

# Role of age, gender and cultural factors as moderator on technology acceptance of online entertainment

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## Abstract

**Purpose** – Research on technology acceptance of online entertainment with age, gender and cultural factors as moderator, is rarely conducted. Previous research predominantly focused on age or gender as moderator, neglecting the influence of cultural factors. Therefore, this study aims to investigate acceptance of online entertainment technology, incorporating age, gender and cultural factors as moderator.

**Design/methodology/approach** – Data were collected through a survey comprising 1,121 individuals aged 14–24 years from three cities in Indonesia. The proposed theoretical model examined the causal effect of acceptance and moderating effects due to individual gender, age, power distance, individualism, feminism and uncertainty avoidance (AU). Subsequently, structural equation modeling was used to evaluate the theoretical model, and the results confirmed several findings from previous research.

**Findings** – The findings confirmed the positive direct impact of habit and price value (PV) on behavioral intention and hedonic motivation, as well as social influence on habit. The recent findings derived from the moderating effect analysis showed that age, individualism and feminism played a moderating role in the effects on individual intention due to habit. Additionally, gender and AU moderated the effects on individual habits due to hedonic motivation.

**Originality/value** – This research contributes to the limited knowledge of technology acceptance of online entertainment, and also integrates the causal effects of individual intention due to habit, PV, hedonic motivation and social influence, considering the moderating role of culture, age and gender. Consequently, the investigation provides valuable insights into the literature by presenting evidence of age, gender and cultural differences in acceptance. Furthermore, it offers practical guidance to online entertainment application developers on designing applications to satisfy consumers of different ages, genders and cultures.

**Keywords** Age, Gender, Culture, Habit, Online entertainment, Technology acceptance

**Paper type** Research paper

## Introduction

In April 2023, “The Global State of Digital,” presented by [Gabby.kenny@wearesocial.net](mailto:Gabby.kenny@wearesocial.net) (2023) shows that out of the global population of 8.03 billion, 5.18 billion are internet users. The finding was obtained from the survey conducted on individuals between the age of 16 and 64, who had spent an average of 6 h and 35 min daily on internet-related activities. Consequently, the finding shows that the primary reasons for internet use include obtaining information (59.3%), staying updated on news and events (51.2%), watching videos, TV shows or movies (50.6%), accessing and listening to music (44%) and gaming (29.7%). In the context of internet users, online music, gaming, video streaming, online comics and online news are interconnected aspects of online media entertainment, which is a focus of this research.

As digital natives, younger people have a greater tendency to use technology due to their familiarity with technology since

childhood (Šorgo *et al.*, 2017). The people’s adaptability and instinctual understanding of technology-related aspects grow rapidly. Based on the widespread use of online technology, particularly in entertainment, investigating technology acceptance concerning gender and age differences becomes crucial for both developers and consumers (Akbar, 2013; Chawla and Joshi,

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2020; Chen, 2018; Harnadi, 2017; Lee, 2009; Venkatesh, 2003, 2012; Wang and Sun, 2016). The initial research on cultural differences in technology acceptance was carried out by Straub (1997), exploring technology acceptance in relation to cultural factors such as power distance (PD), individualism, feminism and uncertainty avoidance (AU). Seventeen years later, Alshare and Mousa (2014) investigated the moderating effect of cultural factors, including PD, individualism and feminism, on consumers' intention to use mobile payment devices. Subsequently, Tarhini et al. (2017) focused on the moderating effect of the same cultural factors on e-learning intention. Despite the prior explorations, research on cultural differences in technology acceptance remains limited, thereby limiting insights for both consumers and developers in this concept.

In the context of technology acceptance, there are variations based on age, gender and cultural factors. Initially, it was observed that males had higher hedonic motivation and habit compared to females (Lee, 2009; Venkatesh, 2012). Meanwhile, Wang and Wang (2008) suggested no discernible differences in hedonic motivation between genders. Another research also found that females showed a greater receptiveness to others' beliefs than males (Venkatesh, 2012). However, Lee (2009) recorded no distinction in social influence between males and females. Concerning sensitivity to price value (PV), Venkatesh (2012) found that females tend to be more sensitive than males.

The differences in technology acceptance among several age groups were observed in the research conducted by Venkatesh (2012) and Akbar (2013). Regarding hedonic motivation, younger people have a higher motivation than older people (Venkatesh, 2012). Meanwhile, Lee (2009) suggested no disparity in hedonic motivation between younger and older people. In terms of social influence, Venkatesh (2012), Lee (2009) and Akbar (2013) presented varying results. For example, Venkatesh (2012) found that older people were more influenced by others' beliefs than younger people. Moreover, Akbar (2013) and Lee (2009) found no significant difference in this regard. Venkatesh (2012) further explored habit and PV and concluded that older individuals have a greater tendency than the younger counterparts.

According to Tarhini et al. (2017), Alshare and Mousa (2014) and Straub (1997), cultural factors play a crucial role in technology acceptance. In terms of social influence, Tarhini et al. (2017) and Alshare and Mousa (2014) identified differences arising from expectations and acceptance variations in PD, group integration individualism-collectivism (I-C), traditional gender role differences (feminism-masculinity) and tolerance for ambiguity and uncertainty (AU). Consequently, to adapt technology acceptance to users' preferences, developers are required to have insight into user needs based on age, gender and cultural factors. Limited research has been conducted on moderating the effect of culture on technology acceptance (Alshare and Mousa, 2014; Straub, 1997; Tarhini et al., 2017). For example, Straub (1997) carried out an investigation using cultural factors such as PD, individualism, feminism and AU as moderator variables, while Tarhini et al. (2017) considered PD, feminism and AU and Alshare and Mousa (2014) used PD and individualism as moderator variables.

Based on the findings, research exploring age, gender and cultural factors in a comprehensive model has not been conducted. Currently, only a limited number of analogous research has been identified, with two conducted by Alshare and

Mousa (2014) in Qatar and Tarhini et al. (2017) in Lebanon. The explorations consider cultural factors as moderator in the context of technology acceptance, arising two decades after Straub (1997) initially proposed the impact of these factors on technology acceptance. It is crucial to be aware that the use of the model has not been thoroughly explored in Indonesia. As a result, the current research fills the existing gap by focusing on data obtained from Indonesia. The primary objective of this research is to investigate technology acceptance of online entertainment. The process includes examining factors related to acceptance of online music, online gaming, video streaming, online comics and online news. To achieve the desired result, two key questions are addressed. First, which factors influence individual intention to accept online entertainment, among age, gender differences and cultural influences? Second, which relationship has significant or moderate effects on intention?

This research explores the causal effects of hedonic motivation, PV and social influence on habit and behavioral intention (BI). Furthermore, it investigates the role of cultural factors as moderator on habit and technology acceptance of online entertainment. New findings are obtained from moderation analysis, particularly regarding role of culture on individual habit and intention to accept online entertainment, as well as the impact of hedonic motivation on habit. By consolidating evidence of variations in acceptability across age, gender and culture, this research contributes to the existing knowledge in this field. Additionally, the findings generated can guide developers of online entertainment applications on the importance of considering age, gender and cultural factors to create successful applications that appeal to users.

The current research is presented in eight sections, with Section 1 being the introduction, providing the background, purpose, questions and contribution of the exploration. Section 2 presents the body of literature supporting the proposed model, while Section 3 describes the proposed model and hypotheses. Section 4 explains the methodology, and Section 5 focuses on data description and analysis. The results are discussed in Section 6, while Section 7 provides the details of results and new results. Finally, Section 8 summarizes the results and analyzes responses to the research questions.

## 2. Literature review

### 2.1 Research variables

The variables used in this research can be seen in Table 1. Additionally, the operational definitions and the references for these variables are described below.

Previous research in technology acceptance was characterized in the context of online media entertainment technology acceptance (Table 2), e-commerce technology acceptance (Table 3) and technology acceptance (Table 4). Furthermore, the context of the moderating effects was characterized in gender difference (Table 5), age difference (Table 6) and cultural difference (Table 7).

