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DETERMINING PRICE VALUE AS A MODERATOR IN TAM IN CONTEXT OF E-LEARNING

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Abstract- E-learning technology is an emerging technology in the field of education and is an effective way to learn, due to which it is gaining popularity globally and in India, especially due to Covid19. This research considered use of price value as a moderator in Technology Adoption Model (TAM). With the application of Structural Equation Modelling (SEM), it is found that both perceived ease of use and usefulness has significant and positive influence on attitude of users towards E-learning; with ease of use as higher impact than the usefulness. Considering intention of youth as a dependent variable, attitude is found to have highest significant influence, followed by perceived usefulness. Perceived Ease of use was not found to have significant influence on intention. Considering price value as a moderator, it is not found to have significant moderating effect on the relationship between attitude and intention to use E-learning. This study is useful for educational institutions like colleges and universities and other private organisations providing various E-learning platforms to effectively develop and implement their e-learning system.

Keywords: *E-Learning, Attitude, Behavioral Intention, Technology Acceptance Model, Price Value*

1. Introduction

E-learning, also known as Electronic learning, is a vast and multi-faceted topic and there exists various definitions of E-learning. As per Moore et al. (2011), E-learning is the form of instruction that occurs between learner and instructor and are held at different times and/or places, using some form of material. E-learning is technology mediated learning approach that allows learners interacting with materials, teachers and peers through a technology platform (Alavi & Leidner, 2001). According to The European Commission (2001), E-learning is the use of multimedia technologies and internet to increase learning quality by easing access to facilities and services as well as distant exchanges and collaboration. It indicates anytime and anywhere learning which make users fond of using it because of flexibility in terms of time, place and collaborative learning.

Over the past decade, online and technology driven education have captured entire education industry. It is a kind of revolution in education sector, thus new phase of education has emerged i.e. e-learning. As per global market insights, e learning market globally have crossed $ 200 billion in 2019 and is expected to grow at 8% CAGR between 2020 and 2026. Forbes estimated global e learning market size worth $325 billion in 2025. E-learning market in India is rapidly expanding with entry of many digital and Edtech firms. According to Research and markets, online education market in India was valued at Rs. 39 billion in 2018 and is projected to expand at 43.85% during 2019-2024, expected to reach Rs. 360.3 billion by 2024.

With this scenario of expansion of e-learning and internet users in India, it is important to conduct research on e-learning among youth to study their attitude towards e-learning. Research is needed to be conducted to identify youth attitude and intentions towards e-learning. Therefore, the present study is conducted for determining attitude and intention of users to use E-learning with the usage of price value as a moderator. This study is useful for all the organizations and Edtech companies providing E-learning platforms whether private or government institutions in enhancing their effectiveness of E-learning platform and in augmenting their user's number by incorporating the results of the study.

E-learning requires wider technology adoption to enhance its user base. Most of the studies have been using only Technology Acceptance Model (TAM) for determining users' intention to adopt E-learning. Since price value plays a major role in determining their usage intention of users, it should be considered in the model which none of the previous study on E-learning has taken into deliberation. Therefore, this study fills this research gap by incorporating price value as a moderator on the relationship between attitude and intention. Also, few studies have been done on E-learning using TAM in India, determining attitude of users towards E-learning by extending TAM model with price value as a moderator would provide useful insights for the users of India.

The next of the paper contributes towards literature review followed by Research Methodology. Results are mentioned in Section 4 whereas Section 5 deals with discussion. Section 6 presents implications of the study. Limitations and future recommendations are addressed in Section 7.

2. Literature review

2.1 Technology Adoption Model (TAM)

TAM is one of the literature's most important applications of Ajzen and Fishbein's theory of reasoned action (TRA). The most often used model of consumers' acceptance and utilisation of technology is Davis's technology acceptance model (Venkatesh, 2000). It was created by Richard Bagozzi and Fred Davis (Davis 1989). An information systems theory called the technology acceptance model (TAM) analyses how people come to accept and employ a technology. An element that influences people's decision to utilise technology is their behavioural intention. The attitude (A), or overall opinion of the technology, has an impact on the behavioural intention (BI). The two technological acceptance measures—ease of use and usefulness—replace many of the attitude measurements used in TRA. Both TRA and TAM have significant behavioural components (Bagozzi et al. 1992).

