Revolutionizing Advertising Design Education: Do Online Tools and Industry Demands Make the Difference?

Xiaoling Xu, Ida Puteri Binti Mahsan*, Bei Gong

Department of Art & Design,Faculty of Art, Sustainability & Creative Industry, Universiti Pendidikan Sultan Idris,Tanjong Malim, Perak, Malaysia
Corresponding Author Email: idaputeri@fskik.upsi.edu.my

Abstract
The teaching of advertising design courses imparts knowledge and skills while also serving as a platform to inspire creativity and practical innovation. This study explores how teaching methods, online tools, industry demands, learning motivation, and student abilities affect engagement. Findings show that course satisfaction, innovative teaching methods, and motivation significantly boost engagement on behavioral, emotional, and cognitive levels. While online tools have limited impact on satisfaction, they enhance motivation and autonomy, supporting the effectiveness of blended learning approaches. Industry demands increase extrinsic motivation, suggesting that incorporating career orientation improves participation. Learning ability influences the relationship between satisfaction and engagement, highlighting the need for personalized support to accommodate diverse abilities. The study emphasizes integrating theory and practice, innovative teaching, and career orientation as effective strategies for cultivating industry-ready talent.
Keywords: Advertising Design Courses, Student Engagement Willingness, Teaching Methods, Online Learning Tools, Learning Motivation, Course Satisfaction, Learning Ability

Introduction
Advertising design as a discipline that combines high levels of practicality and creativity, has shown significant development trends due to market demand and technological changes. The advertising industry has increasingly highlighted the need for diverse talents. It requires students to master traditional design skills while also possessing interdisciplinary abilities and innovative thinking (Braßler and Schultze 2021).According to MAGNA data, the global net advertising revenue (NAR) for media owners is expected to reach $853 billion in 2023, a 5.5% increase from 2022. It is projected to grow another 7.2% in 2024 [https://finance.sina.com.cn/tech/roll/2023-12-20/doc-imzyqwnm2152767.shtml].

Moreover, the introduction of virtual reality (VR) and augmented reality (AR) technologies has injected new vitality into the advertising design field. Data from ARtillery Intelligence indicates that global AR advertising revenue reached $1.5 billion in 2019 and is expected to achieve $8.8 billion by 2023. Last year, Snapchat led the AR advertising market with $1.14 billion in revenue [https://www.jiemian.com/article/4526122.html]. At the same time, the continued growth of social media users has shifted brand marketing towards social platforms. MAGNA's "Global Advertising Forecast" estimates that net advertising revenue (NAR) for media will reach $927 billion in 2024, marking a 10.0% year-on-year increase. This is a noticeable acceleration compared to the 6.4% growth rate in 2023, further driving the demand for targeted advertising and interactive content [https://cn.ipgmediabrands.com/magna-advertising-growth-forecast-202406/?lang=zh-hans].In this context, the teaching content of advertising design courses needs continual adjustment to match the industry's requirements for innovation, technology application, and market insight. However, traditional teaching models are often limited by classroom time and resources. This makes it difficult for students to engage in complex projects or use the latest digital tools during their studies. As a result, their learning motivation and course satisfaction may be affected (Вячеславовна et al. 2021).

Student engagement willingness is a crucial concept in education. It refers to the initiative, interest, and emotional investment that students demonstrate in their learning. (Afdiyanti et al. 2022) categorize engagement into behavioral, emotional, and cognitive participation. These dimensions reflect the various ways students engage in learning. In advertising design courses, however, relevant research primarily focuses on developing design skills and optimizing teaching methods. Limited exploration exists regarding students' willingness to engage. The practical and creative nature of advertising design courses indicates that engagement willingness directly impacts learning outcomes and course experiences. Active participation enhances students' creative thinking while also improving course satisfaction and learning motivation. The widespread use of online learning tools has diversified strategies for enhancing student engagement in advertising design courses. These tools eliminate the time and space limitations of traditional classrooms. They offer students flexible learning methods and abundant resources. For example, mobile platforms enable project discussions at any time, allow for instant feedback, and facilitate collaboration. This approach personalizes and enhances the interactivity of learning (Ari 2020). Simultaneously, the analytical features of online tools enable teachers to track students' progress and interests accurately. This allows for timely adjustments to teaching strategies, further stimulating engagement willingness. Therefore, integrating online learning tools with advertising design courses can enhance motivation and satisfaction while improving students' abilities. This integration aligns course instruction more closely with industry demands.

Enhancing student engagement in advertising design courses improves learning outcomes, creativity, satisfaction, motivation, and achievement. This study examines how teaching methods, online tools, industry demands, and student interests influence engagement willingness, moderated by learning ability. High-ability students engage more readily due to easier content mastery (Rahmalan et al. 2022). Online tools significantly boost engagement and outcomes, prompting teaching reform and talent cultivation (McKeithan et al. 2021). The study emphasizes personalized support and real-time teaching adjustments via

online platforms. Integrating theory and practice enhances instruction quality, aligns courses with market demands, and guides educational reform.

