

**AN ANALYSIS OF THE RELATIONSHIP BETWEEN DIGITAL
ENGAGEMENT, PERCEIVED VALUE, AND ENGAGEMENT EXPERIENCE
INFLUENCING BEHAVIORAL INTENTION TO PARTICIPATE IN E-
SPORTS ACTIVITIES AMONG GENERATION Z STUDENTS AT SUAN
SUNANDHA RAJABHAT UNIVERSITY**

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ABSTRACT

The rapid growth of e-sports has revolutionized the sports and entertainment industry, particularly among Generation Z, who frequently interact with digital platforms. This study investigates the relationships between Digital Engagement, Perceived Value, Engagement Experience, and Behavioral Intention among Generation Z students at Suan Sunandha Rajabhat University. Using a Structural Equation Model (SEM) approach, this research examines how digital engagement and perceived value influence engagement experience and behavioral intention. The findings reveal that Engagement Experience and Perceived Value are critical factors in driving behavioral intention, while digital engagement significantly impacts engagement experience, highlighting its mediating role.

The study employed a quantitative methodology, collecting data from a purposive sample of Generation Z students through an online questionnaire. Statistical analyses, including descriptive statistics and PLS-SEM, were conducted to evaluate the measurement and structural models. Results indicate that all paths in the model are statistically significant ($P\text{-value} < 0.05$), with R^2 values of 0.746 and 0.650 for engagement experience and behavioral intention, respectively. Additionally, the model demonstrates excellent predictive relevance ($Q^2 > 0.35$) and good model fit indices ($SRMR = 0.078$).

These findings underscore the importance of fostering positive engagement experiences and perceived value to enhance behavioral intention in e-sports. The study provides actionable insights for educational institutions and e-sports organizers to design effective digital strategies that resonate with Generation Z. Future research should explore additional factors such as social influence or gamification and expand the study to include diverse demographic groups for a broader understanding of e-sports engagement.

Keywords: Digital Engagement, Perceived Value, Engagement Experience, Behavioral Intention, E-Sports Participation,

INTRODUCTION

The rapid growth of e-sports has transformed the sports and entertainment industry globally, including Thailand. E-sports, characterized by competitive video gaming, has gained significant attention, particularly among the younger generation. Generation Z, who are digital natives, frequently interact with digital platforms, making them the primary participants and consumers in the e-sports ecosystem (Statista, 2023). In Thailand, the government's recognition of e-sports as an official sport in 2017 has further fueled its growth, encouraging educational institutions and private sectors to promote related activities (Bangkok Post, 2023). However, understanding the factors that drive Generation Z's intention to participate in e-sports remains limited.

Digital engagement has emerged as a critical component in fostering participation in e-sports activities. It encompasses behavioral, emotional, and cognitive interactions with digital platforms, such as streaming services, social media, and gaming forums (Kaur et al., 2022). These platforms provide opportunities for e-sports participants to connect, learn, and compete, creating a sense of belonging and shared experience. Moreover, the perceived value derived from these engagements, whether functional, emotional, or social, significantly influences their level of involvement (Zeithaml, 1988). Understanding how digital engagement and perceived value contribute to e-sports participation is essential for designing effective engagement strategies.

Engagement experience, a key mediating factor, bridges digital engagement and behavioral intention. Positive engagement experiences enhance participants' motivation and satisfaction, leading to stronger intentions to participate in future e-sports events (Brodie et al., 2011). For Generation Z students at Suan Sunandha Rajabhat University, these experiences can be influenced by how effectively digital platforms and activities are designed to meet their preferences and expectations. However, limited research exists on how engagement experience mediates the relationship between digital engagement, perceived value, and behavioral intention in the context of e-sports participation among university students.

This study aims to analyze the relationship between digital engagement, perceived value, and engagement experience, and their impact on behavioral intention to participate in e-sports activities among Generation Z students at Suan Sunandha Rajabhat University. By employing a Structural Equation Model (SEM) approach, this research seeks to provide insights into the factors driving e-sports participation and offer recommendations for policymakers and educational institutions to foster a more engaging and sustainable e-sports environment.

Theoretical Foundation

Digital Engagement

Digital marketing represents the evolution of traditional marketing. It is marketing through digital media in which digital channels are used to communicate with consumers while traditional marketing ideas are applied to updated channels of consumer connection. Digital media and digital marketing format Internet use to facilitate adequate information access. (Pahasing et al., 2022) Digital engagement refers to the level of interaction, participation, and connection users have with digital platforms, particularly in the context of e-sports. It encompasses three dimensions: behavioral engagement (e.g., active participation in gaming or e-sports events), emotional engagement (e.g., feelings of enjoyment

or attachment), and cognitive engagement (e.g., focused attention and learning). Calder, Malthouse, and Schaedel (2009) highlight that digital engagement is a critical driver of user involvement and long-term participation in activities facilitated by online platforms. For Generation Z, who are digital natives, these interactions play a pivotal role in shaping their preferences and behaviors toward e-sports.