Table 2 shows that almost all research on technology acceptance of online media entertainment proposed theoretical models with hypotheses tested using quantitative data gathered through questionnaires. TAM, TPB and the extended UTAUT were investigated to examine the moderating effects of age, gender and experience on the

Table 1 Operational definition of variables

Variables	Operational definitions	Reference
Hedonic motivation	The extent to which an individual perceives the use of online media entertainment as enjoyable or pleasurable	Venkatesh (2012)
Habit	The extent to which people tend to behave automatically due to learning, and their behaviors were the result of prior experiences	Venkatesh (2012)
Social influence	The degree of how an individual perceives that others who are important also believe they should use the system	Venkatesh (2003)
Price value	The extent to which “consumers” weigh the perceived benefits of applications against the monetary cost of usage	Venkatesh (2012)
BI	The extent to which user intends to use online entertainment in the future	Harnadi (2017)
Gender	The individual’s gender is categorized as male or female	Nil
Age	The individual’s age in years	Nil
Power distance	The extent to which individuals expect and accept differences in power between different people	Tarhini et al. (2017)
Individualism-collectivism	The extent to which individuals are integrated into groups	Tarhini et al. (2017)
Feminism-masculinity	The extent to which traditional gender role is differentiated	Tarhini et al. (2017)
Uncertainty avoidance	The extent to which ambiguities and uncertainties are tolerated	Tarhini et al. (2017)

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Table 2 Previous research of BI in the context of technology acceptance of online media entertainment

Project/theory	Causal effects on BI	Moderating effects	Data collection	Reference
U&G Expectancy model in mobile English learning games acceptance	Gratification	Gender as moderator of the effect of gratification on continue intention	Quantitative survey	Chen (2018)
Extended UTAUT model in online gaming acceptance	Perceived enjoyment, performance expectancy, facilitating conditions	Age as moderator of the effect of effort expectancy on BI Gender as moderator of the effect of performance expectancy on BI	Quantitative survey	Tarhini et al. (2017)
ETAM in digital game acceptance of the elderly	Game narrative, social interaction, physical condition, perceived ease of use, attitude	Age as moderator of the effect of perceived ease of use on BI Gender as moderator of the effect of perceived ease of use on BI. Experience as moderator of the effect of perceived ease of use and attitude on intention	Quantitative survey	Wang and Sun (2016)
Investigating factors that influence people to play mobile social games	Enjoyment, interaction with others, perceived number of users, perceived number of peers, time flexibility	None	Quantitative Web survey	Wei and Lu (2014)
Antecedents of users’ intentions to play online games using TAM and TPB	Flow, subjective norm, perceived usefulness, perceived ease of use	None	Quantitative survey	Fan et al. (2012)
Examining two competing models based on TPB and TAM	Flow experience, perceived enjoyment, attitude, subjective norms, perceived behavioral control	Gender as moderator of the effect of perceived enjoyment on BI, attitude on BI and human-computer interaction to flow experience Experience as moderator of the effect of perceived behavioral control on BI	Quantitative Web survey	Lee (2009)

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models. Tarhini et al. (2017) and Wang and Sun (2016) explored the moderating effect of age on gaming acceptance, while Chen (2018), Tarhini et al. (2017), Wang and Sun (2016) and Lee (2009) examined the moderating effect of gender on e-learning and gaming acceptance. Additionally, Akbar (2013), Venkatesh (2003) and Venkatesh (2012) examined the moderating effect of age and gender on the academic environment and consumer context as shown in Table 4.

Table 3 shows the summary of previous research on e-commerce technology acceptance, with no proposed moderating effects on the theoretical model. Typically, all models shown in Table 3 were based on UTAUT and were tested using quantitative data collected through questionnaires.

Table 4 shows the compilation of previous research on various contexts of technology acceptance, including mobile payment, commerce and e-learning. The investigations used UTAUT and TAM as the theoretical framework, examining

Table 3 Previous research on BI in the context of e-commerce technology acceptance

Project/theory	Causal effects on BI	Moderating effects	Data collection	Reference
Investigating consumer use of mobile banking	Performance expectance, facilitating conditions, hedonic motivation, price value, habit, service quality, system quality	None	Quantitative survey	Baabdullah et al. (2019)
Role of habit as moderator on purchase intention of live streaming features	Habit	None	Quantitative survey	Chen et al. (2022)
Investigating factors predicting mobile shopping acceptance	Performance expectancy, effort expectancy, facilitating conditions, hedonic motivation, price value, privacy risk	None	Quantitative survey	Chopdar et al. (2018)
Examining factors influencing acceptance of mobile banking	Perceived risk, hedonic motivation, price value, performance expectancy, effort expectancy	None	Quantitative survey	Alalwan et al. (2018)

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Table 4 Previous research on BI in the context of technology acceptance

Project/theory	Causal effects on BI	Moderating effects	Data collection	Reference
The moderating effect of individual cultural values on user's acceptance of e-learning	Perceived ease of use, perceived usefulness, subjective norms, quality of work–life	<i>Power distance</i> as moderator of the effect of subjective norms on BI, perceived usefulness on BI <i>Individualism</i> as moderator of the effect of subjective norms on BI <i>Uncertainty avoidance</i> as moderator of the effect of subjective norms on BI	Quantitative survey	Tarhini et al. (2017)
The moderating effect of espoused cultural dimensions on consumers' acceptance to use mobile payment device	Performance expectancy, social influence, perceived information security	<i>Collectivism</i> as moderator of the effect of social influence on BI <i>Uncertainty avoidance</i> as moderator of the effect of effort expectancy on performance expectancy and perceived information security on BI <i>Masculinity</i> as moderator of the effect of performance expectancy on BI	Quantitative survey	Alshare and Mousa (2014)
Students' acceptance and use of technology in academic environment	Performance expectancy, attitude	<i>Age</i> as moderator of the effect of performance expectancy, effort expectancy and social influence on BI <i>Gender</i> as moderator of the effect of performance expectancy, and effort expectancy on BI <i>Experience</i> as moderator of the effect of perceived ease of use and attitude on intention	Quantitative survey	Akbar (2013)
Extended UTAUT model in consumer acceptance and use of technology	Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit	<i>Age</i> as moderator of the effect of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit on BI <i>Gender</i> as moderator of the effect of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit on BI <i>Experience</i> as moderator of the effect of effort expectancy, social influence, hedonic motivation and habit on BI	Quantitative survey	Venkatesh (2012)
UTAUT model	Performance expectancy, effort expectancy, social influence	<i>Age</i> as moderator of the effect of performance expectancy, effort expectancy and social influence on BI <i>Gender</i> as moderator of the effect of performance expectancy, effort expectancy and social influence on BI <i>Experience</i> as moderator of the effect of effort expectancy and social influence on BI	Quantitative survey	Venkatesh (2003)

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Table 5 Moderating effects of gender

Causal effect on BI	Moderator	Reference	Context of the research
Hedonic motivation	The stronger effect on males than on females (perceived enjoyment)	Lee (2009)	Online gaming
	The stronger effect on males than on females	Venkatesh (2012)	Consumer use and acceptance of technology
	The effect did not differ among males and females (perceived enjoyment)	Wang and Wang (2008)	Online gaming
	Gender was not a significant moderator (flow experience)	Lee (2009)	Online gaming
Social influence	The stronger effect on females than on the males	Venkatesh (2003)	Technology acceptance
	Gender was not a significant moderator	Lee (2009)	Online gaming
Price value	The stronger effect on females than on the males	Venkatesh (2012)	Consumer use and acceptance of technology
Habit	The stronger effect on male than on the female	Venkatesh (2012)	Consumer use and acceptance of technology

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Table 6 Moderating effects of age

Causal effect on BI	Moderator	Reference	Context of the research
Hedonic motivation	The stronger effect was in younger people than in older people	Venkatesh (2012)	Consumer use and technology acceptance
	Age was not a significant moderator	Lee (2009)	Online gaming
Social influence	The stronger effect was in older people than in younger people	Venkatesh (2003)	Technology acceptance
	The stronger effect was in younger people than in older people	Akbar (2013)	Technology acceptance in the academic environment
	Age was not a significant moderator	Lee (2009)	Online gaming
Price value	The stronger effect was in older people than in younger people	Venkatesh (2012)	Consumer use and technology acceptance
Habit	The stronger effect was in older people than in younger people	Venkatesh (2012)	Consumer use and technology acceptance

Source: Created by authors

Table 7 Moderating effects of culture

Causal effect on BI	Moderator	Reference	Context of the research
<i>Moderating effects of power distance</i>			
Social influence	The stronger effect was in larger power distance than in smaller power distance	Tarhini et al. (2017)	E-learning
	Power distance was not a significant moderator	Alshare and Mousa (2014)	Mobile payment device
<i>Moderating effects of individualism</i>			
Social influence	The stronger effect was in collectivism than in individualism	Alshare and Mousa (2014)	Mobile payment device
<i>Moderating effects of masculinity</i>			
Social influence	The stronger effect was in femininity than in masculinity	Tarhini et al. (2017)	E-learning
<i>Moderating effects of uncertainty avoidance</i>			
Social influence	The stronger effect was in higher uncertainty avoidance than in lower uncertainty avoidance	Tarhini et al. (2017)	E-learning

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age, gender, experience and cultural factors such as PD, individualism, feminism and AU as moderator of the model. Tarhini et al. (2017) and Alshare and Mousa (2014) explored cultural factors as moderating effects on e-learning and mobile payment device acceptance. Specifically, Tarhini et al. (2017) considered three cultural factors, including PD, individualism and AU. Meanwhile, Alshare and Mousa (2014) considered three cultural factors, namely, collectivism (opposite of individualism), AU and masculinity (opposite of feminism).

## 2.2 Moderating effect of gender

Gender is a moderator in the relationships between factors within technology acceptance model. Chen (2018), Hamadi (2017), Lee (2009), Venkatesh (2003, 2012), Wang and Wang

(2008) and Wang and Sun (2016) explored gender as moderator in online gaming acceptance and consumer acceptance. Table 5 shows the summary of the moderating effect of gender on related explorations. Regarding the relationship between hedonic motivation and BI, Lee (2009) and Venkatesh (2012) reported that hedonic motivation had a stronger effect on males compared to females. Similarly, Wang and Wang (2008) conducted research and concluded that the effect of gender did not differ between males and females.

Lee (2009) and Venkatesh (2003) presented different results on gender as moderator in the relationship between social influence and BI. For example, Venkatesh (2003) stated that the stronger effect was in females than males. Meanwhile, Lee (2009) concluded that gender was not a significant moderator.