Theoretical Background

Integration of Advertising Design Courses and Online Learning Tools

The integration of advertising design courses with online learning tools is grounded in constructivist, experiential, and multimodal learning theories. This approach offers both theoretical support and practical pathways for course instruction and student engagement. Constructivist learning theory emphasizes that students construct knowledge through interactions with their environment, tasks, and peers. This aligns closely with the practical nature of advertising design courses (Ali Hosney Nounou 2021). Students apply theoretical knowledge to real projects, which deepens their understanding and enhances creativity. The introduction of online learning tools further enhances this process. Flexible platforms and instant feedback enable students to manage their time and access resources effectively. This promotes greater learning autonomy (Polzer et al. 2023). Experiential learning theory emphasizes the significance of reflective practice. In advertising design courses, students continuously refine their work as they complete design tasks. Collaborative discussions on platforms enhance teamwork and course satisfaction (Vallis and Shalavin 2020). Multimodal learning theory underscores the importance of diverse media forms in the learning process. Advertising design encompasses various forms of expression, including images, text, and audio. Online tools offer multimodal resources, enabling students to select appropriate learning methods based on their needs. This enhances learning efficiency and fosters creativity.

The Theory of Student Engagement Willingness

The theory of student engagement willingness integrates educational psychology with behavioral engagement theory. This theory is widely employed to analyze student involvement in various learning contexts and its effects on learning outcomes. In advertising design courses, practical teaching requires students to apply theoretical knowledge to real scenarios through project design and hands-on activities. This approach enhances creativity and problem-solving skills (Vergara et al. 2023). This practical engagement fosters deep participation in the course. Innovative teaching methods—such as project-based learning, case analysis, and teamwork—further stimulate interest while enhancing learning motivation and engagement willingness (Zen et al. 2022). Simultaneously, online learning tools eliminate the time and space limitations of traditional classrooms. These tools enable students to flexibly arrange their learning pace and improve satisfaction and engagement through instant feedback. Additionally, these tools support online collaboration and task division, which enhances teamwork skills (Kaed et al. 2023). The advertising industry's demand for innovative talent serves as a significant external force influencing student engagement willingness. When students perceive a close connection between the course and their career development, their learning motivation significantly increases. Furthermore, students' interest in advertising design acts as a vital intrinsic motivator for active participation. Students who are interested are more willing to invest time and effort in completing course tasks.

Hypotheses

Conceptual Model

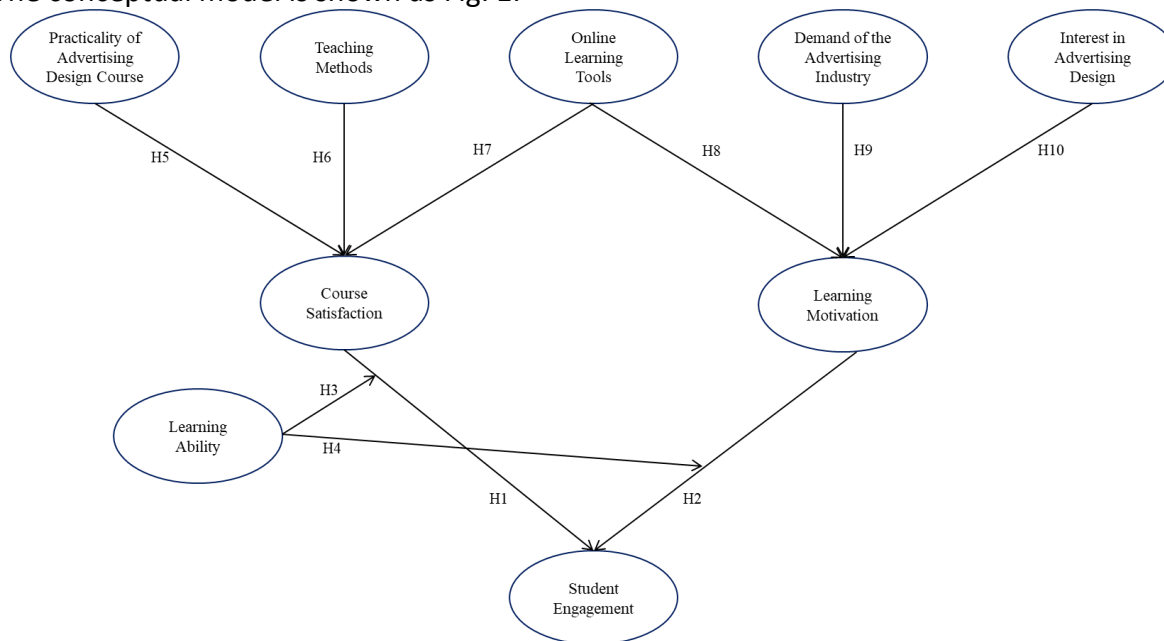The conceptual model is shown as Fig. 1:

Fig. 1. Research model.

The Correlation BETWEEN Course Satisfaction and Student Engagement Willingness

Course satisfaction—students' evaluation of course content, teaching methods, teacher interactions, and overall learning experiences—directly influences their behavioral, emotional, and cognitive engagement (Nia et al. 2023). In advertising design courses, high satisfaction motivates active participation and increases interest in design tasks. Online learning tools enhance course flexibility and interactivity, providing timely feedback and allowing self-paced learning, which improve satisfaction and willingness to engage. Satisfaction also offers emotional support in complex tasks, helping students face challenges and remain engaged (Baloran et al. 2021). As a key source of intrinsic motivation, satisfaction boosts initiative and self-efficacy, supporting the theory that intrinsic motivation drives learning behavior (Landrum et al. 2021). Therefore, this study proposes the following hypothesis:

H1: Course satisfaction is positively correlated with student engagement willingness.

