



## **Factors Influencing Teachers' Behavioral Intention to Adopt E-books for Children with Learning Disabilities in Classroom**

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This study investigates the factors influencing users' willingness to use e-books. A quantitative research method was employed. 600 valid questionnaires were finally obtained, with an effective rate of 93.7 %. They were from both sexes: male (n=120; 20%) and female (480; 80%). Demand satisfaction, social impact, price value, and reading habits had a positive impact on users' willingness to use e-books, among which reading habits have the greatest impact on willingness to use. Among the factors that satisfy users' demand, content demand, social interaction demand, and leisure and entertainment demand could all positively reflect demand satisfaction, among which leisure and entertainment demands had the highest degree of reflection.

**Keywords:** behavioral intention, e-books, children with learning disabilities, Saudi Arabia

### **INTRODUCTION**

In 1971, Michael Hart of the United States converted literary works into electronic versions and distributed them globally for free, namely the Gutenberg Project. From then on, electronic books officially entered the public eye. As digital devices led by computer technology become smaller, faster, and cheaper, and as they are interconnected with the help of Internet technology, a revolution in human reading has been brought about – the shift from paper reading to digital reading. In this transformation process, e-books have inherited the advantages of paper books such as high knowledge density, high content quality, and strong reliability (Arıkaya & Çakır, 2023; Arono et al., 2022; Aydın et al., 2024). They have the characteristics of easy retrieval, rapid dissemination, and accessibility at any time.

They also use multimedia technology to express knowledge content and strengthen the connection between knowledge, providing users with diversified scenarios that are easy to read and facilitate knowledge absorption. Although e-books have the above advantages, people are worried that the screen will hurt their eyes and it is difficult to immerse themselves and think deeply when reading e-books (Maduodoc et al., 2017). As a result, e-books have long been in the "shadow" of paper books and are developing in the direction of imitating paper books. In order to increase the probability of users using e-books, academia has begun to explore from various angles, among which the

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study of factors influencing the willingness to use e-books has become one of the focuses (Saniputri & Tati, 2021).

E-books refer to books that disseminate information in digital form through computer networks and are read with the help of computers or similar devices. It consists of three parts: content, reader, and reading software (Altun, 2018). Therefore, e-books not only have the characteristics of information technology and information systems but also have the characteristics of virtual spiritual cultural products. At present, research on factors affecting e-book usage intention is mainly carried out from the characteristics of information systems, based on models such as the technology acceptance model (TAM), the unified theory acceptance and use of technology (UTAUT), and theory of planned behavior (TPB), starting from the perspectives of perceived value and social environment and considering perceived usefulness and perceived ease of use (Haneefa, 2023; Özkan et al., 2023). Refined, most research results show that factors such as perceived usefulness, perceived ease of use, social influence, and subjective norms have a significant positive impact on intention to use (Alotumi, 2022; Bessadok, 2022; Xue et al., 2024).

From the perspective of individual users, their innovative characteristics are factors that influence the acceptance of e-books. For example, Cai's (2013) research results show that the user's personal innovative characteristics, green consumption attitude, personality traits, and usage experience have a significant positive impact on usage intention. The research results of Lee (2013) also show that personal innovation is an important influencing factor of usage intention. Satisfaction is one of the important factors influencing users' continued use intention. In terms of users' continued use of e-books, the research results of Li & Zhao (2016) show that expectation, confirmation, and satisfaction have an important impact on college students' continued use intention in satisfaction. With degree as a mediating variable. The research results of Smith & Brynjolfsson (2001) show that in the online book consumption market, brand and reputation are important influencing factors for users to choose to buy books; the research results of Liu (2010) show that product innovation and product design have a significant impact on e-book purchase intention.

### **This study**

This study takes the UTAUT model and uses satisfaction theory as the theoretical basis, starting from demand satisfaction and external scenario factors, and refines user needs to explore the factors influencing users' willingness to use e-books. This study contributes to the existing body of knowledge, paving the way to obtain a deeper understanding of the dynamics of adopting e-books for children with LDs in classroom from the perspective of our Saudi Arabia.

