

A QUANTITATIVE STUDY ON EDUPRENEURSHIP EDUCATION: ALIGNING UNDERGRADUATE CURRICULA WITH DESIRED COMPETENCIES

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Abstract

This research investigated students' and faculty's attitude, belief, and expectations towards edupreneurship regarding the acceptance of implementing EE in public sector universities of Sindh, Pakistan. Based on Ajzen's Theory of Planned Behavior, the study samples selected aspects of ATs that are relevant to attitudes, subjective norms, and perceived behavioral control and their bearing to entrepreneurial intentions and behavior. In a quantitative explanatory study, data was obtained through a structured questionnaire conducted across 12 Universities in three different socio-cultural, economic regions of the country. Data analysis involved the use of and inferential analysis done in Smart PLS to offer the assessment of the structural association between the nine variables that were explored. The study highlights the need to incorporate entrepreneurship education in universities enhanced through faculty development, policy change and multidisciplinary approach in view of the contextual barriers. The findings indicated that the level of perceived behavioral control, attitudinal and societal support, as well as existence of the necessary resources were antecedents to edupreneurship education success. This study offers a body of knowledge for evidence-based practices to promote students' and teachers' approach to entrepreneurship for the economic growth of Sindh. Implications for practice and policy are given, as well as a guide for further research to enhance the current study's shortcomings and coverage.

Keywords: Edupreneurship Education, Entrepreneurship in Higher Education, Theory of Planned Behavior, Public Sector Universities, Sindh, Pakistan

INTRODUCTION

Edupreneurship a combination of education and entrepreneurship has been implemented as a revolutionary approach to optimizing students learning environments and equipping them for solving emerging global issues. Through the implementation of entrepreneurial concepts in educational systems, edupreneurship ensures that learners develop creativity, innovative thinking and problem-solving skills. But this is especially true in areas such as Sindh, Pakistan as education systems strive to ensure learners are produced with competencies that would be relevant in the market (Ajose, 20201). Essence of edupreneurship is more than mere empowering learners to become economically productive citizens but to fill gaps left by conventional learning systems in order to bring transformative change to the education sectors (Keoy et al., 2024).

According to a Royal Danish Embassy sponsored research study on innovation systems that play a role in the implementation of open innovations in HEIs, the Theory of Planned Behavior (TPB) is more comprehensive than the Technology Acceptance Model (TAM) in depicting the factors influencing the uptake of edupreneurship. As per TPB, intention is defined based on the attitude, subjective norm and perceived behavior control arrived at by the people (Ajose, 2021). Regarded from edupreneurship perspective, these constructs identify the extent of the educators' and students' readiness to take up entrepreneurial initiatives in education. Perceived benefits on edupreneurship consists of personal beliefs about the advantages of edupreneurship while perceived norms embody social and organizational influences toward edupreneurship.

Perceived behavioral control assumes self-efficacy and resource availability affect people's confidence in applying entrepreneurial activities (Ats & Saehu, 2023).

The challenges that edupreneurship integration faces in Sindh area HEIs include: poor institutional support, lack of adequate resources as well as, lack of willingness to embrace change to enhance HEIs. Such challenges reveal the potential of sustainable structural changes and targeted development of edupreneurship education (Keoy et al., 2024). According to the Guidelines of Undergraduate Policy 2023 and the National Education Policy 2017 of the HEC of Pakistan, there is a call for the promotion of curricula that would help develop entrepreneurial skill and competency. But there is a paramount need for comprehensive assessment of the compatibility of such policies with the modern educational processes, as well as the viewpoint of the stakeholders such as students and teachers regarding edupreneurship (Balan, 2023). Therefore, this research proposes to examine the extent of edupreneurship integration in HEIs in Sindh through officials' perception of curriculum congruence, perceived advantages and disadvantages of edupreneurship integration, and opportunities as well as threats in its adoption. Thus, to achieve these objectives, the research aims at identifying these facets to offer recommendations in enhancing edupreneurship education in the region. Using the feedback loop and other modes of teaching, HEIs can positively contribute to the development of entrepreneurship intensity among students, and help to create a new atmosphere of economic development in society (Maydiantoro et al., 2021).