Furthermore, Venkatesh (2012) used gender as moderator in the relationship between PV and habit on BI, resulting in a conclusion that gender was a significant moderator of PV on BI with a stronger effect in females than males. Gender was also considered a significant moderator on habit and BI with a stronger effect in males than females.

2.3 Moderating effect of age

Akbar (2013), Harnadi (2017), Lee (2009), Venkatesh (2003, 2012) and Wang and Sun (2016) studied the moderating effect of age on the relationship among factors and BI, as shown in Table 6. Specifically, Venkatesh (2012) and Lee (2009) used age as moderator in the relationship between hedonic motivation and BI and reached different conclusions. Venkatesh (2012) concluded that age was a significant moderator with a stronger effect on younger people than on older people, while Lee (2009) found age to be less significant.

Akbar (2013), Lee (2009) and Venkatesh (2003) studied the moderating effect of age on the relationship between social influence and BI, with differing results. Venkatesh (2003) found that the effect was stronger on older people than on younger people, while Akbar (2013) found the opposite. These results differed from the exploration by Lee (2009), concluding that the effect of age was not significant. Additionally, Venkatesh (2012) applied age as moderator in the relationship between PV and habit on BI, with the result showing a stronger effect in older people than in younger people.

2.4 Moderating effect of culture

According to Straub (1997), there were four dimensions known as Hofstede’s cultural dimensions that needed to be examined due to their impact on technology acceptance. These dimensions comprised PD, I-C, femininity-masculinity (F-M) and AU. Cultural research on technology acceptance came from the e-learning context by Tarhini et al. (2017) and the mobile payment device context by Alshare and Mousa (2014), where the four dimensions were used as moderator on the relationship of factors to BI. Table 7 shows the summary of the moderating effect of culture on related research. Tarhini et al. (2017) stated that PD was a significant moderator on the relationship between performance expectancy and social influence to BI, I-C was a significant moderator on the relationship of effort expectancy to BI and both F-M and I-C were significant moderator on the

relationship of performance expectancy and effort expectancy. Meanwhile, Alshare and Mousa (2014) stated that PD and I-C were significant moderator on the relationship of social influence to BI, and F-M was a significant moderator on the relationship of performance expectancy to BI.

Regarding the moderating effects of PD on the relationship of social influence to BI, Tarhini et al. (2017) and Alshare and Mousa (2014) showed different results. According to Tarhini et al. (2017), PD was a significant moderator with a stronger effect in higher PD than in lower. Meanwhile, Alshare and Mousa (2014) stated that PD was not a significant moderator. Alshare and Mousa (2014) further investigated mobile payment devices, resulting in I-C as a significant moderator on the relationship of social influence to BI, where its effect was stronger in collectivism than individualism. Meanwhile, Tarhini et al. (2017) examined the moderating effects of F-M on the relationship of social influence to BI, and the result showed that the stronger effect was in femininity than masculinity. To complete the results, Tarhini et al. (2017) examined AU as a moderating effect of social influence on BI, and found that higher AU was affected more strongly than lower AU.

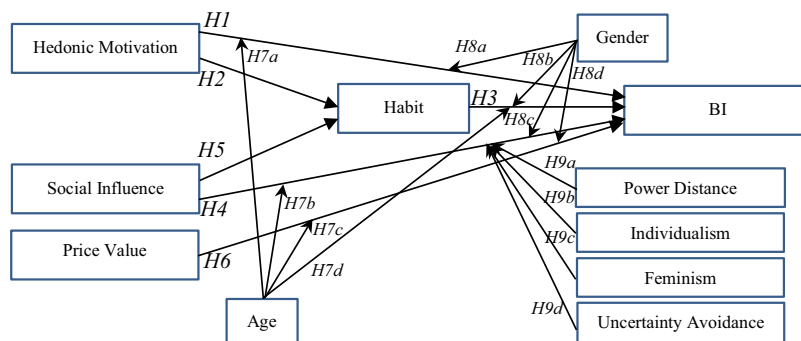
3. Proposed theoretical model and hypotheses

From the review of previous related literature, this research proposed a theoretical model as shown in Figure 1. There were three independent variables (hedonic motivation, social influence and PV), one intervening variable (habit), one dependent variable (BI) and six moderating variables (age, gender, PD, individualism, femininity and AU). The operational definition of the latent variables used in the theoretical model was shown in Table 1, and the questionnaire was discussed in the Appendix. Typically, the purpose of reviewing previous related variables was to identify prominent variables and their causal or moderating effects on an individual’s intention to use online media entertainment technology.

3.1 Hedonic motivation, habit and behavioral intention

Hedonic motivation was an interesting factor in the research of acceptance, comprising perceived enjoyment (PE) and flow experience (FE). In technology acceptance research, PE functioned as a predictor for BI in the works of Akbar (2013), Alshare and Mousa (2014), Chen (2018), Harnadi (2017),

Figure 1 Proposed theoretical model



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Lee (2009) and Wei and Lu (2014), while FE was used by Akbar (2013), Harnadi (2017) and Wang and Sun (2016). Luo *et al.* (2011) associated PE with Use Behavior, but Alshare and Mousa (2014) considered entertainment as a predictor for Use Behavior. Both Chopdar *et al.* (2018) and Venkatesh (2012) used hedonic motivation as a predictor for BI.

PE showed a statistically significant direct effect on BI, as showed by Akbar (2013), Harnadi (2017), Wei and Lu (2014) and Lee (2009). Alshare and Mousa (2014) identified a statistically significant direct effect of PE on attitude and attitude on BI. Concerning FE and BI, Akbar (2013) and Wang and Sun (2016) found a statistically significant direct effect of FE on BI. Meanwhile, Akbar (2013), using escape rather than FE and Straub (1997) suggested a partially significant direct effect of FE on BI.

Chen *et al.* (2022) conducted a research using hedonic motivation as a predictor for habit, alongside convenience of product search. The results showed that both hedonic motivation and convenience of product search had a statistically significant direct effect on habit. It should be acknowledged that habit played a crucial role in technology acceptance of e-commerce and general technology usage. Baabdullah *et al.* (2019), Chen *et al.* (2022) and Venkatesh (2012) used habit as a predictor for BI, and Baabdullah *et al.* (2019), Chen *et al.* (2022) and Venkatesh (2012) applied habit as a predictor for Use Behavior. The results showed that habit had a statistically significant direct effect on BI (Baabdullah *et al.*, 2019; Venkatesh, 2012). Based on these reviews, the following hypotheses were proposed:

- H1. Hedonic motivation had a statistically significant direct effect on BI to use online entertainment.
- H2. Hedonic motivation had a statistically significant direct effect on habit.
- H3. Habit had a statistically significant direct effect on BI to use online entertainment.

### 3.2 Social influence, habit and behavioral intention

Research conducted by Akbar (2013), Wei and Lu (2014), Wang and Sun (2016) and Tarhini *et al.* (2017) used social norm, social interaction and social affiliation as predictors for BI. Meanwhile, Venkatesh (2012) and Venkatesh (2003) considered social influence as the predictor for BI. It should be acknowledged that social interaction and social affiliation were similar to social influence. Furthermore, Akbar (2013), Wei and Lu (2014), Wang and Sun (2016), Venkatesh (2012), Venkatesh (2003) and Tarhini *et al.* (2017) concluded that social influence had a statistically significant direct effect on BI. However, Alalwan *et al.* (2018) and Straub (1997) argued that social influence had a partially statistically significant direct effect on BI. Concerning social influence as a predictor for habit, Rahmiati and Susanto (2022) affirmed that social influence had a statistically significant direct effect on habit. Based on these reviews, the following hypotheses were proposed:

- H4. Social influence had a statistically direct effect on BI to use online entertainment.
- H5. Social influence had a statistically direct effect on habit.

### 3.3 Price value and behavioral intention

PV is an interesting factor in the exploration concerning acceptance of e-commerce. Conceptually, PV referred to the consumer's cognitive process of weighing the perceived benefits of the application against the monetary cost associated with its usage (Baabdullah *et al.*, 2019; Venkatesh, 2012). According to Almaiah *et al.* (2022), Baabdullah *et al.* (2019), Alalwan *et al.* (2018) and Farah *et al.* (2018), PV had a statistically significant direct effect on BI for using internet and mobile banking. Additionally, Venkatesh (2012) also showed that PV had a statistically significant direct effect on Use Behavior. In online entertainment environment, the cost of new technology solutions significantly influenced customers' willingness to adopt and use technology. PV could be measured by how users cognitively evaluated costs, bearing in mind the costs incurred compared to the benefits and quality gained from online entertainment application. Based on these reviews, the following hypothesis was proposed:

- H6. Price value has a statistically direct effect on BI to use online entertainment.

### 3.4 Age, gender and cultural factors

The four cultural factors initially stated by Straub (1997) were less frequently used as moderator variables in technology acceptance research compared to age and gender. These four factors included PD, individualism, feminism and AU. Based on the proposed theoretical model in Figure 1 and the summary of the moderating effect of culture intersecting in the model shown in Table 7, Alshare and Mousa (2014) found that PD and individualism had significant moderating effects on the causal effect of social influence and BI. Meanwhile, Tarhini *et al.* (2017) argued that PD, feminism and AU had significant moderating effects on the causal effect of social influence and BI.