2.2 Empirical Studies related to TAM

In context of mobile marketing tools, mobile phone users generally have positive attitude towards it, besides low adaptation of mobile phones among them **(Barutçu, 2007).** In this study, users' were found to have positive attitude towards mobile advertising, mobile internet, banking, location based mobile services, mobile discount coupons, mobile entertainment; but only mobile shopping was found to be only segment of mobile marketing tool, where users were observed to have negative attitude. Advertisers are being creative nowadays to reach out to each and every customer by utilizing various technological advancements and new advertising medias. Considering m-advertising as marketing media, **Jiménez & San-Martín (2017)** confirmed that consumers' m-repurchase intention is influenced by their positive attitude towards m-advertising and it was also found that their attitude is influenced by their personal factors, social factors and epistemic factors i.e. their compatibility, perceived control, social influence, propensity to use technology. According to **Ünal, Ercis & Keser (2011)**, they found that entertaining, informative, reliable, personalized mobile advertisements which are sent with permission tend to have positive effect on youth and adults' attitude towards it. Youth and adults are noticed to have different attitude towards mobile advertisement. Youth are observed to accept m-advertisements and are believed to be more positive towards it as compared to adults and they believe m-advertisements as more personalized than adults.

In the emergence of short message service (SMS) advertising, **Van der Waldt, Rebello & Brown (2009)** suggested marketers to take customers permission before sending them advertisements; and short, relevant information related to customers' interest should be sent since in their study, customers are observed to have negative attitude towards SMS advertising and their attitude is tend to be positively influenced by consumers' perceptions of the entertainment value, informativeness and credibility; but negatively influenced by consumers' perceptions of the irritation aspect.. By supporting these findings related to SMS Marketing, **Zabadi, Shura & Elsayed (2012)** further added that message should be developed properly as message characteristics like advertising value and advertising message content strongly influenced their attitude. It cannot be assured that all the advertisements received on consumers mobile phones are read and remembered by them. So marketers should indulge in doing lot of efforts to popularize SMS advertising and make it more attractive.

Considering mobile payment system as cash based payments are drastically replacing electronic payment systems, study by **Arvidsson (2014)** concluded that users' attitude determination towards mobile payments are critically influenced by factors like ease of use, relative advantage, high trust, low perceived security risks, higher age and lower income, which are seen to positively associate with attitude. Since consumers focus more on reliability and trust, to engage more users to use mobile payments, companies with such services should develop quick, simple, inexpensive, attractive and secure payment system. **Chawla & Joshi (2019)** also suggested key stakeholders to propose such robust and reliable payment system which could ensure safe and secure transactions that could further lead to more adoption of such systems since trust and security was seen as important catalyst for attitude. They, by considering attitude of consumers towards mobile wallets, concluded that their attitude is significantly dependent on trust, security and lifestyle compatibility and other factors like perceived ease of use (PEOU), perceived usefulness (PU), facilitating conditions.

Considering studies on higher education institutions, **Siragusa (2011)** observed that most of the higher education students, before initiation of online academic writing skills programs, felt anxious and apprehensive. With more

engagement of students with these programs, their attitude became more positive and they believe online programs to be more interesting and useful to them. **Panda & Mishra (2007)** suggested higher education institutions to develop faculty training programs which can also be delivered on the internet so that faculty can be more technology friendly and can adopt and use more e-learning technology since they noticed moderate positive attitude of faculty towards e-learning in their study. Also faculty's experience of using computers and emails were also found to significantly affect their attitude.

Even mobile learning is being commonly used in various higher education institutions which, with use of internet and various technologies, is a great medium to learn and share ideas with each other as stated by **Al-Emran, Elsherif & Shaalan (2016)**. On investigating attitude of students and faculty towards use of mobile learning, both were observed to have positive attitude in using it leading to conclusion that both educators and learners are keen and ready to accept this mobile learning technology. Supporting these findings, **Gunter & Reeves (2017)** also emphasized on the use of mobile learning in educational institutions as this is one of the most effective method of teaching as students learn best when taught using new emerging technologies which are both authentic and interactive. So educators should try to indulge themselves in the use of mobile for teaching and should also learn to integrate these technologies deeply in the education system considering changing requirements and demands of students.