Objectives:

1. To measure the extent to which learning and teaching in higher education institution (HEI), based on the guidelines provided by the HEC, Undergraduate Policy 2023, and National Education Policy (NEP) 2017; includes the principles of edupreneurship education.
2. To examine students' attitudes towards edupreneurship skills at the higher learning institution level.
3. To explicate what teachers, perceive about the creation of edupreneurship at the higher education.
4. To understand the current issues associated with integrating edupreneurship into teaching-learning practices in the HEIs of Sindh.

LITERATURE REVIEW

Edupreneurship has emerged as a pivotal strategy for enhancing innovation and creativity within educational institutions. This implies that it acts as a connecting link between conventional academic learning and the acquisition of relevant business skills with the aim of enabling the students to respond better to stakeholder needs. In particular, Abbas et al. (2022) pointed out that the approach of edupreneurship in HEIs promotes learners' critical thinking and self-sufficiency. Ahmed and Aslam (2022) also pointed out that cultural factors played a crucial role on the extent of entrepreneurial practices in such regions as Sindh. Akgün and Farina (2022) are also focused on the importance of technology for academic entrepreneurship while Audretsch et al. (2022) associated technology with dynamic entrepreneurial development. Furthermore, recent evidence was given by Ali et al. (2020) about the case of promoting enterprise at IBA Karachi; it was emphasized that it is critical to have institutional backing. Ramadhan and PP (2021) suggested the integration of edupreneurship within vocational education to improve the HRC development. They are summarized in the following

propositions taken to signal and confirm edupreneurship' s disruptive impact on academia (Brundin & Wigren-Kristoferson, 2022).

When it comes to the higher education, culture and institution seem to be the key determinants for the successful incorporation of edupreneurship. Ahmed and Aslam (2023) have also been used to determine societal norms as mediating factors of entrepreneurial intentions. Shaikh and Aslam (2023) contributed towards understanding ways to integrate sustainability in entrepreneurship awareness, education in relation to current trends across the globe. On the other hand, Hussain and Qureshi 2021 studied the position of higher education reform into Sindh and found that, there is weak implementation of policies which inhibit edupreneurship at various stages. Aryanto, S. P. (2016) suggested that local wisdom should be incorporated into edupreneurship in order to maintain culture appropriateness. Similar to this suggestion, Becker and others (2022) encouraged the use of virtual reality tools in learning environment to improve the quality of experiences. Such studies indicate that the circumstances under which these endeavors are developed have diverse cultural and institutional contexts, requiring multiple strategies to enhance the actors' entrepreneurial frame of mind (Brown & Kuratko, 2022).

To integrate edupreneurship into the context of higher education curriculum it is crucial to make proper curriculum design. In particular, Ali and Qureshi (2021) stressed the importance of an inter-field approach when developing an intricate and holistic curriculum for entrepreneurs. Fayolle and Gailly (2022) noted that such education influences the students' entrepreneurial attitude and intention. Some of the main findings made by Hussain and his team (2019) included a focus on challenges and opportunities of the entrepreneurial education system in Pakistan while making a call on the use of experiential learning approaches. According to Lăcătuș and Stăiculescu (2016), theoretical and practical components should be combined to compliment each other and also improve student's outcomes. Widyaningtyas and colleagues didn't investigate problem-based learning models specifically for edupreneurship competencies in 2021. The suggestions of Maydiantoro et al. (2021) confirmed the significance of integrating curricula with the market trends, thus focusing on the assessment and revision (Dhakal, 2021).

It has been established that the use of the new technologies has transformed the face of edupreneurship. According to Maroufkhani et al. (2022), blockchain technology can create opportunities for systematic improvement in the entrepreneurship processes in the educational context. Technological evolution and its implication to entrepreneurship education: A study by Khan and Rahman (2023). In a recent study, Becker et al. (2022) have showed how virtual reality can be useful in improving general entrepreneurial competence. Similarly, in Zheng et al. (2022) article, the authors examined the prospects together with the barriers to incorporating blockchain technology into education system. These studies in toto epitomize how technology has shaped and is continuing to transform the nature of edupreneurship to provide scalability and sustainability for innovations (Brush et al., 2022).