In the context of online gaming and consumer acceptance, as shown in Table 5, gender had a significant moderating effect on the direct impact of hedonic motivation on BI (Lee, 2009; Venkatesh, 2012). Specifically, the influence of hedonic motivation and BI was more pronounced in males than in females (Lee, 2009; Venkatesh, 2012). Meanwhile, the effect of social influence on BI showed greater strength in females than in males (Venkatesh, 2003). The impact of PV on BI was similarly more substantial in females than in males (Venkatesh, 2012). On the other hand, the effect of habit on BI was stronger in males than in females (Venkatesh, 2012).

As shown in Table 6, age played a significant moderating role in the direct impact of hedonic motivation on BI (Venkatesh, 2012). Venkatesh (2012) further disclosed that the effect of hedonic motivation on BI was stronger in younger people than in older people. Meanwhile, the effect of social influence on BI was significant in both age groups (Venkatesh, 2012; Akbar, 2013). Additionally, the impact of PV and habit on BI was more pronounced in older people than in younger ones

(Venkatesh, 2012). Based on these reviews, the following hypotheses were proposed:

- H7a. Age had a significant moderating effect on the direct impact of hedonic motivation on BI.
- H7b. Age had a significant moderating effect on the direct impact of social influence on BI.
- H7c. Age had a significant moderating effect on the direct impact of price value on BI.
- H7d. Age had a significant moderating effect on the direct impact of habit on BI.
- H8a. Gender had a significant moderating effect on the direct impact of hedonic motivation on BI.
- H8b. Gender had a significant moderating effect on the direct impact of habit on BI.
- H8c. Gender had a significant moderating effect on the direct impact of social influence on BI.
- H8d. Gender had a significant moderating effect on the direct impact of price value on BI.
- H9a. Power distance had a significant moderating effect on the direct impact of social influence on BI.
- H9b. Individualism had a significant moderating effect on the direct impact of social influence on BI.
- H9c. Feminism had a significant moderating effect on the direct impact of social influence on BI.
- H9d. Uncertainty avoidance had a significant moderating effect on the direct impact of social influence on BI.

**4. Research method**

Based on the theoretical model explained in the previous section, a questionnaire comprising two parts was constructed. The first part was designed to gather demographic information from respondents, consisting of gender, age and experience. The second aimed to capture respondents’ perceptions of the five latent variables in the model, namely, hedonic motivation, social influence, habit, PV and BI, along with four cultural factors, including PD, individualism, masculinity and AU. The questionnaire was tested with ten high school and university students representing the Y and Z generations, thereby producing valuable improvement suggestions. Distribution took place in three Indonesian cities, namely, Jakarta, Bali and Semarang, using both hard copies and Google Forms for printed paper and soft copies, respectively. Additional questionnaires were distributed to some personal contacts in Kalimantan and Sumatra Island via Google Forms. A total of 1,163 questionnaires were received from respondents, subject to screening. Among the questionnaires, 21 were excluded due to missing values and an additional 10 were eliminated for being outside the designated value range. Subsequently, 11 questionnaires were removed due to outlier measures for the model variables. Consequently, 1,121 usable questionnaires was

processed with SPSS, and the response rate was 96.39%, which signified highly acceptable according to Amin (2022). The final sample size of 1,121 questionnaires was subjected to structural equation modeling (SEM) analysis to ensure statistical validity and reliability, incorporating various methods in the analysis and development of the proposed theoretical model.

**5. Descriptive data analysis**

Tables 8 to 11 showed the demographic and behavioral factor of the respondents. Specifically, Table 8 showed that most respondents came from Bali and predominantly used video streaming as their online media choice. Demographically, Table 9 showed that the majority was within the 15–19 age range, representing the Z generation and primarily comprising high school females.

According to the data in Table 10, mobile phones were the preferred device predominantly used at home when engaging in online entertainment. Behavioral factor, including experience

**Table 8** Regions and cities of respondents as well as frequently used applications

City	Freq.	%	Online application	Freq.	%
Semarang	373	33.3	Online music	251	22.4
Bali	466	41.6	Online gaming	199	17.8
Jakarta	204	18.2	Video streaming	571	50.9
Sumatera	13	1.2	Online comic	53	4.7
Kalimantan	65	5.8	Online news	47	4.2
<b>Total</b>	<b>1,121</b>	<b>100.0</b>	<b>Total</b>	<b>1,121</b>	<b>100.0</b>

Source: Created by authors

**Table 9** Age, gender, education and generation of respondents

Age	Freq.	%	Gender	Freq.	%
15	234	20.9	Male	504	45.0
16	293	26.1	Female	617	55.0
17	265	23.6	Total	1,121	100.0
18	55	4.9	Generation		
19	78	7.0	Z	925	82.5
20	69	6.2	Y	196	17.5
21	57	5.1	Total	1,121	100.0
22	28	2.5	Education		
23	22	2.0	High school	810	72.3
24	20	1.8	College	291	26.0
<b>Total</b>	<b>1,121</b>	<b>100.0</b>	Others	20	1.8
			Total	1,121	100.0

Source: Created by authors

**Table 10** Location and devices frequently used by respondent

Devices	Freq.	%	Location	Freq.	%
Mobile phones/tablets	1,017	90.7	Home	1,042	93.0
Laptop/PC	96	8.6	School/college	67	6.0
Console	8	0.7	Net café	12	1.1
<b>Total</b>	<b>1,121</b>	<b>100.0</b>	<b>Total</b>	<b>1,121</b>	<b>100.0</b>

Source: Created by authors



Table 11 Behavioral factor, experience and time respondents spent using online media entertain

Experience	Freq.	%	Day/week	Freq.	%	Hour/day	Freq.	%
≤6 months	26	2.3	Once a week	43	3.8	<30 min	46	4.1
6–12 months	28	2.5	Twice a week	34	3.0	30–60 min	166	14.8
1–1.5 years	51	4.5	Three a week	74	6.6	1–2 h	234	20.9
1.6–2 years	32	2.9	Four times a week	63	5.6	2–3 h	219	19.5
2.1–2.5 years	51	4.5	Five times a week	907	80.9	>3 h	456	40.7
2.5–3 years	86	7.7	Total	1,121	100.0	Total	1,121	100.0
≥3 years	847	75.6						
Total	1,121	100.0						

Source: Created by authors

and the time spent on online entertainment, were shown in Table 11. A significant number of respondents had beyond three years of experience, using online entertainment for more than five times a week, with an average daily usage exceeding three hours.

### 5.1 Data analysis

The theoretical model, using construct validity measures for latent variables, was examined through principal component factor analysis, with Cronbach’s alpha coefficient assessing the reliability of indicators. Table 12 shows the results of validity and reliability, showing satisfactory construct validity with factor loadings exceeding 0.4 and eigenvalues greater than 1. All indicators for the latent variables proved acceptable, good and excellent.

Table 13 shows the correlation coefficients among variables in the theoretical model, providing insight into the relationships within the model. The results were summarized as follows:

- A significant positive correlation ( $p < 0.05$ ) was identified among variables such as experience, hour/day, hedonic motivation, social influence, PV, habit and BI. This implied that variables with high/low values correlated with similarly high/low associated variables.
- Age had a positive correlation ( $p < 0.05$ ) solely with education, social influence, PV and BI. Meanwhile, education showed a significant negative correlation with

experience and a significant positive correlation with social influence.

- All relationships in the theoretical model showed a significant positive correlation among variables.

### 5.2 Causal effect analysis

The causal effect analysis was conducted using AMOS software. Figure 2 showed the results of the SEM analysis, presented in the following format:

- Unstandardized effect data was initially shown, accompanied by statistical significance indicators such as \*, \*\* and \*\*\* for significance at 0.05, 0.01 and 0.001 levels, respectively. Meanwhile, NS showed data that was not statistically significant at a level of 0.05 or lower.
- The standardized effect data was presented in parentheses, followed by magnitude interpretation (small, medium or large) as described by Cohen (1988), with magnitude values less than 0.1, 0.1 to less than 0.5 and 0.5 or greater, respectively.

Figure 2 shows that the effects on BI by hedonic motivation and social influence were positive and small but not statistically significant at the 0.005 level or lower. Similarly, the effects on habit by hedonic motivation and social influence were positive, medium and statistically significant. Additionally, the effects on BI by habit and PV were positive, large and statistically significant, and positive, medium and statistically significant, respectively. The fit statistics for the theoretical model were shown in Table 14, indicating very satisfactory results according to Kline (2015).

### 5.3 Moderating effect analysis

The moderating effect of gender, age, PD, individualism, feminism and AU was examined based on the following groups, namely, gender for males (504) and females (617), age for Z generation (925) and Y generation (196), PD for higher PD (666) and lower PD (455), individualism for individualism (253) and collectivism (868), feminism for feminism (95) and masculinity (1,026) and AU for lower UA (40) and higher AU (1,081). The multigroup analysis, describing the moderation effect, was shown in Table 15 and the fit statistics for each group within gender, age, PD, individualism, feminism and AU could be seen in Table 16.