The aim is to investigate the factors influencing teachers' behavioral intention to adopt e-books for children with learning disabilities in the classroom.

The main question is:

*What are factors influencing teachers' behavioral intention to adopt e-books for children with learning disabilities in the classroom?*

### **Theoretical basis and model construction**

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003) by evaluating the strengths and weaknesses of the eight separate models and theories described above, yielded better results than each of them, with a regression value explaining approximately 70 percent of behavioral intention in organizational contexts (Venkatesh et al. 2012). Within the scope of UTAUT, four basic elements (Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions) as determinants of use and intention were given together with four moderators (gender, age, experience, and willingness to use) and basic relationships were examined (Venkatesh et al., 2003; Yeni & Gecu-Parmaksiz, 2016). According to UTAUT, performance expectancy, effort expectancy and social influence affect behavioral intention to use technology, while behavioral intention and facilitating conditions are determinants of technology use. In addition, it is assumed that individual differences such as age, gender, experience and volunteering have important effects in moderating various UTAUT relationships.

The UTAUT2 model adds three independent variables, namely hedonic motive, price value and habit, to the four independent variables of the UTAUT model, and discards the moderating variable of voluntary use (Alhwaiti, 2023). E-books are binary publications that are developed with the help of technologies such as computers, networks, and communications. They have the characteristics of information technology and information systems. Therefore, the UTAUT 2 model provides theoretical support for this study to analyze the factors affecting users' willingness to use e-books from the perspective of information technology.

### ***Uses gratification theory***

Uses gratification theory is one of the most widely used theories in the field of communication (Bryant & Miron, 2004). It mainly starts from the audience's standpoint and uses knowledge from psychology, sociology and other disciplines to analyze their use of media and their behaviors of obtaining satisfaction, and explains their social reasons and psychological motivations for using media. It is mainly reflected in four aspects: 1) Explain how people use media to satisfy their needs; 2) Find out why people use media; 3) Discover the specific motivations behind the use of media by individuals (Sichach, 2023); 4) Explain the factors that influence people's choice and use of media from the perspectives of society and individuals.

In the 1970s, the use gratification theory was formally established, and the research on this theory can be divided into two stages: the traditional stage and the modern stage (Moon et al., 2022). Traditional research mainly focuses on exploring the purpose of people using media or what needs they satisfy. The research conclusion is that people only come into contact with and use media when they have needs in terms of information, entertainment, social relationships, and psychology. Modern research mainly explains the relationship between motivation, expectation, and usage behavior, and revolves around two core questions: 1) Why are people attracted to the media?; 2) What types of satisfaction does the media provide to people (Moon et al., 2022)?.

Therefore, this theory helps to explain the influence of users' willingness to use from the perspective of usage satisfaction.

### ***Model Construction***

E-books are spiritual and cultural products. People often use them by reading. The purpose of traditional reading is mainly to meet people's needs for learning, appreciation, research and creation (Elhoweris, 2017;Özkan, 2022). The purpose of digital reading is only to increase the satisfaction of interpersonal interaction, participation, sharing, and other needs on this basis (Pamuk et al., 2023; Tepetaş et al., 2021). Therefore, the use demand analysis of e-books cannot only be measured from the perspective of bringing benefits and convenience to users' work, but also from the perspective of whether it can optimize people's knowledge structure, learning and research ability, interpersonal relationship, and survival skills .

The use satisfaction theory is generally measured from four aspects: information search, self-identity, social interaction, and leisure and entertainment. In view of this, this paper refines the user's demand satisfaction into content needs, social interaction needs and entertainment and leisure needs, and replaces the performance expectations and hedonic motivations in the UTAU2 model, so as to better explain the factors affecting the user's willingness to use from the perspective of use satisfaction, and make the influencing factors more accurate and have practical guiding significance.

The purpose of this model is to allow more users to adopt information systems or information technology, which requires corresponding convenient conditions to support it. E-books are the product of the integration of information technology and books, and their main purpose is to allow more users to buy and read. Generally speaking, publishing companies or sellers trigger users' willingness to buy or read through some promotional activities, price reductions and other measures. In view of this, this paper uses incentives instead of convenient conditions, that is, the impact of various online and offline marketing activities implemented by e-book producers and sellers on the willingness to use.

