***p<0.001，**p<0.01，*p<0.05

Based on the structural model presented in Figure 2, all relationships among the core constructs in this study were found to be positive and statistically significant. Flow Experience positively influenced Student Engagement, indicating that the more immersed students are during the learning process, the more likely they are to exhibit sustained focus and active participation in classroom activities. Similarly, Learning Interest had a significant positive effect on Student Engagement, suggesting that students who find the Chinese language curriculum more interesting tend to demonstrate greater behavioral and cognitive involvement in learning. Furthermore, Student Engagement positively affected Utilitarian Value, implying that students who are more engaged in their learning process are more inclined to perceive the curriculum as meaningful and practically applicable.

Overall, the structural model in Figure 2 clearly illustrates that Learning Interest and Flow Experience are critical antecedents of Student Engagement, which in turn significantly enhances students' positive evaluations of the utilitarian value of learning. These results support the theoretical framework and path hypotheses proposed in this study.

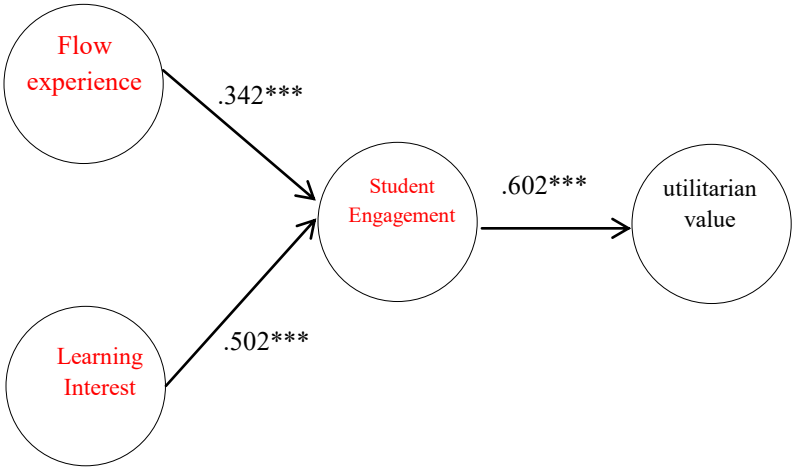

Figure2 Path analysis

5.2 Discussion of Results

This study primarily examined the effects of Learning Interest and Flow Experience on Student Engagement, as well as the impact of engagement on Perceived Utilitarian Value. The results of the structural model analysis using PLS revealed that all three hypothesized paths reached statistical significance, and the findings are largely consistent with previous literature. The detailed discussion is as follows

（1）The Effect of Learning Interest on Student Engagement

The results indicated that students with higher learning interest were more likely to demonstrate greater engagement. This aligns with Dewey's (1913) assertion that interest is a key driver of learning. Similarly, Wigfield and Eccles (2002) emphasized that when students find a learning task interesting and personally meaningful, they are more likely to actively participate. In the context of this study, students who developed an interest in the literary text (e.g., Dream of the Red Chamber) were more willing to invest effort and attention in the course, thereby enhancing their level of engagement.

（2）The Effect of Flow Experience on Student Engagement

The study also found that students' engagement increased significantly when they experienced flow during learning. This is consistent with Csikszentmihalyi's (1975, 1990) flow theory, which posits that immersion and concentration in an activity promote sustained participation while reducing external distractions. Shernoff et al. (2014) further supported this by showing that students are more likely to enter a flow state—and maintain motivation—when instructional settings are both challenging and supportive. This suggests that integrating multimedia resources with appropriate difficulty levels can effectively facilitate flow and enhance student engagement.

（3）The Effect of Student Engagement on Utilitarian Value

The results revealed a significant positive relationship between student engagement and perceived utilitarian value. This finding supports Hamari et al.'s (2016) concept of utilitarian value, which asserts that students are more likely to recognize the value of learning when they believe their efforts lead to practical skill development or future benefits. Likewise, Dempsey et al. (1996) noted that engaging and enjoyable learning activities not only support skill practice and cognitive growth but also contribute to improved self-esteem. This study confirms that student engagement is a critical factor not only for immediate academic performance but also for shaping long-term perceptions of value and applicability.

6. Conclusion and Suggestions

6.1Conclusion

This study employed a questionnaire survey to explore the relationships among four key variables: Learning Interest, Flow Experience, Student Engagement, and Utilitarian Value in the context of Chinese language learning. Reliability and validity analyses confirmed that all measurement scales demonstrated strong internal consistency, with Cronbach's alpha values exceeding the standard threshold. Factor loadings from the rotated component matrix indicated that each item loaded clearly onto a single construct, confirming adequate construct validity. Overall, the model demonstrated good model fit and satisfactory explanatory and predictive power.

In terms of variable relationships, the results showed that:

Flow Experience significantly influenced Student Engagement, suggesting that students who enter a flow state are more likely to remain focused and involved in the learning process.Learning Interest also had a significant impact on Engagement, and it accounted for the largest portion of the variance explained, reaffirming that interest is a core driver of motivation.Student Engagement was significantly associated with Utilitarian Value, indicating that students who are more engaged tend to perceive greater meaning and practical value in the content learned.