## 6. Results

### 6.1 The respondents

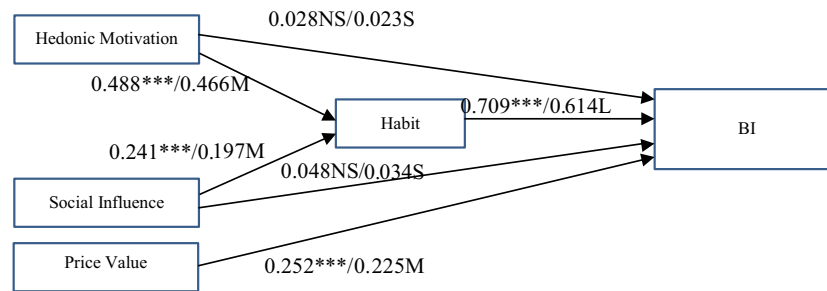
The descriptive data showed that respondents had sufficient experience and maturity, enabling to provision of reliable and valid

Table 12 Construct validity and equivalent reliability of indicators

	HB-BI	HM	SI	PV	Cronbach’s alpha
HB1	0.590	0.343	0.085	0.225	0.726 Acceptable
HB2	0.661	0.224	0.146	0.136	
HB3	0.649	0.120	0.133	−0.095	
BI1	0.771	0.180	0.180	0.270	0.911 Excellent
BI2	0.806	0.136	0.127	0.259	
BI3	0.772	0.161	0.187	0.274	
HM1	0.162	0.831	0.161	0.134	0.846 Good
HM2	0.142	0.818	0.218	0.105	
HM3	0.166	0.840	0.103	0.148	
SI1	0.118	0.197	0.853	0.104	0.809 Good
SI2	0.062	0.155	0.879	0.141	
SI3	0.193	0.091	0.693	0.259	
PV1	0.087	0.233	0.155	0.716	0.756 Acceptable
PV2	0.063	0.078	0.193	0.820	
PV3	0.215	0.082	0.141	0.786	

Source: Created by authors

Figure 2 Direct effects in the theoretical model



Notes: (a) \*\*\* means  $p < 0.001$  and NS means not statistically significant at 0.05 level or less; (b) S (Small), M (Medium), L (Large) standardized effects are those with magnitudes less than 0.1, 0.1 to less than 0.5, and equal to and more than 0.5, respectively

Source: Created by authors

Table 13 Correlation coefficient among variables

	A	Edu	Exp	D/W	H/D	HM	SI	PV	HB	BI
A	1									
Edu	0.812**	1								
Exp	-0.037	-0.087**	1							
D/W	-0.022	-0.021	0.244**	1						
H/D	-0.050	-0.027	0.282**	0.335**	1					
HM	0.021	-0.006	0.092**	0.071*	0.213**	1				
SI	0.104**	0.062*	0.059*	0.026	0.118**	0.396**	1			
PV	0.109**	0.031	0.106**	0.042	0.119**	0.348**	0.419**	1		
HB	0.018	-0.004	0.115**	0.130**	0.295**	0.408**	0.325**	0.334**	1	
BI	0.088**	0.045	0.169**	0.168**	0.302**	0.413**	0.379**	0.425**	0.587**	1

Notes: \*\* Correlation is significant at the 0.01 level (two-tailed); \* Correlation is significant at the 0.05 level (two-tailed)

Source: Created by authors

Table 14 Fit statistics for the theoretical model

Model	N	NC ( $\chi^2/df$ )	RMR	GFI	AGFI	NFI	IFI	CFI	RMSEA
Theoretical model	1,121	399.421/81 = 4.931	0.041	0.955	0.934	0.951	0.961	0.961	0.059

$R^2$ : HB (34%); BI (56%)

Source: Created by authors

responses to questions about online entertainment. Following this description, the distribution of respondents into two groups based on moderating factor was reasonably balanced, except for feminism and AU. This imbalance was acknowledged as a limitation of the research when balancing respondents to facilitate a satisfactory moderating analysis for each of the two groups.

The correlation analysis suggested that the five variables, including hedonic motivation, social influence, PV, habit and BI, were correlated with each other. The causal effect analysis combined these results to derive results on the final model. Consequently, it was found that education, social influence, PV and BI were positively correlated with age. Regarding other variables, education had a significant negative correlation with experience and a significant positive correlation with social influence.

## 6.2 Causal effects

The most influential factor determining the extent to which users intended to engage in online entertainment in the future (BI) was the same as the intention to perform behaviors automatically due to learning and behaviors resulting from prior experiences (habit). The next significant factor was the extent to which consumers made cognitive tradeoffs between the perceived benefits of applications and the monetary cost of usage (PV). The statistically significant direct effect of habit on BI (H3) was consistent with the finding of Baabdullah et al. (2019), Chen et al. (2022) and Venkatesh (2012).

The result that PV had a statistically significant direct effect on BI (H6) was consistent with the research conducted by Baabdullah et al. (2019) and Venkatesh (2012). Two variables, hedonic

Table 15 Analysis of direct causal effects for groups in gender, age, power distance, individualism, feminism and uncertainty avoidance

Causal direct effect	Unstandardized estimate	Statistical significance	Standardized estimate	Magnitude	Unstandardized estimate	Statistical significance	Standardized estimate	Magnitude	
<i>Males (N = 504)</i>					<i>Females (N = 617)</i>				
HM → HB	0.347	***	0.320	M	0.588	***	0.576	L	
SI → HB	0.331	***	0.295	M	0.176	NS	0.129	M	
HB → BI	0.592	***	0.534	L	0.831	***	0.701	L	
HM → BI	0.106	NS	0.088	S	-0.072	NS	-0.059	S	
PV → BI	0.254	***	0.262	M	0.253	***	0.109	M	
SI → BI	0.063	NS	0.051	S	0.025	NS	0.016	S	
<i>Age of 14 – 19 / Z generation (N = 925)</i>					<i>Age of 20–24/Y generation (N = 196)</i>				
HM → HB	0.463	***	0.465	M	0.579	***	0.451	M	
SI → HB	0.256	***	0.214	M	0.147	NS	0.101	M	
HB → BI	0.751	***	0.626	L	0.529	***	0.558	L	
HM → BI	0.033	NS	0.028	S	0.003	NS	0.002	S	
PV → BI	0.244	***	0.218	M	0.291	NS	0.270	M	
SI → BI	0.021	NS	0.014	S	0.149	NS	0.109	M	
<i>Higher power distance (N = 666)</i>					<i>Lower power distance (N = 455)</i>				
HM → HB	0.519	***	0.482	M	0.417	***	0.428	M	
SI → HB	0.212	***	0.179	M	0.297	***	0.237	M	
HB → BI	0.729	***	0.615	L	0.718	***	0.630	L	
HM → BI	0.043	NS	0.033	S	-0.017	NS	-0.015	S	
PV → BI	0.251	***	0.221	M	0.225	***	0.205	M	
SI → BI	0.013	NS	0.009	S	0.142	NS	0.100	M	
<i>Individualism (N = 253)</i>					<i>Collectivism (N = 868)</i>				
HM → HB	0.510	***	0.490	M	0.480	***	0.455	M	
SI → HB	0.226	NS	0.176	S	0.253	***	0.208	M	
HB → BI	0.583	***	0.456	M	0.738	***	0.665	L	
HM → BI	0.261	NS	0.196	M	-0.044	NS	-0.037	S	
PV → BI	0.228	NS	0.184	M	0.259	***	0.242	M	
SI → BI	0.130	NS	0.079	S	0.021	NS	0.016	S	
<i>Feminism (N = 95)</i>					<i>Masculinity (N = 1,026)</i>				
HM → HB	0.593	***	0.561	L	0.467	***	0.444	M	
SI → HB	0.030	NS	0.020	S	0.260	***	0.218	M	
HB → BI	0.331	NS	0.327	M	0.756	***	0.644	L	
HM → BI	0.230	NS	0.215	M	0.017	NS	0.014	S	
PV → BI	0.273	NS	0.285	M	0.243	***	0.212	M	
SI → BI	0.284	NS	0.192	M	0.015	NS	0.011	S	
<i>Lower UA (N = 40)</i>					<i>Higher UA (N = 1,081)</i>				
HM → HB	0.012	NS	0.016	S	0.499	***	0.460	M	
SI → HB	0.629	NS	0.890	L	0.230	***	0.181	M	
HB → BI	0.592	NS	0.345	M	0.693	***	0.619	L	
HM → BI	0.439	NS	0.344	M	0.019	NS	0.016	S	
PV → BI	0.509	NS	0.407	M	0.242	***	0.218	M	
SI → BI	0.108	NS	-0.089	S	0.049	NS	0.035	S	

Notes: \*, \*\* and \*\*\* show statistical significance at a level of 0.05, 0.01 and 0.001, respectively, and NS shows no statistical significance at a level of 0.05 or less

Source: Created by authors

motivation (*H2*) and social influence (*H5*), also had a statistically significant direct effect on habit, which was in line with [Chen et al. \(2022\)](#) and [Rahmiati and Susanto \(2022\)](#). On the other hand, the direct effects of hedonic motivation (*H1*) and social influence (*H4*) on BI were small and not statistically significant.

*H1* and *H4* were partially supported based on the results of the correlation analysis and statistically causal effect analysis. Hedonic motivation correlated with BI but did not have a statistically direct effect on the use of online entertainment (*H1*). Hence, *H1* was partially supported. This result opposed

the investigation performed by [Akbar \(2013\)](#), [Alshare and Mousa \(2014\)](#), [Chen \(2018\)](#), [Harnadi \(2017\)](#), [Wei and Lu \(2014\)](#), [Wang and Sun \(2016\)](#) and [Lee \(2009\)](#). Another result stated that social influence correlated with BI but did not have a statistically direct effect on BI's use of online entertainment (*H4*). Hence, *H4* was partially supported. The result contradicted [Akbar \(2013\)](#), [Wei and Lu \(2014\)](#), [Wang and Sun \(2016\)](#), [Tarhini et al. \(2017\)](#) and [Venkatesh \(2012\)](#). The decisions regarding proposed hypotheses with a direct effect on BI in the theoretical model are shown in [Table 17](#).