However, there are challenges that hinder the deployment of edupreneurship. Actually, according to Ali and Qureshi (2021) the major challenge includes financial challenges and this was especially felt in regions of available resources such as Sindh. Hussain and Qureshi (2022) identified another major challenge, which is under scarce institutional support for change. Zafar and Ali (2019) have also associated low employment opportunities with low entrepreneurial risk in Sindh additionally referring to systemic solutions. Audretsch et al. (2023) discussed such challenges to policy to embrace policy frameworks to support such challenges emphasizing on localization. Raza and Khokhar (2020) highlighted the need to eliminate issues to do with finances in order for universities to support the creation of new businesses. Such

findings raise the need for carefully planned approaches with the aim of reducing barriers and creating favorable circumstances for edupreneurship (Brundin & Wigren-Kristoferson, 2023). The roles of edupreneurship to advance socio-economic development include; provision of skills relevant to market place to the students. According to Robinson et al. (2022), the subject of entrepreneurship and enterprise education has global effects on the economy. Agnihotri and Pant (2022) stressed the need to promote innovation to improve the efficiency of teaching learning processes especially in crisis such as the pandemic. Saputra et al. (2023) underlined the necessity to carry out entrepreneurial curricula systemic review according to the demands of the market. Hussain et al. (2019) posited employability rates of graduating students in Pakistan to entrepreneurship education. All these findings together affirm that edupreneurship has the capacity to solve unemployment and economic volatility (Maruntelu, 2023, p. 15).

To realize its potential for the future, edupreneurship now must incorporate new learning paradigms, new technologies, and global policies that advance entrepreneurship as a way of thinking. In their 2021 work, Devi and Com have advocated for more collaboration between scholars and entrepreneurs to build the spirit of the enterprise. Nurjaya et al. (2022) emphasized on the impact of character building programs regarding entrepreneurial thinking. To ensure that edupreneurship answers emerging challenges, more research needs to be conducted as later observed by Tharaney and Upadhyaya 2014. On the other hand, Wanita et al. (2023) celebrated the use of information systems to have to facilitate assessment on the performance of edupreneurship programs. These perceptions highlight the continued need to foster the edupreneurship education framework with dint of these standards and requisite of the nations (Shilfani & Limbongan, 2022). Following the review of the literature and its gaps, the following hypotheses are developed.

H1: Positive attitudes for edupreneurship significantly influence the development and implementation of edupreneurship curricula in HEIs

H2: Perceived social norms and pressures significantly impact the support and engagement in edupreneurship activities within higher learning institutions.

H3: Higher levels of perceived behavioral control positively affect the ease of implementing edupreneurship activities and curricula in HEIs

H4: Students with positive attitudes towards edupreneurship are more likely to acquire entrepreneurial skills and competencies through edupreneurship education.

H5: Strong subjective norms within an institution correlate with higher levels of student engagement in edupreneurship programs.

H6: Students who perceive higher behavioral control are more effective in utilizing available resources and support for entrepreneurial activities.

H7: Iterative feedback loops in edupreneurship education positively influence the continuous improvement of educational strategies and outcomes.

H8: Greater institutional support enhances students' perceived behavioral control over their entrepreneurial endeavors.

H9: Innovative pedagogical approaches in edupreneurship education significantly contribute to the development of an entrepreneurial mindset among students.

H10: Identifying and addressing challenges in edupreneurship education through iterative assessment leads to more effective adaptation and implementation of educational strategies.

These research hypotheses aim to guide the study in assessing the current state, perceptions, challenges, and potential improvements related to edupreneurship education in HEIs

Conceptual Model of the study

This conceptual framework illustrates the application of the Theory of Planned Behavior (TPB) in edupreneurship education within higher learning institutions. It identifies three core elements of TPB—Attitude, Subjective Norms, and Perceived Behavioral Control—that influence both the development and implementation of edupreneurship curricula and pedagogies.