This paper takes the user's willingness to use e-books as the dependent variable, and takes demand satisfaction, social influence, effort expectation, incentives, price value, and reading habits as independent variables, and intends to explore the influence of user willingness from the perspective of user demand satisfaction and external scenarios. In addition, this paper also focuses on the three dimensions of demand satisfaction, namely content demand, social interaction demand, and entertainment and leisure demand, and takes them as high-order factors. Based on this, the model is constructed, as shown in Figure 1.

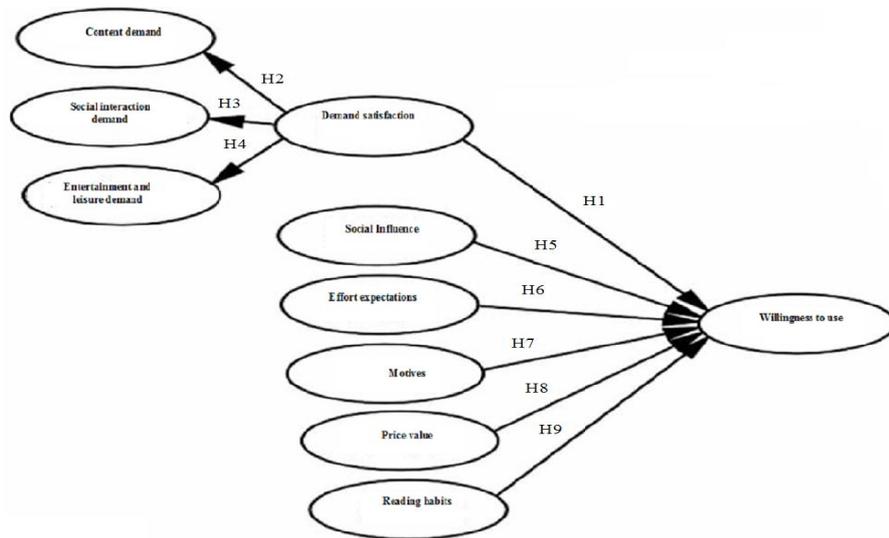


Figure 1  
Research model

### Hypotheses

Intention to use refers to a subjective probability judgment of whether users and potential users adopt e-books and services based on their own psychology. It reflects the intensity of users' subjective intention to use e-books and whether they are willing to consider using them in the future (Alhwaiti, 2023). Because users are affected by internal and external factors, their intention to use varies greatly, which is both diverse and complex. But they also have something in common; that is, any intention to use will be dominated by demand and external context, so this article explains the reasons from these two aspects (Alhwaiti, 2023).

Demand is the internal reason for the user's willingness to use and the starting point of all information behaviors. However, not all demands can necessarily prompt users to use a certain media behavior (Gladden & Jacobs, 2019). It also depends on whether the demand is satisfied. If it is satisfied, it will strengthen the user's willingness to use this media. Otherwise, they will look for alternative media. According to the use satisfaction theory, users use media because they need to satisfy their own needs.

In the digital media age, information is pouring in like a tide, with large quantity, fast update, wide sources, diverse forms and rich types. Users use vision to obtain information no longer limited to pictures and texts, but has expanded to videos, animations and other forms (Mejía-Lobo et al, 2024; Shaibani, 2020). They also use hearing to obtain information more frequently than before. Information is also often produced, published and shared based on social media. This series of changes has transformed users from information recipients and acquirers into producers, participants and communicators. The change in user roles has led to changes in demand. Based on

inheriting the functions of paper books, in addition to meeting users' needs for knowledge and entertainment, e-books also use hypermedia, streaming media, 3R: (Virtual reality (VR), Mixed reality (MR) and Augmented reality (AR) and other technologies to provide users with a brand new reading experience and knowledge absorption scenario, and use technology to provide an interactive communication space to meet users' social interaction needs (Coşkun & Koç, 2021; Değirmenci, & İnel, 2021; Maqableh et al., 2024; Türkan & Çetin, 2022).