The Correlation between Learning Motivation and Student Engagement Willingness

Learning motivation, both intrinsic and extrinsic, significantly influences students' willingness to engage in learning. In advertising design courses, it affects students' interest, focus, involvement, and project performance (Alamri et al. 2021). According to self-determination theory, intrinsic motivation is crucial for active participation; enjoyable and challenging tasks lead to higher behavioral, emotional, and cognitive engagement, enhancing creativity and problem-solving skills. Extrinsic motivation, such as career prospects and the pursuit of high grades, also encourages engagement. When students perceive that a course prepares them for future job demands, they adopt a more positive learning attitude (Hsu et al. 2019). The advertising industry's demand for innovative talent reinforces this motivation. Increased motivation enhances self-efficacy, making students more confident in tackling

complex design tasks and sustaining their engagement (Vu et al. 2022). Therefore, this study proposes the following hypothesis:

H2: Learning motivation is positively correlated with student engagement willingness.

Learning Motivation as a Moderating Variable

Learning ability—the capacity to understand, master, and apply knowledge—significantly impacts learning outcomes and willingness to engage (Ab Jalil et al. 2022). In advertising design courses, it influences adaptability to complex tasks and moderates the relationship between course satisfaction, learning motivation, and engagement willingness. High-ability students grasp content quickly, leading to achievement, satisfaction, and higher levels of behavioral, emotional, and cognitive engagement (Glapaththi et al. 2019). Conversely, lower-ability students may feel frustrated, reducing satisfaction and engagement. They may lack confidence in managing complex tasks, limiting their willingness to engage despite some interest (Muthmainnah, Yakin, and Seraj 2023). This moderating effect is especially evident in practical teaching contexts. Teachers should provide personalized support based on varying learning abilities. By using online platforms to monitor progress, teachers can adjust strategies to enhance learning experiences and engagement. Therefore, this study proposes the following hypotheses:

H3: Learning ability moderates the relationship between course satisfaction and student engagement willingness.

H4: Learning ability moderates the relationship between learning motivation and student engagement willingness.

Other Factors Related to Learning Motivation

The practicality of advertising design courses enhances student satisfaction by allowing students to apply theory through real projects, boosting creativity, problem-solving skills, and course recognition (Huang and Yang 2021). Innovative teaching methods like project-based learning, case analysis, and teamwork stimulate interest and motivation, increasing satisfaction (Annisa 2019). Online learning tools further improve satisfaction by offering flexibility, abundant resources, and instant feedback, enabling students to manage their progress and adjust learning strategies (Nosatova 2021). Therefore, this study proposes the following hypotheses:

H5: The practicality of advertising design courses is positively correlated with course satisfaction.

H6: Teaching methods are positively correlated with course satisfaction.

H7: Online learning tools are positively correlated with course satisfaction.

Other Factors Related to Course Satisfaction

Online learning tools enhance student motivation by providing flexibility, abundant resources, and immediate feedback, fostering autonomy and interest (Zaitun et al. 2021). Online interaction aids timely problem-solving. Advertising industry demands boost extrinsic motivation by linking course content to career prospects (Kania et al. 2022). Interest in advertising design drives intrinsic motivation, encouraging active exploration and improving learning outcomes (Randi and Corno 2022). Therefore, this study proposes the following hypotheses:

H8: Online learning tools are positively correlated with learning motivation.

H9: Demand from the advertising industry is positively correlated with learning motivation.

H10: Interest in advertising design is positively correlated with learning motivation.

Experimental Results
Questionnaire Source

This study examines factors affecting student engagement in advertising design courses using a questionnaire covering course and industry background (practicality, teaching methods, online tools, industry demand), student characteristics (interest, learning ability, motivation), and learning experiences (course satisfaction, engagement). Analyzing data from 200 students at Lanzhou University collected between May 1 and July 30, 2024, the study provides empirical support for teaching improvement. The questionnaire is based on relevant academic research, with sources detailed in Table 1. All participants provided informed consent in accordance with ethical guidelines.

Table 1
Sources of Measurement Items in the Questionnaire

Variables	Constructs	Sources
Practicality of Advertising Design Course	3	(Ali Hosney Nounou 2021; Santi et al. 2023)
Teaching Methods	3	(Elfil and Negida 2017; Randi and Corno 2022)
Online Learning Tools	3	(Alamri et al. 2020a; Luo, Lin, and Yang 2021)
Demand of the Advertising Industry	3	(Ali Hosney Nounou 2021; Doan, Lei, and Shen 2020)
Interest in Advertising Design	3	(Ali Hosney Nounou 2021; Vallis and Shalavin 2020)
Course Satisfaction	5	(Baloran et al. 2021; Santi et al. 2023)
Learning Motivation	5	(Alamri et al. 2020b; Randi and Corno 2022)
Student Engagement	8	(Kaed et al. 2023; Zaitun et al. 2021)
Learning Ability	5	(Braßler and Schultze 2021; Chen and Chi 2021)

Exploratory Factor Analysis
Reliability and Validity Analysis
Table 2
Reliability and Effectiveness

Variables	Items	Alpha	KMO
Practicality of Advertising Design Course	3	.809	.715
Teaching Methods	3	.797	.699
Online Learning Tools	3	.789	.705
Demand of the Advertising Industry	3	.843	.722
Interest in Advertising Design	3	.779	.704
Course Satisfaction	5	.875	.862
Learning Motivation	5	.854	.861
Student Engagement	8	.907	.932
Learning Ability	5	.868	.873
Total	38	.918	.873

To ensure the questionnaire's reliability and validity, the study analyzed variable consistency and suitability, as shown in Table 2. Cronbach's alpha coefficients indicated good internal consistency among the variables (overall alpha = .873). The KMO test showed that all variables had KMO values exceeding 0.7 (overall KMO = .873), confirming the data are suitable for factor analysis and demonstrating good validity.