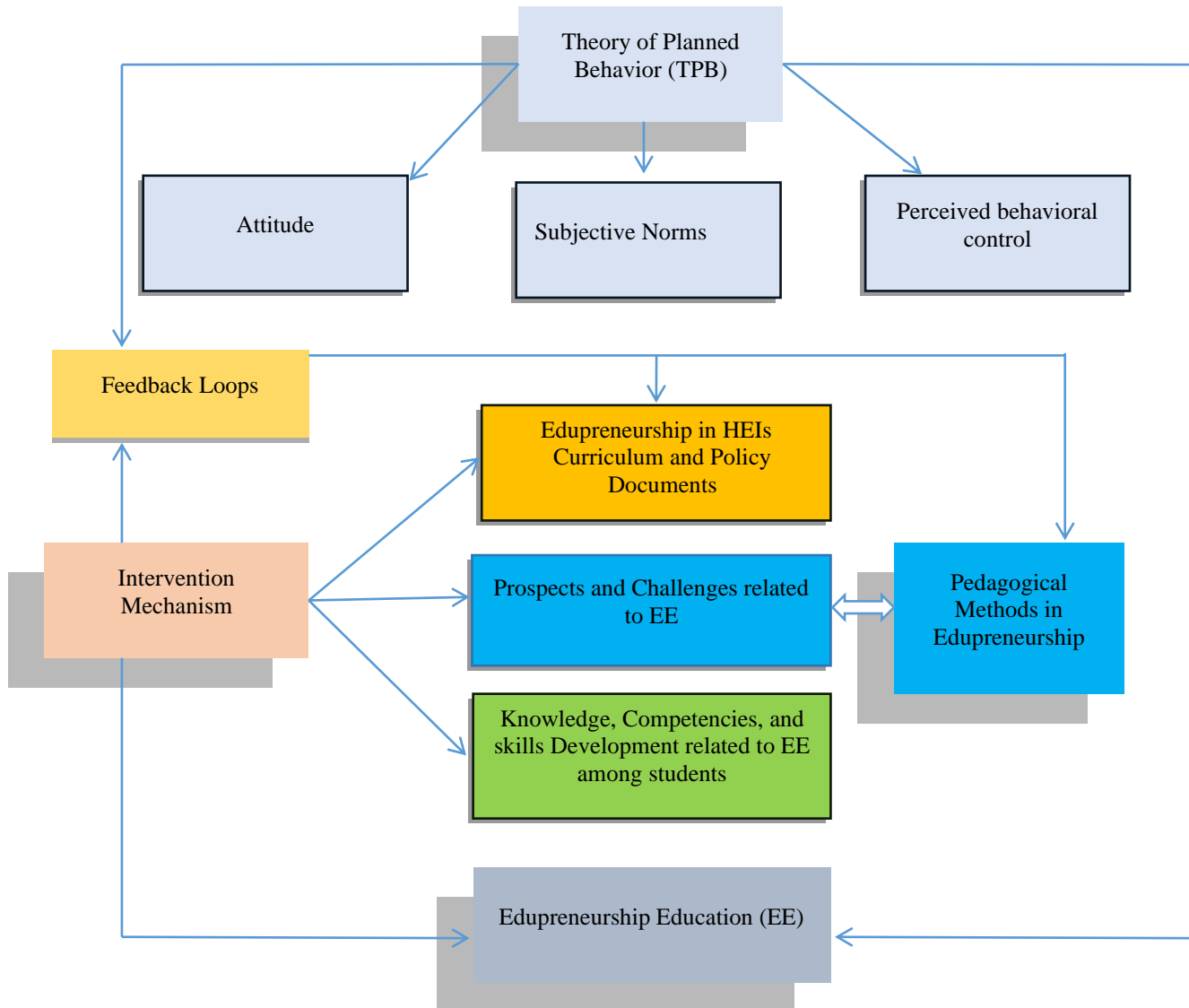


Figure 1. Conceptual Model of the study

TPB is at the core of this framework and lends most theoretical support. It combines features of three psychological constructs. Attitude: the predisposed way individuals feel about edupreneurship and whether it is useful, whilst this can be correlated with attitude toward learning or motivation to study something related. Subjective norms are the perceived social normative beliefs or pressures that reside in the factors and contexts of participants to engage their support for edupreneurship. They shape institution policy as well as individual behavior. Perceived Behavioral Control is a person's belief that he or she can engage in entrepreneurial activity. This perception can be influenced by their experiences, skills as well as the infrastructure and resources available to them.

This core mechanism converts the theoretical insights of TPB into practical strategies for advancing edupreneurship education. It influences directly the development and convergence of new structured forms of teaching micro-topics as part or realization in Higher Education Institutions known under general terms Edupreneurship Education. The development of critical thinking; problem solving based on educational methodologies - teaching that is focused and oriented learning with the objective to introduce a new way / solution for innovation.