In the context of consumers' attitude towards online shopping, **Aldousari, Delafrooz, Ab Yajid & Ahmed (2016)** revealed that attitude of consumers and their perception of online shopping benefits are positively correlated stating that increase in their perception of benefits of online shopping would lead to their positive attitude towards it. Even researchers also noticed positive and high correlation of attitude with convenience, price and wide selection. **Lee & Chow (2020)** investigated consumer attitude towards online fashion renting retailing based on their perceptions of ownership, compatibility, relative advantages and ecological value and suggested later on to devise such strategies which could enhance engagement of consumers and then their retail market. Even compatibility was found to be insignificant factor in determining attitude of consumers which can be enhanced by providing virtual reality or through brick and mortar facilities. Even **Kacen, Hess & Chiang (2013)** also confirmed that online stores have certain disadvantages like difficulty in returns, shipping and delivery charges, post purchase services, uncertainty in receiving the same ordered item, etc. which cannot be overcome besides certain advantages like variety and ease of browsing. Also their study found that consumers are more willing to buy offline on brick and mortar stores than online stores with exception of female non student shoppers with some online shopping experience as they seem to have positive attitude towards online shopping. In the context of mobile shopping as mobile phones are no longer just a device for one to one communication, **Musa et al. (2016)** found that consumers' attitude is hugely determined by mobile application features whereas security and confidentiality is not a significant factor in influencing their attitude towards mobile shopping.

Tarhini et al. (2017) intended to investigate the elements that can prevent or promote college students' use of e-learning platforms. The Unified Theory of Acceptance and Use of Technology was expanded to include the two additional components of trust and self-efficacy in order to provide a conceptual framework. Between January and March 2015, information was gathered via a cross-sectional questionnaire survey from students at two institutions in England. According to the findings, performance expectancy, social influence, habit, hedonic motivation, self-efficacy, effort expectancy, and trust substantially affected behavioural intention (BI). Contrary to what was expected, price value and enabling conditions had no effect on behavioural intention.

On the basis of literature review, following research model is framed for the study.

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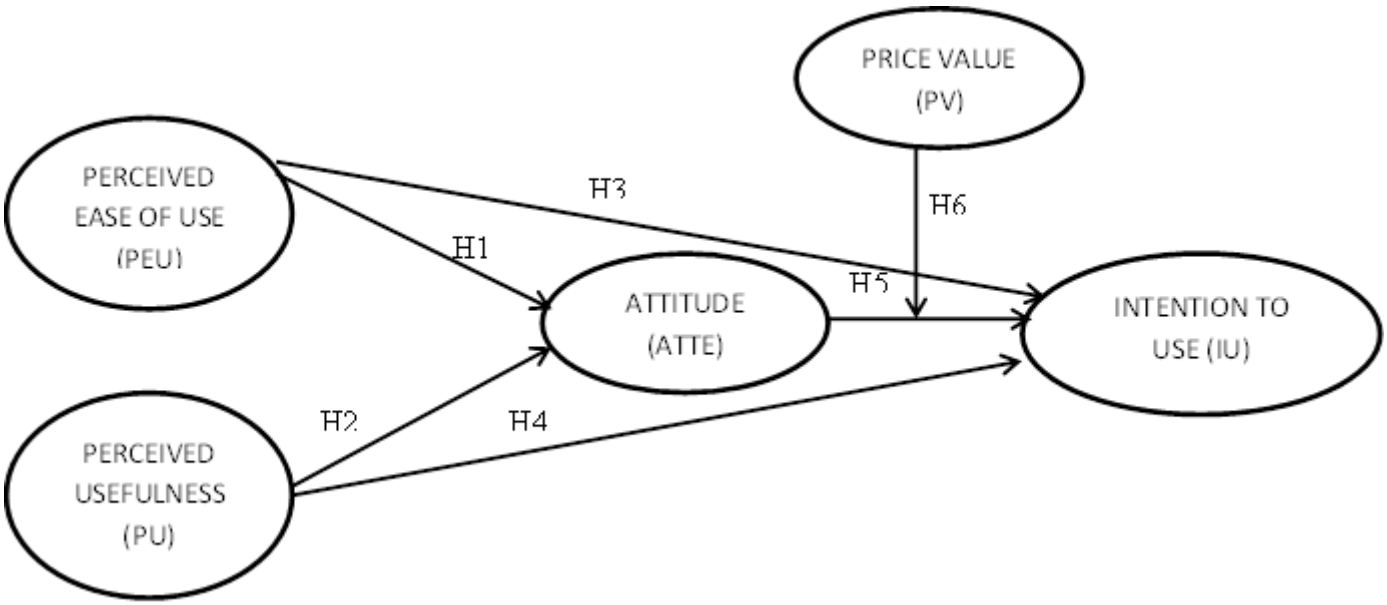

Figure 1 Research Model

Based on the conceptual framework, following hypothesis are framed:
H1: Perceived Ease of Use significantly and positively influence attitude towards E-learning.
H2: Perceived Usefulness significantly and positively influence attitude towards E-learning.
H3: Perceived Ease of Use significantly and positively influence intention to use E-learning.
H4: Perceived Usefulness significantly and positively influence intention to use E-learning.
H5: Attitude towards E-learning significantly and positively influence intention to use E-learning.
H6: Price Value moderates the relationship between attitude and intention to use E-learning such that relationship is stronger when perceived price is low as opposed to high.