Accordingly, the following hypotheses are proposed:

*H1: Demand satisfaction positively affects users' willingness to use e-books.*

*H2: Content demand positively reflects users' demand satisfaction.*

*H3: Social interaction demand positively reflects users' demand satisfaction.*

*H4: Entertainment and leisure demand positively reflects users' demand satisfaction.*

People in real society have a herd mentality and a convergence mentality. They will take the behavior, opinions, or authoritative public opinion guidance of their family, friends, and colleagues as a benchmark for their behavior, and unconsciously converge their own behavior and opinions with them. In the use of information technology, it is generally believed that personal behavior in using technology will be influenced by the behavior of people around them and colleagues with similar work (Alpaslan et al., 2021). In the Internet environment, users have social characteristics. Based on this, the following hypothesis is proposed:

*H5: Social influence positively affects users' willingness to use e-books.*

Effort expectancy is the degree of difficulty perceived by users when using e-books (Asrowi et al., 2019). Zhu (2018) pointed out that the simple and easy-to-learn operation method and simple and fresh operation interface of e-books will have a good effect on improving readers' willingness to use. Based on this, the hypothesis is proposed:

*H6: Effort expectation has a positive impact on users' willingness to use e-books.*

Motive measures refer to the degree of support that users receive from relevant conditions when using e-books. When studying the factors that affect readers' use of resources, Awwad, and Al-Majali (2015) found that incentives have a positive impact on users' willingness to use the product. Based on this, the hypothesis is proposed:

*H7: Motive measures positively affect users' willingness to use*

Venkatesh et al. (2012) concluded that a positive price value could affect behavioral intention positively. Price value actually follows the idea of perceived value (Venkatesh et al., 2012)

*H8: Price Value positively affects the user's willingness to use e-books*

Habit has been defined as the extent to which individuals tend to execute behaviors automatically because of learning (Venkatesh et al., 2012). Venkatesh et al., (2012) found that habit affects the behavioral intention to use technology.

*H9: Reading habits positively affect the user's willingness to use e-books*

## **METHOD**

### **Research design**

This study employs quantitative research methods, investigating the factors influencing inclusive teachers' behavioral intention to adopt E-books for children with learning disabilities in classroom. The survey method was used in this research to obtain data from the respondents, using self-report written questionnaires.

### **Scale design and questionnaire survey**

This study mainly measures content demand from the impact of the knowledge content contained in e-books on users' work, study, and life, as well as the improvement of users' knowledge structure; measures social interaction demand from the sense of existence, belonging, and identity gained by users in the process of using e-books, sharing and communicating the feelings of using e-books, expanding social circles, and strengthening connections with groups; and measures social interaction demand from the perspective of users' The degree of pleasure, happiness and relaxation experienced in the process of using e-books is used to measure the demand for entertainment and leisure; the social impact is measured from the aspects of interpersonal influence and concept cognition; the effort expectation is measured from the aspects of ease of use cognition and complexity. The reading habit is measured from the degree to which users use e-books unconsciously or voluntarily; the price value is measured from the economic perspective by measuring whether users can afford to buy and use e-books; the value of the user is measured from the perspective of the user's willingness to use the e-book. The intention to use e-books was measured from the perspectives of whether users continued to use them and recommended them to others; the incentive measures were measured from the perspectives of e-book producers and sellers implementing various online and offline marketing activities and measures to facilitate users to use e-books. The measurement items were designed based on mature scales, as shown in Table 1. Each variable had more than three measurement items and was measured using a five-point Likert scale (e.g., strongly agree; strongly disagree).