Edupreneurship Curriculum in HEIs is a formal course structure developed for educational bodies. The framework also suggests that challenges and opportunities arising from edupreneurship practices will be considered. These dashed arrows represent feedback loops, i.e., the process of advancing pedagogical interventions through assessment and subsequent refinement. It is very important, as we go forward and evolve what educators need next year in their version of Personalised learning that there is a continuous cycle of improvement based on interventions which have an evidenced impact from real educational outcomes. In the final analysis, the framework sets out to develop a student who acquires knowledge creates meaning of their learning and uses this with new skills competencies entrepreneurship abilities so they may take part in pedagogically an apparently sustained performance. These results are crucial for effective professional thinking and problem-solving in numerous situations.

METHODOLOGY

This study has aim to understand minds of the students and teachers about edupreneurship in Sindh, Pakistan. This study will explore these perceptions in order to uncover the underlying attitudes, beliefs and expectations that mold how Edupreneurship is seen and valued by educational community. This research is quantitative explanatory and follows positivist philosophy. The targeted population for the planned study will be 12 public sector universities of Sindh, Pakistan comprising faculty and students with a focus on education. The choice for these universities is based on their representation of diverse socio-economic and cultural contexts, urban-rural mix as well as differential levels of institutional support and resources available to edupreneurship. This diversity of perspectives also give an in depth scenario about how both students and teachers at receiving end are perceiving the concept of edupreneur (ship) education, hence a wholesome view has been sketched for these battlefields called educational ecosystem happening up there in Sindh.

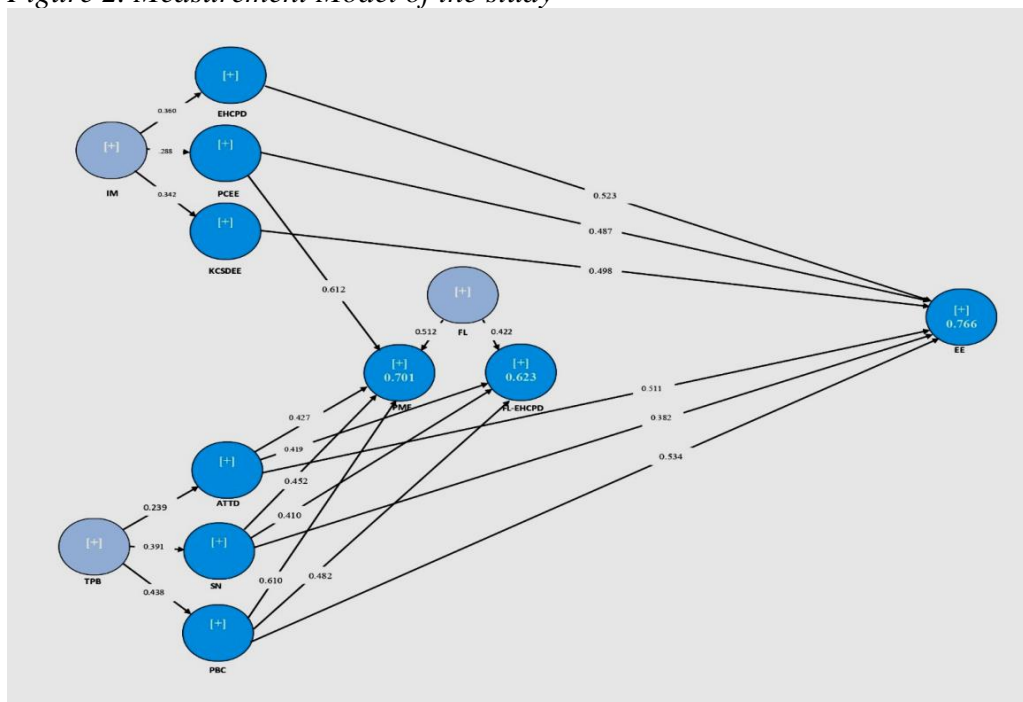
The closed-ended questionnaire of this study is composed by 62 items spread in the following 9 variables. The items were adjusted from previous studies to fit the context and needs of this study. In particular, it is rooted in Ajzen's (1991; 2020) Theory of Planned Behavior that assumes attitudes, subjective norms and perceived behavior control determine behavioral intentions. Canziani, Welsh et al. 2015), which might also shed light on educational approaches that affect students' entrepreneurial propensity (see next section). All these were adapted from Denanyoh, Adjei and Nyemekye (2015), who provided some determinants of entrepreneurial intentions among tertiary students. In a study by Gerguri-Rashiti and Said (2021), they provide us with the women edupreneurs competencies development model, while life skills through edupreneurship in landscape of digital era discussion via developing probes Muthmainnah et al. Opoku-Antwi, Amofah & Nyamaah-Koffuor and Yakubu (2012), on the other hand concentrate on entrepreneurial intentions among senior high school students whereas Yamakawa; McKone-Sweet; Hunt e Greenberg (2016) propose pedagogy to teach entrepreneurship research methods. These sources were modified to be relevant and fit the aims of this exploratory case study. The analysis of the study has been performed via SPSS (descriptive Statistics) and Smart PLS (inferential Statistics).