3. Research methodology

3.1 Data collection

This study is based on descriptive research design where descriptive research design attempts to describe characteristics of certain groups and to determine relationships between variables. This research is based on cross sectional study rather than longitudinal study as it is one time measurement i.e. characteristics of sample members are measured only once at a single point of time. Youth of the age group of 15-24 of North India who have either completed or are pursuing any paid e-learning course of minimum length of 3 months like test preparation, online tutoring, Higher Education, other certified courses, etc. are the target population of the study. Snowball sampling, also called referral sampling, is used to contact respondents of the study. Using Cochran formula, researcher has taken 600 respondents which would be appropriate sample size suitable to represent the population.

3.2 Instrument development

A structured and close ended questionnaire is used for the purpose of data collection from respondents. A Questionnaire is framed on the basis of literature survey and in consultation with experts in the field of education and E-learning. Their comments were considered and modifications were made accordingly. Questionnaire was initiated with basic introduction to the meaning of E-learning to make respondents aware of the topic of the questionnaire. Along with this, there was filter question for the study for the selection of respondent whether the respondent is using E-learning platform for minimum 3 months or not. Only those respondents were made to fill the questionnaire who answered yes to the filter question. Another section considered items related to TAM model and moderator i.e. price value. Table 1 mentions meaning of the constructs of the study along with their source of items of questionnaire.

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Table 1 Meaning and Source of the constructs

Construct	Meaning	Source
Attitude	Psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor	Eagly and Chaiken (1993)
Intention to use	User's choice to keep utilizing a certain piece of technology that they first agreed to and have been utilizing	Nabavi et al. (2016).
Perceived Ease of Use	The degree to which a person believes that using a particular system would be free of effort	Davis (1989)
Perceived Usefulness	The degree to which a person believes that using a particular system would enhance his or her performance	Davis (1989)
Price Value	Users' cognitive trade-off between the perceived benefits of E-learning technology and the monetary cost for using it	Venkatesh et al. (2012)

3.3 Data Analysis

The two-step structural equation modelling (SEM) methodology described by Anderson and Gerbing (1988) was applied in this study. Initially, confirmatory factor analysis (CFA) was employed to test the measurement model. Second, SEM was applied to assess the structural model and the causal link between the components. AMOS 21.0 was applied to all the tools described above.

4. Results

4.1 Respondents' demographics and usage profile

Among 598 respondents who participated in the study, 37% were males and 63% were females. The analysis of age depicts that 17.6% youth were from age group 15-17; 53.3% youth was from 18-20 age group; while rest 29.1% youth was from 21-24 age group. Comparing respondents on the basis of region, majority of youth belonged to urban area (58.4%). Youth belonging to rural area constitutes 22.7% and only 18.9% belonged to semi-urban area. On the basis of level of education, respondents who have completed secondary level of education constitutes only 9% of the proportion among respondents; proportion of senior secondary youth was 31.6%; bachelors were 37.3%; 14.7% constitutes respondents with Master degree and youth with Diploma degree were only 7.4%. Lastly, considering family income of the respondents annually, 65.1% youth has family income of less than 5 lakhs annually; 22.9% youth has family income of 5-10 lakhs; 5.9% respondents has family income of 10-15 lakhs annually and only 6.2% has family income of more than 15 lakhs per annum. Demographic profile of the respondents is presented in Table 2.

Table 2 Demographic Profile of Respondents

	Number	Percentage (%)
Gender		
Male	221	37.0
Female	377	63.0
Age		
15-17	105	17.6
18-20	319	53.3
21-24	174	29.1
Region		
Rural	136	22.7
Semi-urban	113	18.9

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Urban	349	58.4
Education level		
Secondary	54	9.0
Senior Secondary	189	31.6
Bachelors	223	37.3
Masters	88	14.7
Diploma	44	7.4
Family income		
<5 lakhs	389	65.1
5-10 lakhs	137	22.9
10-15 lakhs	35	5.9
>15 lakhs	37	6.2

4.2 Measurement Model

With the use of AMOS 21 (Analysis of Moment Structures), Measurement model is assessed through application of Confirmatory Factor Analysis (CFA) to examine the validity and reliability of the constructs. Analysis of Measurement Model or CFA includes assessing psychometric properties of the constructs i.e. reliability and validity; and model fit indices.