Perceived Value

Perceived value is the user's evaluation of the benefits they receive from an activity relative to the costs incurred. In the context of e-sports, perceived value can include functional benefits (e.g., entertainment and skill-building), emotional benefits (e.g., enjoyment and excitement), and social benefits (e.g., a sense of community and belonging). Zeithaml (1988) posits that perceived value strongly influences consumer decision-making and engagement in activities. For Generation Z students, the perceived value of participating in e-sports can significantly impact their motivation to engage in these activities.

Engagement Experience

Engagement experience refers to the user's subjective perceptions and emotional responses resulting from their interactions with e-sports platforms and activities. Positive engagement experiences, such as enjoyable gameplay, social connections, and rewarding outcomes, enhance users' satisfaction and motivation to participate further. Brodie et al. (2011) argue that engagement experiences mediate the relationship between user interactions and their long-term intentions to remain involved in activities. This makes engagement experience a crucial mediator in understanding how digital engagement and perceived value influence behavioral intention in the e-sports context.

Behavioral Intention

Behavioral intention is a user's commitment or willingness to perform a specific action, such as participating in e-sports activities. According to the Theory of Planned Behavior (Ajzen, 1991), behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral control. In the e-sports context, factors such as digital engagement, perceived value, and positive engagement experiences can shape a user's intention to participate. Generation Z students, who are highly influenced by digital media and social interactions, are likely to form their behavioral intentions based on these critical factors.

Research Hypotheses

- H1: Digital engagement positively influences engagement experience.
- H2: Digital engagement positively influences behavioral intention to participate in activities.
- H3: Perceived value positively influences engagement experience.
- H4: Perceived value positively influences behavioral intention to participate in activities.
- H5: Engagement experience positively influences behavioral intention to participate in activities.

OBJECTIVE

1. To examine the relationship between Digital Engagement and Perceived Value and their effects on Engagement Experience and Behavioral Intention among participants.

2. To assess the fitness and appropriateness of the Structural Equation Model (SEM) developed in this study.

METHODOLOGY

Population and Sampling

The population for this study consists of Generation Z students enrolled at Suan Sunandha Rajabhat University. The sample size is determined using Krejcie & Morgan's table or the G*Power analysis tool, ensuring an adequate number of respondents for statistical analysis. A purposive sampling method is employed to select participants who have prior experience or interest in e-sports activities. This method ensures that the sample accurately represents the target population, focusing on students who are relevant to the research context.

Data Collection

Data is collected using an online questionnaire distributed through platforms such as Google Forms. The questionnaire is divided into five sections:

1. Demographic Information: Basic information about the respondents.
2. Digital Engagement: Questions measuring behavioral, emotional, and cognitive aspects of digital engagement.
3. Perceived Value: Questions assessing the functional, emotional, and social value derived from e-sports participation.
4. Engagement Experience: Questions evaluating the participants' subjective experiences during e-sports activities.
5. Behavioral Intention: Questions measuring the intention to participate in future e-sports activities.

The questionnaire is designed using a 5-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree," to quantify the responses.

Data Analysis

The collected data is analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the relationships among the latent variables and test the research hypotheses. The analysis involves the following steps:

1. Measurement Model Evaluation: Assessments include reliability (Cronbach's alpha, composite reliability), convergent validity (Average Variance Extracted, AVE), and discriminant validity (Fornell-Larcker criterion).
2. Structural Model Evaluation: Path coefficients, T-statistics, and p-values are analyzed to test the hypotheses. Additionally, R^2 , Q^2 , and model fit indices (SRMR) are used to evaluate the predictive power and goodness-of-fit of the model.

RESULTS

All variables have high mean values (mostly ranging from 3.3 to 4.4), indicating positive evaluations from the respondents. The skewness and kurtosis values suggest that the data distribution is not normal,

which is typical for survey data. The p-value of 0.000 supports the conclusion that the data is not normally distributed. However, this does not pose an issue for PLS-SEM, as it does not require the assumption of normality for data distribution (Hair et al., 2021). From Table 1.