Factor Analysis
Table 3
Factor Analysis Results
Total variance explained

	Initial eigenvalues			Sum of squares of rotating loads		
Element	total	Percentage of variance	accumulation %	total	Percentage of variance	Accumulation %
1	9.673	25.456	25.456	4.997	13.150	13.150
2	4.604	12.117	37.573	3.433	9.034	22.184
3	2.256	5.936	43.510	3.356	8.831	31.015
4	2.069	5.444	48.954	3.340	8.791	39.805
5	1.902	5.005	53.958	2.342	6.163	45.968
6	1.660	4.370	58.328	2.287	6.019	51.987
7	1.556	4.093	62.422	2.205	5.803	57.790
8	1.307	3.440	65.861	2.122	5.585	63.375
9	1.165	3.066	68.927	2.110	5.552	68.927

Extraction method: principal component analysis.

Table 3 indicates that nine factors with eigenvalues greater than 1 were extracted, cumulatively explaining 68.93% of the total variance and effectively summarizing the questionnaire data. The first factor contributed most significantly (eigenvalue 9.673, 25.46% variance). Rotated factor loadings increased cumulative explained variance from 13.15% to 68.93%, indicating effective data aggregation.

Confirmatory Factor Analysis
1) Model indicator analysis

Table 4 Model fit of confirmatory factor analysis									
Model Fit	CMIN	DF	CMIN/DF	NFI	RFI	IFI	TLI	CFI	GFI	RMSEA
Fit Results	717.611	629	1.141	0.832	0.812	0.976	0.972	0.975	0.850	0.027
Judgment Std.	-	-	<3	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08

A confirmatory factor analysis (CFA) was conducted to assess the questionnaire's validity in Table 4. The model showed good fit indices: CMIN/DF was 1.141 (less than 3), indicating good fit; CFI was 0.975, IFI was 0.976, and TLI was 0.972—all well above 0.9, reflecting strong model fit. Although NFI and RFI were below 0.9 (0.832 and 0.812), other indices performed well. GFI was 0.850, close to the standard value, and RMSEA was 0.027 (well below 0.08), further supporting excellent model fit. These results confirm the construct validity of the scale for factors affecting student engagement in advertising design courses.

Convergent Validity Analysis

Table 5

Convergent validity and composite reliability

Construct	Item	Loading Factor	CR	AVE
Practicality of Advertising Design Course	PADC1	0.781	0.674	0.586
	PADC2	0.742		
	PADC3	0.774		
Teaching Methods	TM1	0.794	0.756	0.546
	TM2	0.667		
	TM3	0.799		
Online Learning Tools	OLT1	0.684	0.747	0.596
	OLT2	0.734		
	OLT3	0.805		
Demand of the Advertising Industry	DAI1	0.847	0.851	0.693
	DAI2	0.754		
	DAI3	0.839		
Interest in Advertising Design	IAD1	0.811	0.758	0.588
	IAD2	0.720		
	IAD3	0.709		
Course Satisfaction	CS1	0.857	0.818	0.593
	CS2	0.756		
	CS3	0.716		
	CS4	0.734		
	CS5	0.761		
Learning Motivation	LM1	0.797	0.818	0.593
	LM2	0.685		
	LM3	0.848		
	LM4	0.694		
	LM5	0.676		
Student Engagement	SE1	0.678	0.797	0.598
	SE2	0.782		
	SE3	0.702		
	SE4	0.674		
	SE5	0.796		
	SE6	0.753		
	SE7	0.789		
	SE8	0.753		
Learning Ability	LA1	0.803	0.797	0.600
	LA2	0.802		
	LA3	0.731		
	LA4	0.704		
	LA5	0.721		

The study assessed the questionnaire's convergent and discriminant validity using Composite Reliability (CR) and Average Variance Extracted (AVE) in Table 5. All constructs had CR values above 0.7, indicating good internal consistency (e.g., demand from the advertising industry had a CR of 0.851). AVE values were all above 0.5 (e.g., online learning tools had an AVE of 0.596), confirming strong convergent validity. Discriminant validity analysis showed that the square root of each construct's AVE exceeded its correlations with other constructs

(e.g., the practicality construct had a square root AVE of 0.765), indicating strong discriminant validity among the constructs.

Table 6
Discriminant validity

Factors	PADC	TM	OLT	DAI	IAD	CS	LM	SE	LA
Practicality of Advertising Design Course	0.765								
Teaching Methods	0.398	0.755							
Online Learning Tools	0.419	0.460	0.767						
Demand of the Advertising Industry	0.375	0.504	0.388	0.822					
Interest in Advertising Design	0.304	0.296	0.281	0.324	0.754				
Course Satisfaction	0.394	0.539	0.416	0.552	0.239	0.796			
Learning Motivation	0.348	0.535	0.394	0.413	0.195	0.424	0.786		
Student Engagement	0.269	0.060	0.201	0.042	0.114	0.336	0.317	0.742	
Learning Ability	0.460	0.432	0.412	0.504	0.315	0.519	0.428	0.098	0.766