Assessment of Construct Validity and Reliability

To verify the reliability and validity of the latent indicators, many experiments were conducted. Only when a measure is dependable and valid can it be said to be reliant. Hence, it is best to abstain of metrics that are weak indicators of the thing they are meant to assess. The most important goal to strive for when evaluating a research measure is construct validity. It determines the extent to which conclusions about the theoretical foundations of a measure may be validly drawn from its operationalization. Thus, a test may only be considered valid if it yields the desired results (Heeler & Ray, 1972; Thompson, 2003). Analysis of construct validity includes following components:

a. Face or Content Validity: It judges a measure based on its perceived validity, which mostly relies on common sense. To guarantee that a measurement theory is accurate, it is crucial to comprehend each construct and its significance. It could also be considered the most important validity test (Hair et al., 2006).

b. Convergent Validity: The degree to which the scale corresponds well with other assessments of the same construct is known as convergent validity. It refers to how effectively the item measurements connect to one another with respect to common ideas (Anderson & Gerbing, 1984). This validity could be examined through the following ways:

i. **Factor Loadings**: The standardised factor loadings should be greater than 0.50, and preferably, they should be greater than 0.70 with statistical significance (Hair et al., 2006). Each item factor loadings in this case were shown to be more than 0.70.

ii. **Average Variance Extracted (AVE):** The average of the squared factor loadings for each construct is the variance retrieved. By multiplying the quantity of items by the sum of all squared standardised factor loadings, it is determined. As each construct's AVE is found to be higher than 0.5 as shown in Table , the convergent validity was determined to be adequate (Fornell & Larker, 1981). Each construct's CR was higher than > 0.7.

ii. **Reliability**: The degree to which a scale yields consistent readings after several measurements is referred to as reliability (Clancy & Rabino, 2007). It is important to consider reliability of the measurement so that it can be assured that situational or transient factors would not influence further processes of the study. There exists different methods of measuring reliability and using one method is never sufficient for more reliable results. It is always advised to use multiple measures for ensuring reliability. Exploratory Factor

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Analysis (EFA) was employed for checking initial reliability. In this Confirmatory Factor Analysis (CFA), Composite Reliability is used. Composite reliability measures how consistently a group of elements put into a latent construct performs as a whole. Readings over 0.70 indicate high reliability. It is determined by dividing the square of the total loadings of the standardised factors by the square of the total loadings plus the total loadings of the indicator measurement errors. Here, all of the constructs' composite reliabilities are higher than 0.70 (Table), showing robust internal consistency.

c. **Discriminant Validity:** The degree to which one concept varies from all other components in the research model is discovered through discriminant validity (Chin, 1998). Discriminant validity is determined using two different methods. The correlation coefficients between the latent factor measurements with the measurement items were analysed. It is possible to determine discriminant validity by altering the construction measures. Instead of loading heavily on the other constructs in the study model, the measurements should exhibit strong loading on their predicted construct. As a result, the loadings should be greater than the cross loadings (Hair et al., 2016).

To ensure that each construct has a higher variance with its measurements relative to the other latent constructs in the research model, the average variance extracted (AVE) is evaluated (Storey & Kahn, 2010). In general, the square root of the AVE for a given construct should be more than the variance that the construct and other constructs in the model share, and it should be greater than 0.5 (Fornell & Bookstein, 1982; Hair et al., 2016; Chin, 1998). It is advised that the construct accounts for at least 50% of the measurement variation when the AVE value is greater than 0.5. With the use of cross-loadings and the Fornell-Larcker scale, the discriminant validity was evaluated. Table contains the Fornell-Larcker scale analysis. The bold diagonal elements in the Table 3 provide the square root of the AVE scores (Abu-Al-Aish, 2014). The measurement items all heavily load on their own latent constructs rather than loading on other constructs, according to an analysis of the loadings and cross-loadings (Cheng & Chen, 2015). As a result, the conditions for discriminant validity are met since the square root of each construct's AVE is greater than its highest co-relation (Fornell & Larker, 1981) as shown in Table .

Table 3 Factor Matrix Showing Discriminant Validity for Confirmatory Factor Analysis

	CR	AVE	ATTEE	PEU	PU	CIL
ATTEE	0.843	0.518	**0.720**			
PEU	0.937	0.715	0.456	**0.846**		
PU	0.958	0.851	0.415	0.292	**0.923**	
CIL	0.873	0.696	0.651	0.346	0.353	**0.834**

Model Fit Indices: It is a technique to assess goodness of fit of the model that indicates suitability of the data for the application of CFA.

Table 4 shows all the different model fit values of the measurement model of the eleven constructs of this objective, along with its recommended values. It can be interpreted from the

Table 4 that model is reasonably fit for further application and model indices are better than recommended values.