Table 1  
Measurement items and their sources

Variables	Coding	Measurement items	Source
Content Demand	CD 1	Using e-books can expand my reading range	Alharbi & Drew (2014)
	CD 2	Using e-books can improve my knowledge level	
	CD 3	Using e-books can help me work and study better	Ghazal et al.(2016)
Social Interaction Demand	SID 1	Share your feelings/comments about using e-books, and feel that it is helpful to others	Alharbi & Drew (2014)
	SID 2	Using e-books allows me to get in touch with people with similar interests and expand my interpersonal relationships	
	SID 3	E-books allow me to exchange opinions and share knowledge and information with others	Ghazal et al.(2016)
Entertainment and leisure Demand	ELD 1	I feel relaxed and happy when using e-books.	Yang(2010)
	ELD 2	Using e-books brings me a lot of fun.	
	ELD 3	I think using e-books is a good way to relax.	
Social Influence	SI 1	People around me think I should use e-books	Yang(2010)
	SI 2	If most of my friends use e-books, I will use them too	Elhwaiti (2023)
	SI 3	Using e-books is consistent with my values	
	SI 4	Using e-books is consistent with my professional environment	
	SI 5	Using e-books is consistent with my lifestyle	
Efforts expectations	EE 1	I think it is easy to master the skills of using digital reading software	Venkatesh et al.(2003)
	EE 2	The digital reading software is reliable in terms of system stability	
	EE 3	I think it is easy to master the skills of using digital reading equipment	
Reading habits	RH 1	At present, I am willing to use e-books	Venkatesh et al.(2003)
	RH 2	In certain situations, I will definitely use e-books	
	RH 3	For me, using e-books is a very natural thing	
Price Value	PV 1	I can find a lot of free e-books on the Internet.	Venkatesh et al.(2012)
	PV 2	I think the price of e-books is generally low.	
	PV 3	I can afford to buy e-books.	
Willingness to use	WU 1	In the future, I plan to continue using e-books	Venkatesh et al.(2012)
	WU 2	In the future, I expect to use e-books more frequently	
	WU 3	In the future, I will recommend others to use e-books	
Motives	M 1	Some incentives (such as sharing, forwarding comments, inviting newcomers, etc.) are attractive to me to use e-books	Amahan& DIT (2023)
	M 2	The virtual reading level system set by the reading software can motivate me to read e-books further	
	M 3	Online promotional activities can motivate me to read e-books further	

### Data collection

A total of 640 electronic questionnaires were collected (Google Forms). Based on the screening criteria of having online learning experience and excessive repetition of answers to measurement questions, 600 valid questionnaires were finally obtained, with an effective rate of 93.7%. The sample was from both sexes: male (n=120; 20%) and female (480; 80%). Data were collected from February to June 2024, in Taif, Saudi Arabia. Before starting the implementation of the draft scale, an application was handed in to the ethics committee, and the necessary permissions were obtained. Ethics committee guidelines were followed. Data from respondents were exported to SPSS version 25 for descriptive data analysis. Model constructs were evaluated using

structural equation modeling (SEM) analysis via Analysis of Moment Structure (AMOS) version 26 software.

## FINDINGS

### *Measurement model test*

Reliability mainly reflects the stability and consistency of the measured data, indicating the consistency of the measurements made by investigators on similar phenomena (groups) at different times or using different methods and the degree of consistency of the results obtained. In general, the reliability test adopts the internal consistency reliability index (ICR) more often, and ICR can be reflected by the Cronbach  $\alpha$  value and composite reliability (CR). It is usually required that the higher the  $\alpha$  value and CR value, the better; the  $\alpha$  value should not be less than 0.6, and the composite reliability value should not be less than 0.7, indicating that the model reliability is high (Sarstedt et al., 2022). The results of confirmatory factor analysis are shown in Table 2. As can be seen from Table 3, the minimum  $\alpha$  value is 0.800 and the minimum CR value is 0.880, indicating that the reliability of the measurement model is relatively ideal.

Validity testing is generally reflected through the testing of content validity, convergent validity and discriminant validity. The items in this study are based on mature scales, and are optimized based on the review opinions of relevant experts and the results of pre-tests. Therefore, the content validity is reasonable and effective. It is generally believed that the value of average variance extracted (AVE) is not less than 0.5, indicating that the convergent validity is relatively good. As shown in Table 3, the minimum value of AVE is 0.711, indicating that the convergent validity of the measurement model is relatively good. The square value of the AVE value and the correlation coefficient between the constructs are shown in Table 3. As can be seen from Table 4, each AVE value is greater than the square value of the correlation coefficient between the two constructs, indicating that the discriminant validity is good.