Structural Equation Model Path Analysis

Table 7
Structural equation model path coefficient test

Assumptions	Path			Estimate	S.E.	C.R.	P Label	Std.Coef.	Conclusion
H5	Course Satisfaction	<--	Practicality of Advertising Design Course	.222	.105	2.118	.034	.180	Supported
H6	Course Satisfaction	<--	Teaching Methods	.469	.103	4.538	***	.421	Supported
H7	Course Satisfaction	<--	Online Learning Tools	.181	.100	1.819	.069	.166	Not Supported
H8	Learning Motivation	<--	Online Learning Tools	.210	.062	3.365	***	.304	Supported
H9	Learning Motivation	<--	Demand of the Advertising Industry	.195	.054	3.592	***	.315	Supported
H10	Learning Motivation	<--	Interest in Advertising Design	.020	.076	.261	.794	.022	Not Supported
H2	Student Engagement	<--	Learning Motivation	.394	.110	3.590	***	.273	Supported
H1	Student Engagement	<--	Course Satisfaction	.397	.071	5.557	***	.435	Supported

* p<0.05；** p<0.01；*** p<0.001.

Using Structural Equation Modeling (SEM) in Table 7, the study found that the practicality of advertising design courses positively affects course satisfaction (coefficient = 0.180, *p* < 0.05), and innovative teaching methods significantly enhance satisfaction (coefficient = 0.421, *p* < 0.001). Online learning tools do not have a significant impact on satisfaction (*p* = 0.069) but significantly boost learning motivation (coefficient = 0.304, *p* < 0.001). Industry demand in advertising significantly influences learning motivation (coefficient = 0.315, *p* < 0.001), while interest in advertising design has no significant effect (*p* = 0.794). Learning motivation positively affects student engagement (coefficient = 0.273, *p* < 0.001), and course satisfaction also enhances students' willingness to participate (coefficient = 0.435, *p* < 0.001).

Moderating Effect Analysis
Learning Ability Moderates the Relationship Between Course Satisfaction and Student Engagement Willingness

Table 8
shows the results of how learning ability moderates the relationship between course satisfaction and student engagement willingness

Experimental result				
Model Path	coefficient (Estimate)	standard error (S.E.)	critical ratio (C.R.)	P value
Constant	3.0697	.4899	6.2658	.0000
Course Satisfaction	-.2152	.1860	-1.1568	.2488
Learning Ability	-.7804	.1994	-3.9129	.0001
Course Satisfaction × Learning Ability	.2681	.0692	3.8759	.0001
Conditional effects of regulatory effects				
Learning Ability (Effect)	standard error (S.E.)	critical ratio (t)	P value	lower limit (LLCI)	upper limit (ULCI)
1.4875 .1837	.0956	1.9207	.0562	-.0049	.3723
2.3944 .4268	.0634	6.7321	.0000	.3018	.5519
3.3012 .6700	.0823	8.1454	.0000	.5078	.8322

This study used interaction term regression analysis to examine how learning ability moderates the relationship between course satisfaction and student engagement willingness in Table 8. The model showed a good fit (constant term = 3.0697, SE = 0.4899, *p* < 0.001). Without accounting for learning ability, course satisfaction did not significantly impact engagement willingness (coefficient = -0.2152, *p* = 0.2488). Learning ability had a significant negative effect (coefficient = -0.7804, *p* < 0.001), suggesting that high learning ability may negatively influence engagement willingness in certain contexts. Notably, the interaction term "course satisfaction × learning ability" was significant (coefficient = 0.2681, *p* < 0.001), indicating that learning ability positively moderates the relationship between course satisfaction and engagement willingness. At higher levels of learning ability (2.3944 and 3.3012), the moderating effect was significant (coefficients = 0.4268 and 0.6700, *p* < 0.001), and confidence intervals did not include zero, further validating the significant moderating role of learning ability.

Learning Ability Moderates the Relationship between Learning Motivation and Student Engagement Willingness

Table 9

Shows the results of how learning ability moderates the relationship between learning motivation and student engagement willingness

Experimental result				
Model Path	coefficient (Estimate)	standard error (S.E.)	critical ratio (C.R.)	P value
Constant	1.8794	.5320	3.5326	.0005
Learning Motivation	.2302	.2225	1.0346	.3021
Learning Ability	-.2135	.2175	-.9816	.3275
Learning Motivation × Learning Ability	.0835	.0840	.9939	.3215

This study employed interaction term regression analysis to investigate the moderating role of learning ability in the relationship between learning motivation and student engagement willingness. The results are presented in Table 9. The estimated value of the constant term is 1.8794, with a standard error of 0.5320, which is significant (p < 0.001). This suggests a good model fit. However, the direct impact coefficient of learning motivation on engagement willingness is 0.2302 (p = 0.3021), indicating no significance. The impact coefficient of learning ability on engagement willingness is -0.2135 (p = 0.3275), which is also not significant. Additionally, the coefficient for the interaction term "learning motivation × learning ability" is 0.0835 (p = 0.3215), indicating no significance. This suggests that learning ability does not significantly moderate the relationship between learning motivation and engagement willingness.

Discussion

This study investigates factors influencing student engagement willingness in advertising design courses using EFA, CFA, and SEM, validating most hypotheses in line with educational psychology theories. It finds that course practicality and innovative teaching methods significantly enhance student satisfaction and engagement willingness by fostering behavioral, emotional, and cognitive involvement. Project-driven approaches and case analyses improve knowledge application, while innovative methods stimulate motivation across multiple levels. Although online learning tools have minimal impact on satisfaction, their flexibility and immediate feedback enhance learning motivation. A strong connection between course content and career development boosts external motivation, whereas interest alone does not significantly influence motivation, likely requiring combination with skills and self-efficacy. Learning ability significantly moderates the relationship between course satisfaction and engagement willingness, with high-ability students showing greater engagement in high-satisfaction courses. However, it does not significantly moderate the relationship between learning motivation and engagement willingness, indicating that learning motivation directly influences engagement. The study emphasizes the importance of personalized teaching and practical activities to enhance motivation, satisfaction, and engagement, providing theoretical support for teaching practices in advertising design courses.