Table 4 Model Fit Indices of the Measurement Model

Name of Category	Name of Index	Level of Acceptance	Measurement Model
Absolute fit	CMIN/DF	<5.0	2.911
	RMSEA	between 0.03 and 0.08	0.057
	GFI	> 0.90	0.94
Incremental fit	CFI	> 0.90	0.976
	TLI	> 0.90	0.971
	NFI	>0.90	0.964
	IFI	> 0.90	0.976

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Parsimonious fit	PNFI	>0.6	0.813
	PCFI	>0.6	0.823
	AGFI	>.8	0.92

All the above psychometric analysis and model fit values ensures that the measurement model related to eleven constructs of this objective had satisfactory reliability and validity.

4.3 Analysis of Structural Model and Hypothesis Testing

After the application of Confirmatory Factor Analysis (CFA), impact of independent constructs on intention was assessed as shown in Fig. 1. All the validity of elements was again checked in structural model as in the measurement model. Firstly, factor loadings were examined for each item, which again came out to be above 0.5. Indices for overall model fit were assessed through absolute, incremental and parsimonious fit indices as shown in Table . The value of Goodness of Fit Index (GFI) = (0.94) was found to be near to 0.900, Comparative fit Index (CFI) = 0.98, Tucker Lewis Index (TLI) = (0.971), Incremental Fit Index (IFI) = (0.98), the minimum discrepancy divided by its degree of freedom is CMIN/DF = 2.92 which was within acceptable value, PNFI = 0.8, PCFI = 0.82 and Root Mean Square error of Approximation (RMSEA) = 0.058. All these values as in the acceptable limit ensure good model fit.

Table 5 Model Fit Indices of the Structural Model

Name of Category	Name of Index	Level of Acceptance	Structural Model
Absolute fit	CMIN/DF	<5.0	2.92
	RMSEA	between 0.03 and 0.08	0.058
	GFI	> 0.90	0.94
Incremental fit	CFI	> 0.90	0.98
	TLI	> 0.90	0.971
	NFI	>0.90	0.97
	IFI	> 0.90	0.98
Parsimonious fit	PNFI	>0.6	0.8
	PCFI	>0.6	0.82
	AGFI	>.8	0.92

According to the output of structural model assessment, hypothesis for this objective is checked. As presented in Table , both Perceived Ease of Use and Perceived Usefulness are found to have positive and significant impact on attitude of youth towards E-learning. Impact of Perceived Ease of Use (0.366, P< 0.001) is more than impact of Perceived Usefulness (0.308, P< 0.001) on attitude of youth. Considering the impact of both the constructs on Continued Intention of youth in using E-learning, only Perceived Usefulness is observed to have significant and positive impact (0.096, P< 0.05). Perceived Ease of Use was found to be insignificant antecedent of intention (0.05, P> 0.1). But attitude of youth for E-learning is found to have significant positive impact on intention of youth in using E-learning (0.589, P< 001). This results in acceptance of H1, H2, H4, H5 and rejection of H3. Therefore, four hypotheses are accepted out of five.

Table 6 Testing of the Hypothesis

Hypothesis	Relationship	Std Estimate	S.E.	C.R.	P	Decision
H1	ATTE <--- PEU	0.366	0.028	9.474	***	Accepted
H2	ATTE <--- PU	0.308	0.026	8.648	***	Accepted
H5	CIL <--- ATTE	0.589	0.07	10.416	***	Accepted
H4	CIL <--- PU	0.094	0.029	2.879	0.004	Accepted

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H3	CIL	<---	PEU	0.05	0.033	1.379	0.168	Rejected