Table 2  
Results of confirmatory factor analysis

Variables	Number of items	Cronbach's alpha	CR	AVE
Content Demand	3	0.800	0.880	0.722
Social Interaction Demand	3	0.866	0.904	0.744
Entertainment and leisure Demand	3	0.868	0.906	0.732
Social Influence	5	0.842	0.904	0.756
Efforts expectations	3	0.845	0.907	0.764
Reading habits	3	0.867	0.911	0.711
Price Value	3	0.885	0.930	0.828
Willingness to use	3	0.847	0.918	0.766
Motives	3	0.901	0.941	0.820

Table 3  
Correlation coefficients

	CD	SID	ELD	SI	EE	RH	PV	WU	M
CD	-								
SID	0.719	-							
ELD	0.719	0.719	-						
SI	0.381	0.541	0.722	-					
EE	0.350	0.437	0.722	0.667	-				
RH	0.367	0.458	0.700	0.622	0.388	-			
PV	0.398	0.477	0.659	0.644	0.418	0.477	-		
WU	0.366	0.485	0.611	0.677	0.420	0.455	0.398	-	
M	0.382	0.479	0.663	0.682	0.425	0.480	0.413	0.511	-

It is generally believed that when the skewness and kurtosis are close to 0, the data can be considered to be approximately subject to normal distribution (Orcan, 2020). The absolute value of the skewness of the sample data in this study is 0.638 at the maximum and 0.153 at the minimum, and the absolute value of the kurtosis is 0.394 at the maximum and 0.004 at the minimum. It can be seen that the values of skewness and kurtosis are close to 0, indicating that the sample data approximately meets the normal distribution and the structural equation model method can be used to verify the model.

#### **Structural model test**

According to the path hypothesis of the theoretical model, the three primary factors of content demand, social interaction demand, and entertainment and leisure demand are used as internal potential variables of demand satisfaction. Therefore, they cannot be drawn with double arrows to form a covariate relationship, and it is necessary to add estimated residual terms. The higher-order factor demand satisfaction is used as an external potential variable of willingness to use. The primary factors of reading habits, and motivation are used as the external potential variables of willingness to use. Motive measures, effort expectation, social impact, and price value are used as exogenous latent variables of willingness to use, and a covariation relationship needs to be established between the exogenous latent variables.

Based on this, an identifiable structural equation model containing high-order factors is constructed. Then the model is operated with "calculate estimated value" and the model is corrected, and its GFI is 0.911, CFI is 0.957, TLI is 0.949, and IFI is 0.957, both exceeding 0.9 and reaching the good standard; RMR is 0.031 and RMSEA is 0.049, both less than 0.05 and reaching the excellent standard; although CMIN/DF is 3.574, greater than 0.3, the good standard, the other fit indexes of this model all reach the model adaptation standard (Shi et al., 2020). In addition, the effective sample size is greater than 200. Therefore, the model is acceptable and has a good prediction effect, as shown in Figure 2. The results of the hypothesis verification are shown in Table 4:

Table 4  
Results of the hypothesized relationship

Path Relationship	Beta	CR	P	Significance	Hypothesis Testing
H1: Demand satisfaction positively affects users' willingness to use	0.180			Significant	Supported
H2: Content demand positively reflects users' need satisfaction	0.780	3.180	0.00	Significant	Supported
H3: Social interaction demand positively reflects users' need satisfaction	0.890	3.210	0.00	Significant	Supported
H4: Leisure and entertainment demand positively reflects users' need satisfaction	0.910	3.206	0.00	Significant	Supported
H5: Social influence positively affects users' willingness to use	0.181	3.00	0.00	Significant	supported
H6: Effort expectation positively affects users' willingness to use	0.040	0.750	0.460	Not significant	Not supported
H7: Incentive measures positively affect users' willingness to use	0.190	3.760	0.00	Significant	Supported
H8: Price Value positively affects the user's willingness to use	0.230	4.900	0.001	Significant	Supported
H9: Reading habits positively affect the user's willingness to use	0.540	8.000	0.00	Significant	Supported