This study identifies key factors influencing student engagement in advertising design courses, examining their underlying mechanisms through P-value and path coefficient

analysis. Course satisfaction significantly influences engagement willingness. High satisfaction increases students' behavioral, emotional, and cognitive involvement, consistent with Fredricks' (소원현 2022) multidimensional engagement theory. Teachers should enhance course enjoyment and practicality to boost satisfaction and improve learning outcomes. Innovative teaching methods notably enhance course satisfaction. This supports active learning strategies suggested by (Luo et al. 2021), including project-based learning and case analysis, which stimulate student interest and meet practical and innovative needs. However, online tools have a limited impact on course satisfaction, likely due to the practical and interactive nature of advertising design courses. Nevertheless, online tools do positively impact learning motivation, as their flexibility and immediate feedback can enhance student initiative. In career-oriented courses, recognizing the benefits for career development increases students' external motivation. This is consistent with (Alamri et al. 2020a) self-determination theory, which emphasizes the combined effects of intrinsic and extrinsic motivation on learning behavior. The study finds that learning ability significantly moderates the relationship between course satisfaction and engagement willingness. Students with higher learning ability are more likely to experience a sense of achievement and increased engagement willingness in high-satisfaction courses. However, the moderating effect of learning ability on the relationship between learning motivation and engagement willingness is not significant, suggesting that learning motivation directly influences engagement willingness more strongly. Thus, teachers should offer personalized support, particularly with complex tasks, to enhance students' confidence and abilities, fostering deeper engagement. The study provides valuable insights for higher education and the advertising industry on teaching and talent development. Schools should enhance practical teaching, improving students' hands-on skills and creativity through project-based learning and case analysis, while employing diverse, interactive teaching methods. Although online tools have limited impact on satisfaction in advertising design courses, a blended teaching model that combines these tools with practical tasks can enhance the learning experience.

Implications
Theoretical Implications

This study enriches educational theory by examining key factors that influence students' willingness to engage in advertising design courses. The results indicate that course satisfaction, teaching methods, and learning motivation significantly positively impact students' willingness to engage. These findings support the multidimensional student engagement theory proposed by (Azila-Gbettor et al. 2021). The practical and innovative nature of advertising design courses fosters a strong reliance on course experiences for students' behavioral, emotional, and cognitive engagement. When students are satisfied with both the course content and teaching methods, their engagement levels significantly increase. Additionally, the study validates self-determination theory, finding that intrinsic interest and extrinsic career needs collectively promote learning motivation. This is particularly evident in career-oriented courses, where career prospects significantly enhance students' learning motivation and willingness to engage (Santi et al. 2023). Thus, closely linking courses to career development—such as by introducing industry projects and real case studies—effectively motivates students to participate actively. Moreover, this research confirms the moderating effect of learning ability on the relationship between course satisfaction and students' willingness to engage. These findings support (Alamri et al. 2020b)

self-efficacy theory. Students with high learning abilities are more likely to experience a sense of achievement and self-efficacy in their courses, resulting in a greater willingness to engage.

Practical Implications

It proposes specific strategies to enhance students' willingness to engage and improve learning outcomes. The course's practicality and innovative teaching methods are essential for stimulating student participation. Educators should integrate theory with real projects. This integration allows students to apply their knowledge practically, enhancing their sense of engagement and recognition within the course. This approach aligns with the experiential learning theory proposed by (Miller, Severance, and Krajcik 2021). Designing real advertising projects enables students to deepen their understanding and improve their practical skills and creativity. Research indicates that diverse teaching methods—such as project-based learning, case analysis, and teamwork—enhance course satisfaction and learning motivation (Kristianto and Gandajaya 2022). Interactive teaching methods, including teamwork and class discussions, effectively boost student interest and engagement. These methods also foster communication and collaboration skills. Although online learning tools may have a limited impact on course satisfaction, their effectiveness can be improved through deeper integration with course content. (Yu et al. 2022) note that online platforms can facilitate design reviews, work displays, and feedback, thus improving student autonomy and flexibility. The study also identifies a strong correlation between learning motivation and students' willingness to engage. This suggests that educators should strengthen the link between coursework and career development to stimulate students' extrinsic motivation. For instance, introducing industry lectures and collaborative projects can help students recognize the course's value for their future careers (Zhou, Tigelaar, and Admiraal 2024).

Conclusion

This study, grounded in educational psychology, behavioral engagement theory, and self-determination theory, examines the effects of teaching methods, online learning tools, industry demand, learning motivation, and learning ability on students' willingness to engage in advertising design courses. The results indicate that course satisfaction, innovative teaching methods, and learning motivation significantly enhance students' willingness to engage. High satisfaction and diverse teaching approaches increase student participation; thus, courses should integrate theory with practice by incorporating real projects and case analyses. Interactive teaching methods, such as project-based learning, case analysis, and teamwork, improve satisfaction and engagement, fostering creativity and problem-solving skills. Although online tools have a limited impact on satisfaction, their flexibility and immediate feedback can enhance learning motivation and autonomy; therefore, they should be combined with practical teaching using a blended online and offline model. Industry demand boosts learning motivation and incorporating career orientation can enhance extrinsic motivation and engagement. Learning ability moderates the relationship between course satisfaction and willingness to engage, with students possessing higher learning abilities more likely to increase their willingness to engage. Educators should provide personalized support to help students build confidence and enhance their learning motivation.