Note: *** means <0.001

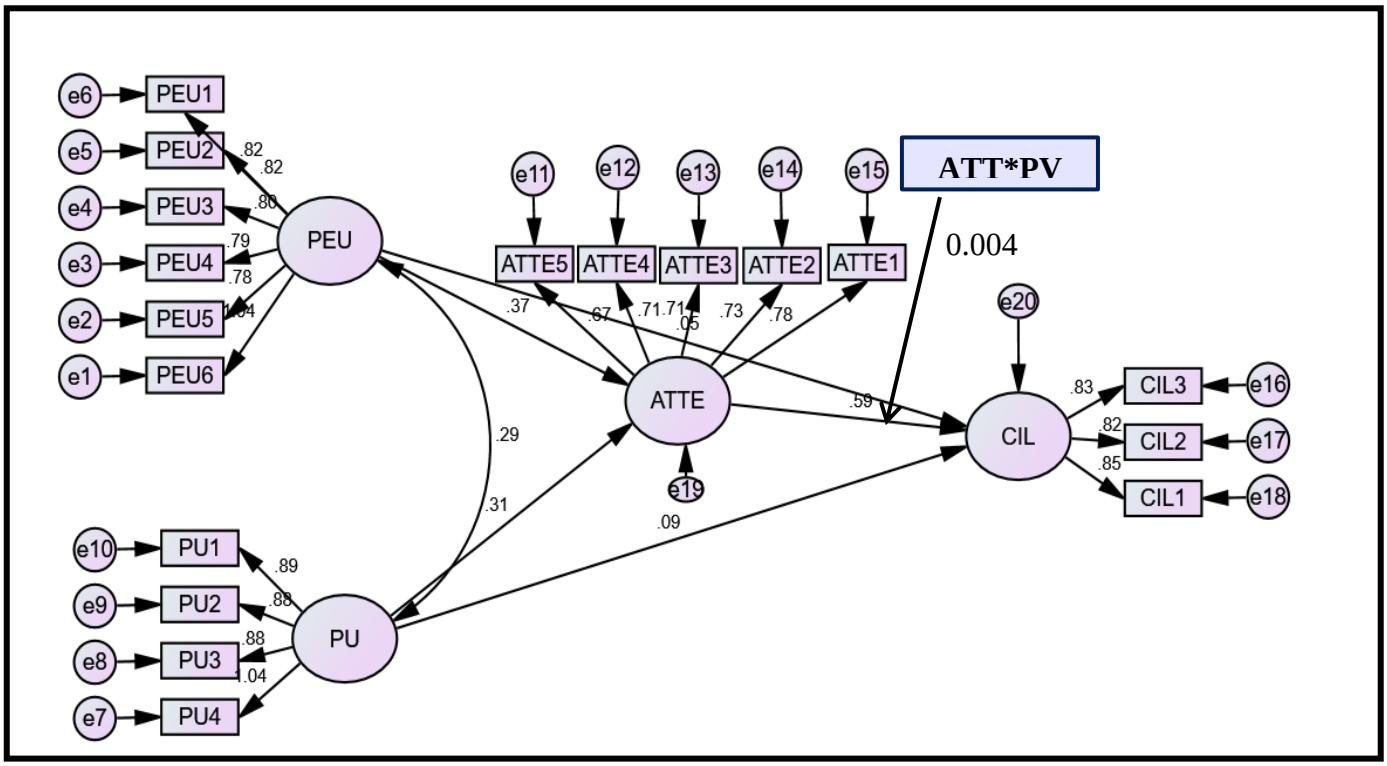

Fig. 1 Structural Model

PEU- Perceived Ease of Use, PU- Perceived Usefulness, ATTE- Attitude towards E-learning, CIL- Intention to use E-learning

Price Value as a moderator

In this study, price value is examined as a moderator on the relationship between attitude and intention of youth to use E-learning. It was hypothesized that positive relationship between attitude and intention to use E-learning will get stronger when users perceive high price value for E-learning platforms. By running moderation effect in AMOS 21, Price value is found to have significant positive and direct effect on intention (0.154, P< 0.05); but interaction effect of price value and attitude of users on intention is not significant (0.004, P> 0.05). This signifies that there is no significant change in the relationship of attitude and intention to use due to high or low price value for respondents and price value is not a significant moderator on the relationship between attitude and intention to use E-learning.

5. Discussion

This study considered the research model which is based on Technology Acceptance Model (TAM) along with price value as a moderator. This TAM model involves four constructs- Perceived Ease of Use, Perceived Usefulness, Attitude and intention of youth to use E-learning. In this light, factors influencing attitude and intention to use E-learning technology were explored along with role of price value as a moderator on the relationship between attitude and intention to use E-learning.

With the application of SEM, it is found that Perceived Ease of Use has significant and positive influence on attitude of youth towards E-learning; but it is not found to have significant influence on intention of users to use E-learning. This makes an opinion that Perceived Ease of Use is a significant antecedent of Attitude towards E-learning. This result is consistent with the findings of Lin (2011) and Arvidsson (2014) who

also noticed significant influence of ease of use on attitude. With more ease, comfortable and compatible system, they will develop positive attitude towards it. Surprisingly, ease in using technology would not stimulate users to continue using it. Thus, e-learning providers should design their platforms user friendly and comfortable to use. They should develop light weight websites and apps with low internet bandwidth, search optimization techniques, and downloading options.