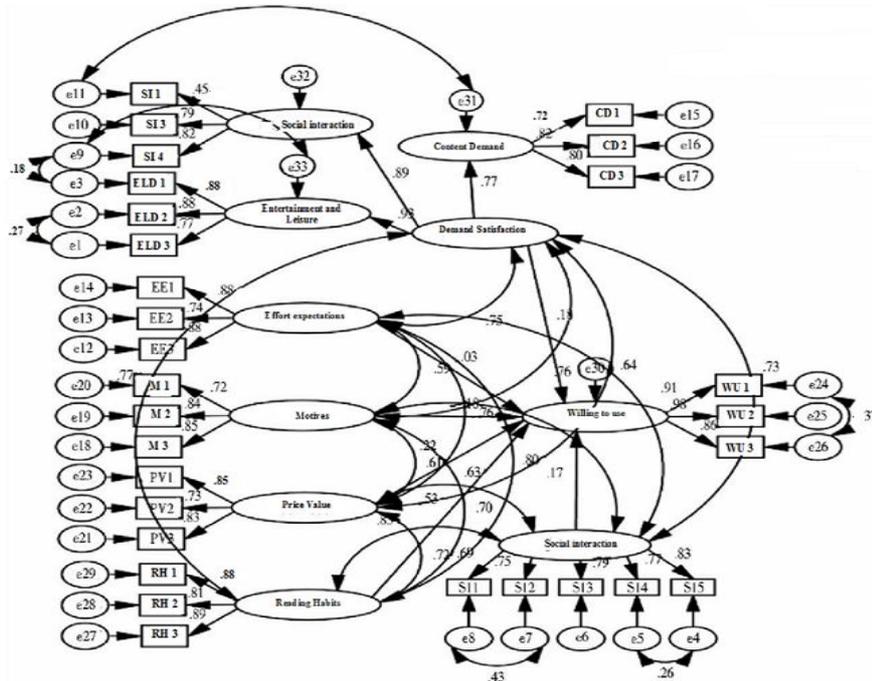


Figure 2  
Structural equation model

From Table 4, we can see that except H6 is not supported, other hypotheses are supported. Demand satisfaction, social impact, price value and reading habits had a positive impact on users' willingness to use e-books, among which reading habits have the greatest impact on willingness to use. Among the factors that satisfy users' demand, content demand, social interaction demand, and leisure and entertainment demand could all positively reflect demand satisfaction, among which leisure and entertainment demands had the highest degree of reflection.

## DISCUSSION

The aim is to investigate the factors influencing teachers' behavioral intention to adopt e-books for children with learning disabilities in the classroom.

This study takes the UTAUT model and uses satisfaction theory as the theoretical basis, starting from demand satisfaction and external scenario factors, and refines user needs to explore the factors influencing users' willingness to use e-books.

Consumer behavior studies believe that any consumer behavior is dominated by human needs (Mason et al., 2023). In terms of a specific behavioral process, consumers first show a state of scarcity in terms of physiology and psychology. When this state reaches a certain degree of urgency, the demand will be activated, generating the motivation to satisfy the demand, and then taking corresponding actions to satisfy the demand. In this way, demand satisfaction becomes an important factor affecting users' use of e-books. In terms of *demand satisfaction*, the impact is in turn the demand for leisure and entertainment, the demand for *social interaction*, and the demand for content. The reasons for this situation may be related to people's understanding of digital reading, reading habits, and digital environment. The results of Yao and Wang (2024) show that digital literacy is associated with the perceived usefulness and ease of use. Higher performance expectancy, facilitating conditions, social influence, and service quality were all significant predictors of the eLearning platform on behavioral intention (Almaki et al., 2024).

Currently, most researchers believe that digital reading belongs to "shallow reading", "fragmented reading" and "jumping reading", which is not conducive to in-depth thinking; because electronic screens are harmful to the eyes, it is not conducive to long-term reading (Hakemulder & Mangen, 2024); using mobile phones and computers to read causes too much interference, which is not conducive to immersive reading; and so on. Therefore, reading e-books is not like the era of "green lamps and yellow scrolls", which is mainly to obtain knowledge from books, but to use it as a leisure method. E-books are produced when digital technology and paper books are integrated (Hakemulder & Mangen, 2024). They can be electronic versions of paper books, or enhanced versions presented using multimedia technology.