Table 1
Presents Mean, Observed Minimum and Maximum, Standard Deviation, Excess Kurtosis, Skewness, and P-value

Observed variables	Mean	Observed min	Observed max	Standard deviation	Excess kurtosis	Skewness	p value
DE1	4.190	1	5	0.937	2.087	-1.337	0.000
DE2	3.530	1	5	1.151	-0.712	-0.316	0.000
DE3	3.312	1	5	1.196	-0.572	-0.384	0.000
DE4	3.768	1	5	1.038	-0.130	-0.585	0.000
DE5	4.162	1	5	0.867	2.151	-1.292	0.000
PV1	4.350	1	5	0.687	0.621	-0.862	0.000
PV2	4.255	1	5	0.656	-0.748	-0.322	0.000
PV3	4.332	1	5	0.719	0.253	-0.837	0.000
PV4	4.255	1	5	0.648	-0.718	-0.306	0.000
PV5	4.088	1	5	0.738	-1.157	-0.140	0.000
EE1	4.285	1	5	0.713	0.352	-0.769	0.000
EE2	4.265	1	5	0.648	-0.720	-0.322	0.000
EE3	4.110	1	5	0.750	0.313	-0.647	0.000
EE4	4.190	1	5	0.754	-0.407	-0.541	0.000
EE5	4.258	1	5	0.653	-0.737	-0.320	0.000
BI1	4.085	1	5	0.826	-0.988	-0.346	0.000
BI2	4.245	1	5	0.837	2.050	-1.207	0.000
BI3	4.305	1	5	0.779	0.607	-1.006	0.000
BI4	4.237	1	5	0.718	-1.004	-0.389	0.000
BI5	4.343	1	5	0.742	0.089	-0.868	0.000

Measurement Model

All latent variables exhibit good reliability and validity, indicating that the measurement model is of high quality. This model is suitable for use in the subsequent structural model analysis. From Table 2.

Table 2
presents the values of Cronbach's Alpha, Composite Reliability (rho a), Composite Reliability (rho c), and Average Variance Extracted (AVE)

latent variables	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)
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Behavioral Intention	0.860	0.867	0.900	0.643
Digital Engagement	0.882	0.891	0.913	0.679
Engagement Experience	0.907	0.908	0.931	0.730

All paths in the model are statistically significant ($P\text{-Value} < 0.05$). The variables **Engagement Experience** and **Perceived Value** play a crucial role in explaining **Behavioral Intention**. **Digital Engagement** has a pronounced effect on **Engagement Experience**, which may serve as a key mediator in the indirect influence on **Behavioral Intention**. From Table 3

Table 3 presents the Path Coefficients for the research hypotheses tested in the Structural Equation Model (SEM).

latent variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Digital Engagement -> Behavioral Intention	0.199	0.201	0.053	3.777	0.000
Digital Engagement -> Engagement Experience	0.560	0.560	0.039	14.314	0.000
Engagement Experience -> Behavioral Intention	0.431	0.431	0.076	5.669	0.000
Perceived Value -> Behavioral Intention	0.272	0.271	0.046	5.919	0.000
Perceived Value -> Engagement Experience	0.445	0.444	0.037	11.980	0.000

The latent variables in this model demonstrate a good ability to explain variance, with **Engagement Experience** showing the highest R^2 value of 0.746. The **R^2 Adjusted** values are closely aligned with the R^2 values, indicating that the model is efficient and the included variables play a significant role. From Table 4

Table 4 presents the values of R-square and R-square Adjusted.

latent variables	R-square	R-square adjusted
Behavioral Intention	0.650	0.647
Engagement Experience	0.746	0.745

The variables **Behavioral Intention** and **Engagement Experience** have Q^2 values greater than 0.35, indicating excellent predictive relevance. The variable **Digital Engagement** has a Q^2 value of 0, as it does not function as a dependent variable. Overall, this model demonstrates strong potential in explaining and predicting the variance of key variables in the research. From Table 5

Table 5 presents the values of Construct Cross-Validated Redundancy.

latent variables	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Behavioral Intention	2000.000	1175.700	0.412
Digital Engagement	2000.000	2000.000	0.000
Engagement Experience	2000.000	918.063	0.541