Detailed Questionnaire

Construct	Items
Practicality of Advertising Design Course	1.This course provides ample opportunities to apply theoretical knowledge to real-world projects.
	2.The practical activities in the course help me better understand advertising design concepts.
	3. Through project-based practice, I have improved my creativity and problem-solving skills.
Teaching Methods	1.The teaching methods (such as case analysis and project-based learning) stimulate my interest.
	2.The teaching approach encourages cooperation and teamwork among students.
	3.The teaching strategies used in class help me grasp the core knowledge of advertising design.
Online Learning Tools	1.Online learning tools allow me to organize my study schedule flexibly and improve my efficiency.
	2.The instant feedback from online platforms helps me better understand course content.
	3.Online tools enhance my interaction with teachers and classmates.
Demand of the Advertising Industry	1.I think the course content aligns with the real needs of the advertising industry.
	2.This course helps me better understand the demand for creative talents in the advertising field.
	3.The knowledge and skills from this course improve my competitiveness in the job market.
Interest in Advertising Design	1.I am highly interested in the field of advertising design and willing to explore more.
	2.The creative process in advertising design sparks my curiosity and imagination.
	3.I am willing to actively participate in activities and projects related to advertising design.
Learning Motivation	1.I believe that the knowledge gained from this course will benefit my future career.
	2.I am passionate about the new knowledge and skills I learn in this course.
	3.I work hard to complete course activities to achieve high grades.
	4.I aim to enhance my creative thinking ability through this course.
	5.The promising future of the advertising industry motivates me to invest more time in this course.
Course Satisfaction	1.I am satisfied with the overall learning experience of this course.
	2.The course content and teaching methods meet my expectations.
	3.The teacher's guidance and feedback make me feel supported.
	4.I am satisfied with the design of the projects and assignments in the course.
	5.The course helps me build a clear career path.
Learning Ability	1. I can easily understand and master the content of the advertising design course.
	2.When facing complex tasks, I can find effective solutions.
	3.I can stay focused during study and complete tasks on time.
	4.I have strong self-learning ability and can solve problems independently.
	5.When encountering difficulties, I can adjust my approach to overcome them.
Student Engagement	1.I actively participate in class discussions and share my ideas.
	2.I am willing to spend time preparing and completing assignments and projects.
	3.I actively communicate and collaborate with teachers and classmates.
	4.I use online resources to engage in course-related activities.
	5.Even when the workload is heavy, I maintain a positive attitude toward participation.
	6.I engage in advertising design-related learning beyond the classroom.
	7.I sustain my interest in the course without being easily distracted.
	8.I hope to participate in more similar courses or projects in the future.

References

Ab Jalil, H., Ismail, I. A., Ma'rof, A. M., Lim, C. L., Hassan, N., & Che Nawi, N. R. (2022). Predicting learners' agility and readiness for future learning ecosystem. Education Sciences, 12(10), 680.

Afdiyanti, A. P., Hidayah, E. N., Nugraha, E. R. L., Herdiansyah, M. R., Khotimatussannah, N., Hanifa, P. A., & Ambarini, S. D. (2022). MODIFIKASI ALAT UKUR STUDENT ENGAGEMENT PADA SAAT PEMBELAJARAN JARAK JAUH. MOTIVA: JURNAL PSIKOLOGI, 5(1), 16-24.

Alamri, H., Lowell, V., Watson, W., & Watson, S. L. (2020). Using personalized learning as an instructional approach to motivate learners in online higher education: Learner self-determination and intrinsic motivation. Journal of Research on Technology in Education, 52(3), 322-352.

Alamri, H., Lowell, V., Watson, W., & Watson, S. L. (2020). Using personalized learning as an instructional approach to motivate learners in online higher education: Learner self-determination and intrinsic motivation. Journal of Research on Technology in Education, 52(3), 322-352.

Nounou, N. (2021). A proposed strategy for applying hybrid learning in teaching advertising design. International Journal of Design and Fashion Studies, 4(1), 329-351.

Annisa, A. N. (2019). Pengaruh motivasi belajar terhadap prestasi siswa di sekolah. Al-Ittizaan: Jurnal Bimbingan Konseling Islam, 2(2), 1-6.

JournalSeek, G. (2019). International Journal of Instruction. International Journal of Instruction, 12(1).

Azila-Gbettor, E. M., Mensah, C., Abiemo, M. K., & Bokor, M. (2021). Predicting student engagement from self-efficacy and autonomous motivation: A cross-sectional study. Cogent Education, 8(1), 1942638.

Baloran, E. T., Hernan, J. T., & Taoy, J. S. (2021). Course satisfaction and student engagement in online learning amid COVID-19 pandemic: A structural equation model. Turkish Online Journal of Distance Education, 22(4), 1-12.

Braßler, M., & Schultze, M. (2021). Students' innovation in education for sustainable development—a longitudinal study on interdisciplinary vs. Monodisciplinary learning. Sustainability, 13(3), 1322.

Chen, Y., & Chi, T. (2021). How does channel integration affect consumers' selection of omni-channel shop** methods? An empirical study of US consumers. Sustainability, 13(16), 8983.