Since electronic books need digital technology to be realized, they should show functions and features that paper books do not have, and bring users a new reading experience. In addition, influenced by the Internet spirit of openness, interaction, and participation, as well as the changes in daily life brought about by social media, users hope to interact with authors and other users when using e-books, share knowledge and

feelings, and gain a more convenient reading experience. Therefore, users need to obtain satisfaction in terms of self-identification, interactive communication, etc. when using e-books. Therefore, it can be said that users use e-books to satisfy their leisure, entertainment, and interactive communication, while knowledge content is mainly obtained from reading paper books.

**Reading habits** are gradually formed and developed in people's long-term reading activities, and can subtly influence people's willingness and behavior to use e-books for a long time (Tanju & Hakkoymaz, 2022). Once people form the habit of reading e-books, they will use e-books involuntarily when choosing reading objects. In this way, reading habits become a key factor affecting the willingness to use.

**Price value** has become an important factor affecting people's use of e-books. E-book users are members of society. According to behavioral theory, they will join groups with the same interests as themselves. The beliefs and attitudes formed in the group often have a subtle influence on the user's behavior. The cognitive norms formed in the group will make the user consistent with the group's expectations. Therefore, social influence will affect the user's behavior and willingness to use e-books. Users use e-books to meet their own needs. Reading software is merely a tool to meet their needs.

**Motives** have a positive impact on intention to use, which is exactly the opposite of the original hypothesis of this study. This situation may be caused by the following reasons: 1) The purpose of promotional activities is to sell books, without considering the reading needs of users. 2) The marketing methods adopt the same strategy as general physical products, ignoring the importance of e-books. The spiritual and cultural attributes of e-books, such as adding advertisements to e-books and rewarding users for sharing, can easily make users feel disgusted or rebellious, so the motive measures have a counterproductive effect.

## CONCLUSION and IMPLICATION

If the 1971 digitized Declaration of Independence is called the first e-book, then it is only nearly half a century old. Compared with paper books, which have a history of thousands of years, it is still in its infancy, and some influencing factors have not yet been fully manifested. With the deepening of social digitization and the further popularization of digital publishing products. In addition to the factors proposed in this study, such as demand satisfaction, reading habits, incentives, effort expectations, social impact, and price value, there will be other factors worthy of study, such as psychological and emotional factors, social and cultural factors, and product factors themselves.

Policymakers and teacher educators need to adopt e-books to teach children with disabilities. Policymakers and teachers should consider e-book as a technological form. This could be achieved by providing training.

## RECOMMENDATIONS

Based on this research result, libraries can strengthen the interviews of popular e-books in the purchase of e-books, and appropriately reduce or interview educational and

professional e-books according to readers' needs. Based on this result, publishing companies can formulate the following development strategies: 1) continue to strengthen the understanding and recognition of user needs and user characteristics, use big data technology to profile users, and match e-books and services with user needs according to the Pareto optimal principle; 2) integrate e-books with different contents into the industrial development process according to demand to improve user satisfaction and usage rate; 3) on the basis of ensuring content satisfaction, increase and strengthen technology development, use technology to enhance the functions of reading software and platforms and develop personalized services.

### **LIMITATIONS**

Like most empirical studies, this study had limitations that could guide a further study. The study was limited in that was conducted in Taif City. A similar study in another city from another region might generate different results. Secondly, this study employed a standard questionnaire survey. In the future, non-standard survey methods could be considered. Therefore, subsequent research can continue to expand and extend on this basis, or conduct comparative analysis with other digital publishing products to find out the similarities and differences between them to increase the depth of research.

### **CRedit authorship contribution statement**

The author: Writing – review & editing, Writing – original draft, Resources, Methodology, Investigation, Data curation.

### **Declaration of competing interest**

The author declares no conflict of interest.

### **Supplementary materials**

No supplementary materials associated with this document

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