Analysis showed that Perceived Usefulness significantly has a positive influence both on attitude of youth and their intention to use it. This leads to the fact that when users perceive E-learning technology to be useful in their learning and enhancing their productivity, they tend to have more positive attitude towards E-learning and high intention of using it. Between both the independent constructs, impact of Perceived Usefulness on attitude is much higher than its impact on their intention to use E-learning platforms. Infact, there is a weak impact of perceived usefulness on users intention to use continue E-learning but significant. This proves Perceived Usefulness to be significant factor affecting users' attitude and intention to continue using E-learning platforms. Even Liaw, Huang, Chen (2007) concluded that behavioral intention to use e-learning is influenced by perceived usefulness. Many other studies also supported this claim of the study (Lin, 2011). E-learning system should be designed in such a way which could deliver higher value to E-learners so that their productivity in E-learning could be enhanced like Periodic assessment tests, appropriate background and text contrast, speech recognition technology.

Considering the impact of attitude on the intention of youth towards E-learning, analysis concluded that attitude has significant and positive influence on intention of youth towards E-learning. Infact, among all the hypothesis related to this model, the impact of attitude on intention is highest. This finding is consistent with other related studies (Achadinha et al., 2014; Gazley et al., 2015; Hussein, 2017). This ensures that users tend to continue using E-learning platforms when they develop positive attitude towards it. Therefore, more the positive attitude of youth towards E-learning, higher will be their intention of continue using it.

Considering role of price value as a moderator, it is not found to have significant moderating effect on the relationship between attitude and intention to use E-learning. This depicts that with higher price value for E-learning course, impact of attitude on intention to use E-learning is not impacted. It neither gets strong nor gets weaker with lower or higher price value. Significant influence of price value on continued intention is noticed in few previous studies (Chowdhury, 2012; Hsiao & Chen, 2017). Opposite to this, some studies found no significant influence of price value on intention (Tarhini et al., 2017; Hidayat-ur-Rehman et al., 2020; and Karjaluoto, 2016).

6. Implications

6.1 Theoretical Implications

This study adds to the existing literature of E-learning in distinct substantial ways. Firstly, this study intended to explore factors affecting attitude and intention to use E-learning. This has resulted in exploration of two factors i.e. Perceived Ease of Use and Perceived Usefulness influencing attitude of users towards E-learning and influence of Attitude on their intention to use E-learning. Secondly, in terms of theory building, this study has developed Technology Acceptance Model (TAM) with the usage of Moderator – Price Value. None of the previous studies has incorporated Price value as a moderator in TAM model, especially in the context of E-learning. The proposed model could be considered as a key contribution in the literature of E-learning. This would inspire future researchers to integrate more related factors to the model as independent variables or as a moderator. Along with this theory, other theories relevant in e-learning context can also be added.

6.2 Managerial implications

This study offers all the E-learning providers like Ed-tech companies, Higher education institutes and other E-learning platforms different proposals for effective implementation of E-learning technology. The model of attitude based on Technology Acceptance Model concludes that intention of youth to continue using E-learning platforms is significantly influenced by their attitude towards E-learning; which further is influenced by Perceived Ease of Use and Perceived Usefulness. Therefore, in order to develop positive attitude for E-learning among youth, they should focus on making their E-learning platforms easy and comfortable to use and incorporating such content on it which is useful for users. Since attitude is more influenced by Perceived Ease of Use than Perceived Usefulness, E-learning providers should first focus on enhancing comfort and easiness of E-learning platforms and then implement strategies for enhancing its usefulness. They should develop light weight websites and apps with low internet bandwidth, search optimization techniques, and downloading options. E-learning system should be designed in such a way which could deliver higher

value to E-learners so that their productivity in E-learning could be enhanced like Periodic assessment tests, appropriate background and text contrast, speech recognition technology.

7. Limitation and future studies

This study too has some limitations. First only two factors are considered in the study which could impact attitude towards E-learning. Future research could incorporate more variables in the model that has a probable chance of impacting attitude. Also, this TAM model could be extended by combining it with other theories for better understanding of E-learning behaviour. Secondly, Price value is not found to be a moderator on the relationship of attitude and intention to use. This seems little contradictory according to previous literature. Future research could add this construct – Price Value as an independent factor or as a moderator in other research models so that the results of the study could be validated. Third, The current research was exploratory and mostly focused on quantitative technique. Thus, qualitative methodological study is advised for future research. For instance, the research design might use content analysis or case study methods to present a comprehensive view of the problem at hand. Lastly, given the limitations of cross-sectional research, longitudinal studies should be carried out in the future to test the suggested model and reassess the causal relationships between the studied variables.

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