In sum, this study verified that Learning Interest and Flow Experience are important antecedents of Student Engagement, which in turn plays a mediating role in enhancing students' perceived value of learning. The findings support existing theories and offer practical implications for curriculum design and motivation enhancement in Chinese language instruction.

6.2 Limitations and Suggestions for Future Research

Although this study has provided initial empirical support for the relationships among learning interest, flow experience, engagement, and perceived value in the context of Chinese instruction, several limitations remain that future research may address:

（1）Expanding Sample Scope and Representativeness

The current study was limited to a sample of junior high school students from the Taoyuan area, which may restrict the generalizability of the findings. Future research is encouraged to increase the sample size and include students from diverse geographic regions, urban and rural contexts, and both public and private schools. This would help mitigate sample bias due to background or resource differences and enhance the external validity of the results.

（2）Including Diverse Subject Areas for Comparative Analysis

This study focused exclusively on Chinese language instruction, which provides meaningful insights into a specific literary learning context. However, the sample primarily consisted of students from general academic tracks, without including students from other domains such as STEM or vocational and arts-related fields. Future studies could explore the effects of multimedia-based instruction across various subjects—such as science, social studies, and design—to examine whether engagement and perceived utility differ by discipline, thereby broadening the scope and interdisciplinary applicability of the research.

References.

1. Ainley, M., &Ainley, J. (2011). Student engagement with science in early adolescence: The contribution of enjoyment to students' continuing interest in learning science. Contemporary Educational Psychology, 36(1), 4-12. https://doi.org/10.1016/j.cedpsych.2010.08.001
2. Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice-Hall2.
3. Chapman, E. (2003). Alternative approaches to assessing student engagement rates. Practical Assessment, Research and Evaluation, 13(8), 1-7.
4. Csikszentmihalyi, M. (1975). Beyond boredom and anxiety .SanFrancisco: Jossey-Bass.

5. Csikszentmihalyi, M. (1975). Beyond Boredom and Anxiety: Experiencing Flow in Work and Play. San Francisco: Jossey-Bass.
6. Csikszentmihalyi, M. (1975). Beyond boredom and anxiety: The experience of play in work and games. Jossey-Bass.
7. Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. New York: Harper Collons.
8. Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. Harper & Row.
9. Csikszentmihalyi, M. (1990). Flow: The Psychology of Optimal Experience. New York: Harper & Row.
10. Day, H. I. (1981). Play, a Ludic Besthetics, in Advances in Intrinsic Motivation andAesthetics. New York and London: Plenum Press.
11. Deighton, J., & Grayson, K. (1995). Marketing and seduction: Building exchangerelationships by managing social consensus. Journal of Consumer Research, 21(3),93-109.
12. Dempsey, J. V., Lucassen, B, A., Haynes, L. L., & Casey M. S. (1996). Instructionalapplications of computer games. Paper presented at 1996 annual meeting of theAmerican Educational Research Associate, ERIC#394500.
13. Dewey, J. (1913). Interest and effort in education. Cambridge, MA: Riverside Press.
14. Ellington, H., Adinall, E., & Percival, F. (1982). A handbook of game design, 9-12.London: Kogan Page.
15. Fornell, C., &Larcker, D. F. (1981). "Structural Equation Models with UnobservableVariables and Measurement Error," Journal of Marketing Research, 18(1), 39-50.
16. Freeman, P. A. (1922). The experience of “flow” during challenge education activities for adults. Unplished doctoral dissertation, Indian University Bloomington.
17. Glanville, J. L., &Wildhagen, T. (2007). The measurement of school engagement: Assessing dimensionality and measurement invariance across race and ethnicity. Educational and Psychological Measurement, 67(6), 1019–1041. https://doi.org/10.1177/0013164406299126
18. Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis (5th ed.). Prentice Hall.
19. Malone, T. W. (1980). Toward a theory of intrinsically motivating instruction. Doctoraldissertation. Stanford University.
20. Mayer, R. E. (2001). Multimedia Learning. Cambridge University Press.
21. Nunnally, J. (1978). Psychometric Theory, New York: McGraw-Hill.
22. Pine, J., & Gilmore, J.H. (1998). Welcome to the experience economy. Harvard Business Review, 76(4), 97-105.
23. Richardson, A. (1984). The experiential dimension of psychology. Queensland: University of Queensland Press.
24. Shernoff, D. J., Csikszentmihalyi, M., Schneider, B., &Shernoff, E. S. (2014). Student engagement in high school classrooms from the perspective of flow theory. School Psychology Quarterly, 19(2), 158–176. https://doi.org/10.1037/spq0000045
25. Silvia, P. J. (2001). Interest: A meta-theoretical perspective. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), The role of interest in learning and development (pp.27-41). Hillsdale, NJ: Law-rence Erlbaum Associates.
26. Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. Journal of Educational Psychology, 85(4), 571–581. https://doi.org/10.1037/0022-0663.85.4.571
27. Skinner, E. A.,&Belomont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. Journal of Educational Psychology, 85(4), 571-581.
28. Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. Developmental Review, 12(3), 265-310.
29. Zimmerman, B. J. (2000). Self-effocacy: An essential motive to learn. Contemporary Eductional Psychology, 25, 82-91.