Doan, X. V., Lei, X., & Shen, S. (2020). Pricing of reusable resources under ambiguous distributions of demand and service time with emerging applications. European Journal of Operational Research, 282(1), 235-251.

Elfil, M., & Negida, A. (2017). Sampling methods in clinical research; an educational review. Emergency, 5(1).

Glapaththi, I., Dissanayake, R., Welgama, T., Somachandara, U., Weerarathna, R. S., & Pathirana, G. Y. (2019). A study on the relationship between student engagement and their academic achievements. Asian Social Science, 15(11), 1.

Hsu, H. C. K., Wang, C. V., & Levesque-Bristol, C. (2019). Reexamining the impact of self-determination theory on learning outcomes in the online learning environment. Education and information technologies, 24(3), 2159-2174.

Huang, D., Yu, C., Ni, J., Luo, Y., Zhang, Q., Yuan, Y., & Tang, Z. (2024). Study on Visualization Water Drive Experiment and Mechanism in Bottom Water Reservoir Affected by Seepage Barrier. Engineering Advances, 4(1).

Kania, N., & Robbihi, H. I. (2022). Online learning on student learning motivation. The Incisor (Indonesian Journal of Care's in Oral Health), 6(1), 195-205.

Landrum, B., Bannister, J., Garza, G., & Rhame, S. (2021). A class of one: Students' satisfaction with online learning. Journal of Education for Business, 96(2), 82-88.

Luo, Y., Lin, J., & Yang, Y. (2021). Students' motivation and continued intention with online self-regulated learning: A self-determination theory perspective. Zeitschrift für Erziehungswissenschaft, 24(6), 1379-1399.

McKeithan, G. K., Rivera, M. O., Mann, L. E., & Mann, L. B. (2021). Strategies to promote meaningful student engagement in online settings. Journal of Education and Training Studies, 9(4), 1-11.

Miller, E. C., Severance, S., & Krajcik, J. (2021). Motivating teaching, sustaining change in practice: Design principles for teacher learning in project-based learning contexts. Journal of Science Teacher Education, 32(7), 757-779.

Al Yakin, A., & Seraj, P. M. I. (2023). Impact of metaverse technology on student engagement and academic performance: the mediating role of learning motivation. International Journal of Computations, Information and Manufacturing (IJCIM), 3(1), 10-18.

Sharif Nia, H., Marôco, J., She, L., Khoshnavay Fomani, F., Rahmatpour, P., Stepanovic Ilic, I., ... & Reardon, J. (2023). Student satisfaction and academic efficacy during online learning with the mediating effect of student engagement: A multi-country study. Plos one, 18(10), e0285315.

Nosatova, V. (2021). Формування мотивації до самостійного учіння як чинник успішності навчання студентів в університеті. New Collegium, 1(103), 105-108.

Polzer, J., Xu, X., Selitskiy, K., Archibald, R., & Gill, A. (2023). A systematic method for retrofitting legacy machines using the "shoestring" philosophy.

Rahmalan, H., Mohamad, S. N. M., Ahmad, N., Rahman, A. A., Nasir, M. M., & Sidek, S. (2022, May). How engaged is your student? A review of online learning tools. In 2022 Applied Informatics International Conference (AiIC) (pp. 137-142). IEEE.

Randi, J., & Corno, L. (2022). Addressing student motivation and learning experiences when taking teaching online. Theory Into Practice, 61(1), 129-139.

Santi, E. A., Gorghiu, G., & Pribeanu, C. (2023). Perceived Self-Efficacy and Course Satisfaction in Students Preparing for Teaching Careers. Problems of Education in the 21st Century, 81(5), 687-701.

Vallis, C., & Shalavin, C. (2020). Bend me, stretch me: Connecting learning design to choice. ASCILITE Publications, 134-144.

Vergara, K. C., Santos, J. E., Blasa-Cheng, A., Balatbat, M., & Vergara, R. A. (2023). Engagement and Learning Success: Evidence from Three Years of Transformational Teaching Strategies in Online Event Marketing Education. International Journal of Multidisciplinary: Applied Business and Education Research, 4(11), 4101-4112.

Vu, T., Magis-Weinberg, L., Jansen, B. R., van Atteveldt, N., Janssen, T. W., Lee, N. C., ... & Meeter, M. (2022). Motivation-achievement cycles in learning: A literature review and research agenda. Educational Psychology Review, 34(1), 39-71.

Yu, Z., Yu, L., Xu, Q., Xu, W., & Wu, P. (2022). Effects of mobile learning technologies and social media tools on student engagement and learning outcomes of English learning. Technology, Pedagogy and Education, 31(3), 381-398.

Zaitun, Z., Hadi, M. S., & Harjudanti, P. (2021). The impact of online learning on the learning motivation of junior high school students. Bisma The Journal of Counseling, 5(1), 56-63.

Zen, Z., & Ariani, F. (2022). Academic achievement: the effect of project-based online learning method and student engagement. Heliyon, 8(11).

Zhou, N., Tigelaar, D., & Admiraal, W. (2024). The relationship between vocational teachers' motivational beliefs and their engagement in work placement. Journal of Vocational Education & Training, 76(3), 664-683.

Suraeva, M. O. (2021). Innovation in the sphere of advertising: latest innovations and prospects of development. Вестник Самарского университета. Экономика и управление, 12(2), 140-146.

소원현. (2022). 온라인 학습특성이 자기결정성 욕구, 학업성취에 미치는 영향. 글로벌융합연구학회지, 1(1), 71-80.