Table 16 Fit statistics for groups in gender, age, power distance, individualism, feminism, and uncertainty avoidance

Group	N	NC ( $\chi^2/df$ )	RMR	GFI	AGFI	NFI	IFI	CFI	RMSEA	R <sup>2</sup> : BI (%)
<b>Gender</b>										
Males	504	230.717/81 = 2.848	0.044	0.943	0.915	0.938	0.959	0.959	0.061	55.0
Females	617	268.390/81 = 3.313	0.043	0.947	0.922	0.943	0.959	0.959	0.061	56.9
<b>Age</b>										
14–19/Z generation	925	301.674/81 = 3.724	0.036	0.959	0.940	0.953	0.965	0.965	0.054	55.3
20–24/Y generation	196	215.073/81 = 2.655	0.082	0.867	0.803	0.887	0.926	0.925	0.092	55.5
<b>Power distance</b>										
Higher power distance	666	285.144/81 = 3.520	0.043	0.947	0.922	0.944	0.960	0.959	0.062	55.1
Lower power distance	455	268.901/81 = 3.320	0.046	0.929	0.895	0.918	0.942	0.941	0.071	58.7
<b>Individualism</b>										
Individualism	253	152.280/81 = 1.880	0.057	0.929	0.895	0.920	0.961	0.960	0.059	51.2
Collectivism	868	334.437/81 = 4.129	0.040	0.951	0.927	0.948	0.960	0.960	0.060	57.8
<b>Feminism</b>										
Feminism	95	143.076/81 = 1.766	0.082	0.834	0.754	0.863	0.936	0.934	0.090	67.1
Masculinity	1,026	352.868/81 = 4.356	0.041	0.957	0.936	0.952	0.962	0.962	0.057	55.5
<b>Uncertainty avoidance (UA)</b>										
Lower uncertainty avoidance	40	160.534/81 = 1.982	0.168	0.676	0.519	0.678	0.810	0.798	0.159	77.2
Higher uncertainty avoidance	1,081	371.987/81 = 4.592	0.041	0.957	0.936	0.953	0.963	0.962	0.058	54.2

Note: R<sup>2</sup> is the proportion of the variance of the variable BI that is explained by the variables affecting it

Source: Created by authors

Table 17 Decisions for research hypotheses

Research hypotheses	Reference
<b>Supported</b>	
H2: Hedonic motivation has a statistically direct effect on habit	Chen et al. (2022)
H3: Habit has a statistically direct effect on BI's use of online entertainment	Baabdullah et al. (2019), Chen et al. (2022) and Venkatesh (2012)
H5: Social influence has a statistically direct effect on habit	Rahmiati and Susanto (2022)
H6: Price value has a statistically direct effect on BI to use online entertainment	Baabdullah et al. (2019), Venkatesh (2012), Almaiah et al. (2022) and Farah et al. (2018)
<b>Partially supported</b>	
H1: Hedonic motivation has a statistically direct effect on BI to use online entertainment	Akbar (2013), Alshare and Mousa (2014), Chen (2018), Harnadi (2017), Wei and Lu (2014), Wang and Sun (2016) and Lee (2009)
H4: Social influence has a statistically direct effect on BI to use online entertainment	Akbar (2013), Wei and Lu (2014), Wang and Sun (2016), Tarhini et al. (2017) and Venkatesh (2012)

Source: Created by authors

### 6.3 Moderating effect analysis

The decision regarding the moderating effect analysis of gender, age, PD, individualism, feminism and AU was shown in Table 18. In the aspect of age and gender, the results for the moderating effect analysis on the causal effect of habit on BI were supported (H7d and H8b). These results were consistent with Venkatesh (2012). Gender also had a significant moderating effect on the direct impact of hedonic motivation on habit, which was a new findings not reported in previous related research. Concerning PD, individualism, feminism and AU, the results of the moderating effect analysis on the causal effects of social influence on BI were not supported (H9a, H9b, H9c and H9d). These outcomes contradicted the investigation conducted by Tarhini et al. (2017) and Alshare and Mousa (2014). Moreover, there were new results concerning the moderating effect analysis

of individualism, feminism and AU on the causal effect in the model. Individualism had a significant moderating effect on the direct impact of hedonic motivation on BI. Feminism had a significant moderating effect on the direct impact of habit on BI. AU had a significant moderating effect on the direct impact of hedonic motivation on habit.

Based on Table 18, the following conclusions could be drawn:

- For age: the moderating effect of age only existed on the direct causal effect of habit on BI (H7d → Supported).
- For gender: the moderating effect of gender existed on the direct causal effect of habit on BI (H8b → Supported) and hedonic motivation on habit (new finding).
- For PD: the moderating effect of PD did not exist on the causal effects of social influence on BI (H9a → not supported).

Table 18 Decisions for moderating effect analysis of gender, age, power distance, individualism, feminism, and uncertainty avoidance

Hypotheses	Reference	Comment
<i>Decisions on age as moderator</i>		
Age has no significant moderating effect on the direct effect of hedonic motivation on BI		<i>Effect on Y-Gen</i> Small, positive, not statistically significant
Age has no significant moderating effect on the direct effect of social influence on BI		Medium, positive, not statistically significant
Age has no significant moderating effect on the direct effect of price value on BI		Medium, positive, not statistically significant
Age has a significant moderating effect on the direct effect of habit on BI		Large, positive, statistically significant
H7a: age has a significant moderating effect on the direct effect of hedonic motivation on BI	Lee (2009) and Venkatesh (2012)	<i>Not supported</i>
H7b: age has a significant moderating effect on the direct effect of social influence on BI	Lee (2009), Venkatesh (2003) and Akbar (2013)	<i>Not supported</i>
H7c: age has a significant moderating effect on the direct effect of price value on BI	Venkatesh (2012)	<i>Not supported</i>
H7d: age has a significant moderating effect on the direct effect of habit on BI	Venkatesh (2012)	<i>Supported</i>
<i>Decisions on gender as a moderating effect</i>		
Gender has no significant moderating effect on the direct effect of hedonic motivation on BI		<i>Effect for males</i> Small, positive, not statistically significant
Gender has a significant moderating effect on the direct effect of habit on BI		Large, positive, statistically significant
Gender has no significant moderating effect on the direct effect of social influence on BI		Small, positive, not statistically significant
Gender has a significant moderating effect on the direct effect of price value on BI		Medium, positive, statistically significant
Gender has a significant moderating effect on the direct effect of hedonic motivation on habit		Medium, positive, statistically significant
H8a: gender has a significant moderating effect on the direct effect of hedonic motivation on BI	Lee (2009) and Venkatesh (2012)	<i>Not supported</i>
H8b: gender has a significant moderating effect on the direct effect of habit on BI	Venkatesh (2012)	<i>Supported</i>
H8c: gender has a significant moderating effect on the direct effect of social influence on BI	Lee (2009) and Venkatesh (2003)	<i>Not supported</i>
H8d: gender has a significant moderating effect on the direct effect of price value on BI	Venkatesh (2012)	<i>Not supported</i>
Gender has a significant moderating effect on the direct effect of hedonic motivation on habit		<i>New finding</i>

(continued)

Table 18

Hypotheses	Reference	Comment
<i>Decision on power distance as a moderator</i> Power distance has no significant moderating effect on the direct effect of social influence on BI <i>H9a</i> : power distance has a significant moderating effect on the direct effect of social influence on BI	Tarhini et al. (2017) and Alshare and Mousa (2014)	<i>Effect on higher power distance</i> Small, positive, not statistically significant <i>Not supported</i>
<i>Decisions on individualism as a moderating effect</i> Individualism has no significant moderating effect on the direct effect of social influence on BI Individualism has a significant moderating effect on the direct effect of hedonic motivation on BI <i>H9b</i> : individualism has a significant moderating effect on the direct effect of social influence on BI	Alshare and Mousa (2014)	<i>Effect on individualism</i> Small, positive, not statistically significant Medium, positive, not statistically significant <i>Not supported</i>
Individualism has a significant moderating effect on the direct effect of hedonic motivation on BI	–	<i>New finding</i>
<i>Decisions on feminism as a moderating effect</i> Feminism has no significant moderating effect on the direct effect of social influence on BI Feminism has a significant moderating effect on the direct effect of habit on BI <i>H9c</i> : feminism has a significant moderating effect on the direct effect of social influence on BI	Tarhini et al. (2017)	<i>Effect on feminism</i> Medium, positive, not statistically significant Medium, positive, not statistically significant <i>Not supported</i>
Feminism has a significant moderating effect on the direct effect of habit on BI	–	<i>New finding</i>
<i>Decisions on uncertainty avoidance as a moderating effect</i> Uncertainty avoidance has no significant moderating effect on the direct effect of social influence on BI Uncertainty avoidance has a significant moderating effect on the direct effect of hedonic motivation on habit <i>H9d</i> : uncertainty avoidance has a significant moderating effect on the direct effect of social influence on BI	Tarhini et al. (2017)	<i>Effect on higher uncertainty avoidance</i> Small, positive, not statistically significant Medium, positive, statistically significant
Uncertainty avoidance has a significant moderating effect on the direct effect of hedonic motivation on habit	–	<i>New finding</i>

Source: Created by authors

- For individualism: the moderating effect of individualism did not exist on the direct causal effect of social influence on BI ( $H9b \rightarrow$  not supported) and the moderating effect only exists on the direct causal effect of hedonic motivation on BI (new finding).
- For feminism: the moderating effect of feminism did not exist on the direct causal effect of social influence on BI ( $H9c \rightarrow$  not supported) and the moderating effect only existed on the direct causal effect of habit on BI (new finding).
- For AU: the moderating effect of AU did not exist on the direct causal effect of social influence on BI ( $H9d \rightarrow$  not supported) and the moderating effect only existed on the direct causal effect of hedonic motivation on habit (new finding).