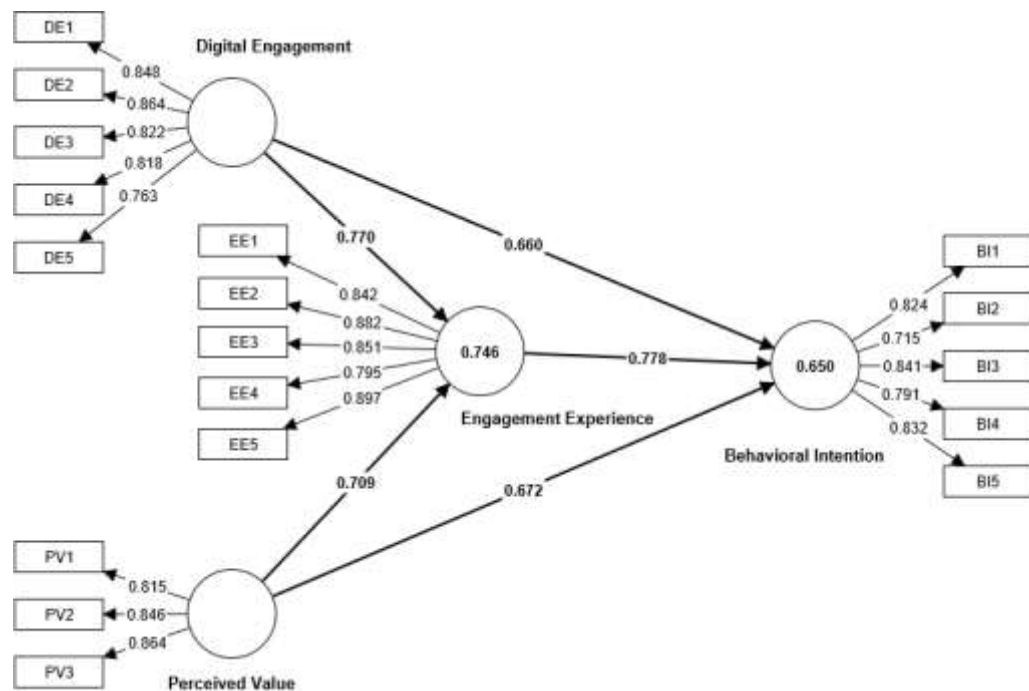
The model fit indices suggest an acceptable fit for the structural equation model (SEM). The SRMR value of 0.078, below the 0.08 threshold, indicates a good fit, with alignment between the Saturated and Estimated Models. Low d_{ULS} (1.051) and d_G (0.997) values further confirm the model's suitability to the data. While the Chi-square value (1936.084) is high due to sample size sensitivity, the SRMR mitigates concerns. The NFI value of 0.687 is acceptable but below the ideal benchmark of 0.9, suggesting potential for further model refinement. From Table 6

Table 6 presents the values of Model Fit.

Item	Saturated model	Estimated model
SRMR	0.078	0.078
d_{ULS}	1.051	1.051
d_G	0.997	0.997
Chi-square	1936.084	1936.084
NFI	0.687	0.687

This diagram represents the Structural Equation Model (SEM) showing the relationships between latent variables (Digital Engagement, Perceived Value, Engagement Experience, and Behavioral Intention) and their observed indicators. From Figure 1

Figure 1: Model of DPEB



CONCLUSION AND FUTURE WORK

This study examined the relationships between Digital Engagement, Perceived Value, Engagement Experience, and Behavioral Intention among Generation Z students participating in e-sports activities at Suan Sunandha Rajabhat University. The findings provide valuable insights into the factors influencing behavioral intention and the overall effectiveness of the proposed structural model.

1. Key Findings:

- Engagement Experience and Perceived Value were identified as critical factors directly impacting Behavioral Intention, highlighting their importance in promoting e-sports participation. This is consistent with Zhipeng Chen et al. (2024)'s study that ski consumers' perceived value has a significant positive influence on both customer satisfaction and loyalty. Specifically, the higher the perceived value of ski consumers in their ski experience, the higher their satisfaction with the ski resort, which in turn indicates greater loyalty. In a research study by Sid Terason et al. (2022), it was found that Perceived value was an acritical mediator and direct predictor of revisit intentions. In addition, the results of the study by Yingjie Zhang et al. (2024) found that Activity quality also has a positive effect on perceived value.
- Digital Engagement had a significant influence on Engagement Experience, underscoring its role as a driver for positive user experiences.
- All paths in the model were statistically significant ($P\text{-value} < 0.05$), and the model demonstrated excellent predictive relevance, with Q^2 values above 0.35 for key constructs.

2. Model Fit and Predictive Relevance:

- The model exhibited good fit indices, with an SRMR value of 0.078 and acceptable Chi-square and NFI values, indicating a reliable representation of the relationships among the variables.
- The high R^2 values for Engagement Experience (0.746) and Behavioral Intention (0.650) further validate the model's explanatory power.

3. Implications:

- The study highlights the importance of fostering positive engagement experiences and perceived value to enhance behavioral intention in the context of e-sports.

- Educational institutions and e-sports organizers can leverage these findings to design digital strategies that resonate with Generation Z, promoting greater participation and long-term engagement.
- 4. Recommendations for Future Research:
 - Future studies could explore additional variables, such as social influence or gamification, to further enrich the understanding of factors driving e-sports participation.
 - Expanding the scope to include participants from other demographic groups or institutions would provide a broader perspective on e-sports engagement.

Overall, this research contributes to the growing body of knowledge on e-sports by providing actionable insights into digital engagement and behavioral intention among Generation Z students. These findings can guide strategic planning to enhance participation in e-sports and similar digital activities.

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