## 7. Discussion

The results confirmed the conclusions from previous research related to direct causal effects on BI, as shown in Table 18.  $H2$  and  $H5$  were supported, stating that hedonic motivation and social influence had a statistically direct effect on habit. These results were in line with Chen et al. (2022) and Rahmiati and Susanto (2022). Additionally,  $H3$  and  $H6$  were also supported, showing that habit had a statistically direct effect on BI to use online entertainment ( $H3$ ), in accordance with research conducted by Baabdullah et al. (2019), Chen et al. (2022) and Venkatesh (2012). The PV had a statistically direct effect on BI to use online entertainment ( $H6$ ), consistent with research by Almaiah et al. (2022), Farah et al. (2018), Baabdullah et al. (2019) and Venkatesh (2012).

$H1$  and  $H4$  were partially supported based on the results of correlation analysis and statistical causal effect analysis. Hedonic motivation correlated with BI but lacked a statistically direct effect on BI to use online entertainment ( $H1$ ). Therefore,  $H1$  was partially supported. This result contrasted with Akbar (2013), Alshare and Mousa (2014), Chen (2018), Harnadi (2017), Wei and Lu (2014), Wang and Sun (2016) and Lee (2009). Another result suggested that *Social Influence* correlated with BI but had no statistically direct effect on BI to use online entertainment ( $H4$ ). This scenario implied that  $H4$  was partially supported. This result contradicted Akbar (2013), Wei and Lu (2014), Wang and Sun (2016), Tarhini et al. (2017) and Venkatesh (2012).

The result from the moderating effect analysis were shown in Table 18. According to Table 18, age, gender and feminism had a moderating effect on the direct causal effect of habit on BI. Similarly, individualism, AU and gender had a moderating effect on the direct causal effect of hedonic motivation on habit. However, PD had no moderating effect on any causal effects in the research model.

$H7d$  was supported, confirming the research by Venkatesh (2012). It was observed that age had a significant moderating effect on the direct effect of habit on BI. Regarding Z and Y generations, the effect of habit on BI was large, positive and statistically significant. Other hypotheses ( $H7a$ ,  $H7b$  and  $H7d$ ) related to the moderating effect of age were not supported. Moreover, the results contradicted the research conducted by Lee (2009), Venkatesh (2003), Venkatesh (2012) and Akbar (2013).

In the results related to gender as a moderating effect,  $H8b$  was supported, while  $H8a$ ,  $H8c$  and  $H8d$  had no supporting results. The supported  $H8b$  was consistent with the research conducted by Venkatesh (2012). In this context, gender had a significant moderating effect on the direct impact of habit on BI. For both males and females, the effect of habit on BI was large, positive and statistically significant. The unsupported  $H8a$ ,  $H8c$  and  $H8d$  opposed the research by Lee (2009) and Venkatesh (2012). A new result regarding gender, not reported in previous related literature, showed a significant moderating effect on the direct impact of hedonic motivation on habit. Regarding males, the effect of hedonic motivation on habit was medium, positive and statistically significant, while for females, the effect was large, positive and statistically significant.

Concerning the findings on cultural factors as moderating effects, results for all hypotheses were not supported ( $H9a$ ,  $H9b$ ,  $H9c$  and  $H9d$ ). Typically, the results contradicted the explorations performed by Tarhini et al. (2017) and Alshare and Mousa (2014). However, new results not reported in previous related research stated that:

- PD did not have a significant moderating effect on all causal effects in the theoretical model.
- Individualism had a significant moderating effect on the direct impact of hedonic motivation on BI. In the context of individualism, the effect of hedonic motivation on BI was medium, positive and not statistically significant, while for collectivism, the effect was small, negative and not statistically significant.
- Feminism had a significant moderating effect on the direct impact of habit on BI. Regarding feminism, the effect of habit on BI was medium, positive and not statistically significant. Meanwhile, for masculinity, the effect was large, positive and statistically significant.
- AU had a significant moderating effect on the direct impact of hedonic motivation on habit. For lower AU, the effect of hedonic motivation on habit was small, positive and not statistically significant, while for higher AU, the effect was medium, positive and statistically significant.

## 8. Conclusions and implications

In conclusion, this research aimed to explore acceptance of online entertainment technology, considering age, gender and cultural factors as moderator. Consequently, two significant results were produced, namely, the positive and direct impact of habit and PV on BI, hedonic motivation and social influence on habit, and the new findings from moderating effect analysis, showing that age, individualism and feminism played moderating role in the effects on individuals' intentions due to habit. Furthermore, gender and AU moderated the effects on individual's habit due to hedonic motivation.

The results had practical implications for various stakeholders. For example, business practitioners planning to enhance the adoption of online entertainment had to consider the behavioral impact on users' social lives. Regarding the government and educators aiming to restrict usage, understanding the tradeoff between perceived benefits and monetary costs was crucial for effective intervention. Consumers concerned about the benefits and costs were informed.

Business practitioners, including online media entertainment application developers and resellers needed to understand that acceptance of online entertainment technology (such as online music, gaming, video streaming, comics and news) was influenced by user habit and the tradeoff between perceived benefits and monetary costs. Moreover, technology usage habit was shaped by hedonic motivation and the influence of important individuals recommending technology use.

Developers aiming to design and promote applications among specific users had to consider factor determining consumer adoption. An example of this consideration included age, gender, societal ideas, meanings, beliefs, emotional experiences with applications and users' intentions to continue using the application. Another essential factor to be considered by developers and resellers included keeping updated with users' frequent locations, preferred devices and weekly usage hours.

Concerns from the government and educators about the behavioral impact of online media entertainment on users' social lives often led to efforts to restrict usage and educate society about the impact. To ensure effective education, there was a need to understand that user acceptance was influenced by usage habit, which was subsequently influenced by hedonic motivation and social factor. Additionally, age and gender moderated the impact of habit on an individual's intention, while the effects of hedonic motivation were moderated by gender, individualism and the tendency to avoid uncertainty. The reality that users predominantly engaged in video streaming, online music listening and online gaming at home with their mobile phones prompted the government and educators to enact policies to assist parents in guiding their children's participation in online media entertainment.

Individuals aiming to regulate online media entertainment needed to understand the influence of hedonic motivation and social factor on the adoption of online media. The results showed that adoption was significantly influenced by users' tendency to perform behaviors automatically due to learning and past experiences. The impact of habit on BI was more crucial for both females and males, as well as for both Z and Y generations and more significant for masculinity than feminism. User's habit in using online media entertainment was strongly influenced by the perceived fun or pleasure and the belief of important others regarding its use. The effect of hedonic motivation on habit was significant, particularly for females and those with higher AU. Moreover, the adoption of online media entertainment was not strongly influenced by the belief of important others or the perceived fun or pleasure in individualism and collectivism. The usage rates for online media entertainment were crucial, with almost all respondents using it for 15 h or more per week and almost half of the respondents exceeded 15 h. Based on this explanation, the government, educators and parents could help users manage their time better for social life, family, research and online media usage.

Users who were concerned about the benefits relative to the monetary cost paid could gather information from the results. The research suggested that their adoption of online media entertainment was strongly influenced by the cognitive tradeoff between perceived benefits and monetary costs.

In the Indonesian context, the research on user acceptance of online media entertainment was the first to be conducted. Consequently, repeating the exploration was strongly

recommended to address its limitations in external validity. Future exploration should expand the theoretical model, incorporating elements such as performance expectancy and effort expectancy as proposed by Venkatesh (2012).

## References

- Akbar, F. (2013), "What affects students' acceptance and use of technology? A test of UTAUT in the context of a higher-education institution in Qatar", Unpublished senior honors thesis, Carnegie Mellon, doi: [10.1184/R1/6686654.v1](https://doi.org/10.1184/R1/6686654.v1).
- Alalwan, A.A., Dwivedi, Y.K., Rana, N.P. and Algharabat, R. (2018), "Examining factors influencing Jordanian customers' intentions and adoption of internet banking: extending UTAUT2 with risk", *Journal of Retailing and Consumer Services*, Vol. 40, pp. 125-138, doi: [10.1016/j.jretconser.2017.08.026](https://doi.org/10.1016/j.jretconser.2017.08.026).
- Almaiah, M.A., Al-Rahmi, A.M., Alturise, F., Alrawad, M., Alkhalaf, S., Lutfi, A., Al-Rahmi, W.M. and Awad, A.B. (2022), "Factors influencing the adoption of internet banking: an integration of ISSM and UTAUT with price value and perceived risk", *Frontiers in Psychology*, Vol. 13, doi: [10.3389/fpsyg.2022.919198](https://doi.org/10.3389/fpsyg.2022.919198).
- Alshare, K.A. and Mousa, A.A. (2014), "The moderating effect of espoused cultural dimensions on consumer's intention to use mobile payment devices", *35th International Conference on Information Systems "Building a Better World Through Information Systems"*, ICIS 2014, pp. 1-15, available at: <https://aisel.aisnet.org/icis2014/proceedings/GlobalandCulturalIssues/3/>
- Amin, H. (2022), "An analysis of online Sadaqah acceptance among university graduates in Malaysia", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 15 No. 6, pp. 1019-1034, doi: [10.1108/IMEFM-01-2019-0020](https://doi.org/10.1108/IMEFM-01-2019-0020).
- Baabdullah, A.M., Alalwan, A.A., Rana, N.P., Kizgin, H. and Patil, P. (2019), "Consumer use of mobile banking (M-Banking) in Saudi Arabia: towards an integrated model", *International Journal of Information Management*, Vol. 44, pp. 38-52, doi: [10.1016/j.ijinfomgt.2018.09.002](https://doi.org/10.1016/j.ijinfomgt.2018.09.002).
- Chawla, D. and Joshi, H. (2020), "The moderating role of gender and age in the adoption of mobile wallet", *foresight*, Vol. 22 No. 4, pp. 483-504, doi: [10.1108/FS-11-2019-0094](https://doi.org/10.1108/FS-11-2019-0094).
- Chen, C.P. (2018), "Understanding mobile English-learning gaming adopters in the self-learning market: the uses and gratification expectancy model", *Computers & Education*, Vol. 126, pp. 217-230, doi: [10.1016/j.compedu.2018.07.015](https://doi.org/10.1016/j.compedu.2018.07.015).
- Chen, H., Chen, H. and Tian, X. (2022), "The dual-process model of product information and habit in influencing consumers' purchase intention: the role of live streaming features", *Electronic Commerce Research and Applications*, Vol. 53, p. 101150, doi: [10.1016/j.elerap.2022.101150](https://doi.org/10.1016/j.elerap.2022.101150).
- Chopdar, P.K., Korfiatis, N., Sivakumar, V.J. and Lytras, M.D. (2018), "Mobile shopping apps adoption and perceived risks: a cross-country perspective utilizing the unified theory of acceptance and use of technology", *Computers in Human Behavior*, Vol. 86, pp. 109-128, doi: [10.1016/j.chb.2018.04.017](https://doi.org/10.1016/j.chb.2018.04.017).



- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Lawrence Erlbaum Associates, doi: [10.4324/9780203771587](https://doi.org/10.4324/9780203771587).
- Fan, L., Gu, J., Suh, Y. and Lee, S. (2012), "How to attract Chinese online game users", *Asian Journal on Quality*, Vol. 13 No. 1, pp. 7-21, doi: [10.1108/15982681211237798](https://doi.org/10.1108/15982681211237798).
- Farah, M.F., Hasni, M.J.S. and Abbas, A.K. (2018), "Mobile-banking adoption: empirical evidence from the banking sector in Pakistan", *International Journal of Bank Marketing*, Vol. 36 No. 7, pp. 1386-1413, doi: [10.1108/IJBM-10-2017-0215](https://doi.org/10.1108/IJBM-10-2017-0215).
- Gabby.kenny@wearesocial.net (2023), "The global state of digital in April 2023", available at: <https://wearesocial.com/uk/blog/2023/04/the-global-state-of-digital-in-april-2023/>
- Harnadi, B. (2017), "An investigation of the adoption of online game technologies in Indonesia", *International Journal of Gaming and Computer-Mediated Simulations*, Vol. 9 No. 1, pp. 1-27, doi: [10.4018/IJGCMS.2017010101](https://doi.org/10.4018/IJGCMS.2017010101).
- Kline, R.B. (2015), *Principles and Practice of Structural Equation Modeling*, 4th ed., Guilford Publications, New York, NY.
- Lee, M. (2009), "Understanding the behavioural intention to play online games", *Online Information Review*, Vol. 33 No. 5, pp. 849-872, doi: [10.1108/14684520911001873](https://doi.org/10.1108/14684520911001873).
- Luo, M.M., Chea, S. and Chen, J.S. (2011), "Web-based information service adoption: a comparison of the motivational model and the uses and gratifications theory", *Decision Support Systems*, Vol. 51 No. 1, pp. 21-30, doi: [10.1016/j.dss.2010.11.015](https://doi.org/10.1016/j.dss.2010.11.015).
- Rahmiati, R. and Susanto, P. (2022), "The effects of social influence, hedonic motivation, and habit on E-Money behavioral intention: the role of perceived risk as a moderator", *Proceedings of the Eighth Padang International Conference on Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA-8 2021) The*, Vol. 222 No. 1, pp. 184-189.

- Šorgo, A., Bartol, T., Dolničar, D. and Boh Podgornik, B. (2017), "Attributes of digital natives as predictors of information literacy in higher education", *British Journal of Educational Technology*, Vol. 48 No. 3, pp. 749-767, doi: [10.1111/bjet.12451](https://doi.org/10.1111/bjet.12451).
- Straub, D. (1997), "Testing the technology acceptance model across cultures: a three country study", *Information & Management*, Vol. 33 No. 1, pp. 1-11, doi: [10.1016/S0378-7206\(97\)00026-8](https://doi.org/10.1016/S0378-7206(97)00026-8).
- Tarhini, A., Hone, K., Liu, X. and Tarhini, T. (2017), "Examining the moderating effect of individual-level cultural values on users' acceptance of E-learning in developing countries: a structural equation modeling of an extended technology acceptance model", *Interactive Learning Environments*, Vol. 25 No. 3, pp. 306-328, doi: [10.1080/10494820.2015.1122635](https://doi.org/10.1080/10494820.2015.1122635).
- Venkatesh, V. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly: Management Information Systems*, Vol. 27 No. 3, pp. 425-478, doi: [10.2307/30036540](https://doi.org/10.2307/30036540).
- Venkatesh, V. (2012), "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology", *MIS Quarterly: Management Information Systems*, Vol. 36 No. 1, pp. 157-178, doi: [10.2307/41410412](https://doi.org/10.2307/41410412).
- Wang, H. and Wang, Y. (2008), "Gender differences in the perception and acceptance of online games", *British Journal of Educational Technology*, Vol. 39 No. 5, pp. 787-806, doi: [10.1111/j.1467-8535.2007.00773.x](https://doi.org/10.1111/j.1467-8535.2007.00773.x).
- Wang, Q. and Sun, X. (2016), "Investigating gameplay intention of the elderly using an extended technology acceptance model (ETAM)", *Technological Forecasting and Social Change*, Vol. 107, pp. 59-68, doi: [10.1016/j.techfore.2015.10.024](https://doi.org/10.1016/j.techfore.2015.10.024).
- Wei, P.S. and Lu, H.P. (2014), "Why do people play mobile social games? An examination of network externalities and of uses and gratifications", *Internet Research*, Vol. 24 No. 3, pp. 313-331, doi: [10.1108/IntR-04-2013-0082](https://doi.org/10.1108/IntR-04-2013-0082).

## Appendix

### Questionnaire

#### A. Latent variables

*Hedonic motivation* (adapted from Venkatesh, 2012)

- While playing online entertainment, I feel happy.
- I feel that playing online entertainment makes me relax.
- Playing online entertainment, keep me entertained.

*Price value* (adapted from Venkatesh, 2012)

- In my opinion, the price of using online entertainment is still reasonable.
- The benefits of using online entertainment are equivalent to the money I have spent.
- With the price incurred, the use of online entertainment still benefits me.

*Social influence* (adapted from Venkatesh, 2012)

- People who are influential to me, think that it is not a problem for them if I play entertainment online.
- People who are important to me think that it is not a problem for them if I play online entertainment media.
- People whom I respect for their opinions suggest that I keep playing the online entertainment media.

*Habit* (adapted from Venkatesh, 2012)

- Playing online entertainment has become a habit for me.
- I have to play online entertainment.
- I feel addicted to online entertainment.

*Behavioral intention* (adapted from Harnadi, 2017)

- I intend to continue playing online entertainment in the future.
- I predict that I will continue to play online entertainment.
- I plan to continue playing online entertainment.

#### B. Cultural variables

*Power distance* (adapted from Tarhini et al., 2017)

- Teachers/lecturers must make most decisions without consulting students.
- Teachers/lecturers should not ask students' opinions too often.
- Students must agree with the decisions made by the teacher/lecturer and the school/university management.

*Individualism* (adapted from Alshare and Mousa, 2014)

- It is better to study/work in groups than alone.
- Group success is more important than individual success.
- Awards for individuals are less important than rewards for groups.

*Feminism* (adapted from Alshare and Mousa, 2014)

- It is important for me to appreciate outstanding academic achievements.
- It is important for me to focus more on achieving superior academic achievements.
- It is important for me to outperform my classmates.

*Uncertainty avoidance* (adapted from Tarhini et al., 2017)

- Rules and regulations are important because they tell students what to expect from the school/university.
- It is important to know the specific requirements and instructions spelled out in detail so, I always know what to do.
- Standardized operational work instructions and procedures are very helpful for my learning.

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