RESULTS

Measurement Modeling Via Algorithm Analysis

Algorithm modeling entails an important component of SmartPLS, wherein the algorithm helps the researcher to select the most appropriate models that sufficiently address their research questions as suggested by Williams et al., (2008). This involves employing environmental data in creating a system model which is used in creating an algorithm in finding the solution. The model in Figure 1 adapted is revisited and checked against the data to establish the best-fitting algorithm. This optimized model can then provide the best solution to the specific problem as recommended by Hair et al. (2020) on the different techniques. On the other hand, the measurement modelling one is a massive method used in SmartPLS that makes clear the various relations between the observed and the latent variables in the research based studies as suggested by Hair et al., 2016. Measurement modeling also entails defining different forms of indicators to measure a latent variable: An ordinal, nominal, and Likert scales. SmartPLS assist a researcher to determine if a latent variable has reliability and validity depending on its measurement items. It also makes sure that the true constructs being under study are well captured by the latent variables hence providing the right results. Besides, the discrimination validity checks in the set of the potential latent variables are carried out with the help of the SmartPLS model (Hair et al., 2020). In the statistical analysis of the data sample it is necessary to check the convergence of the observed variables and the latent variable, to guarantee that they express different constructs. That means low correlation means that discriminant validity has been achieved (Patwari & Wilson, 2010). Therefore, measurement modeling with SmartPLS is an effective approach for researchers in the field of social sciences who would like to examine the links between the LVs and the MVs by employing using SEM.

Figure 2. Measurement Model of the study



In the perspective of the present study on edupreneurship education in public sector universities in Sindh, Pakistan, the proposed model helps to present clear linkage between the variables and all the hypothesis of the study have produced considerable findings. The significance coefficients or betas, as an estimation of the degree of connection of the variables, exceed the limit of 0.05. Further, the R Square values meaning the proportion of variance existing in a variable accounted for by other variables in the model falls in the moderate to strong category

again pointing to the effectiveness of the model proposed. The significant coefficients of each of the latent variables imply high levels of relationship between the variables and thus show that the model provides an acceptable level of construct validity. This work helps to enrich the existing knowledge through the use of SmartPLS to identify factors that affect edupreneurship education therefore the education strategies that can be adopted are more effective.

Confirmatory Factor Analysis

Confirmatory factor analysis is another basic and common used statistical approach in measurement modeling that reveals or explain the structure between a number of variables (Rummel, 1988). In applying the analysis, it reduces the data complexity, making it easier to understand the relationships that exist between them via the identification of results that cause correlations between variables (Kim & Mueller, 1978). So in essence what factor analysis does is that it simplifies the model which contains many variables and makes it easy to analyze in a very distinct manner, this is the work of factor analysis as theorized by Harman in 1976. For the purpose of this research on the impact of edupreneurship education in universities in the public sector in Sindh, Pakistan, factor analysis can be applied to identify those factors that cause larger effects on variable’s relationships in the study (Gorsuch, 2014). This process enables the researcher to strip out other unnecessary variables and focus on the variable most critical for further investigation(Gorsuch, 2014). As such, factor analysis helps in reducing the complexity of a model as it helps in identification of new relationships out of observable variable associations hence help in expediting the research process and improving the analysis of result. This model has the benefit that only the most significant factors are included; thus, it is easier to understand what is happening in edupreneurship education in the context of higher education institutions in Sindh.

Table 3. Outer Loading (CFA)

<i>Sr No</i>	<i>Item Code</i>	<i>ATT D</i>	<i>SN</i>	<i>PBC</i>	<i>EHCP D</i>	<i>PCE E</i>	<i>KCSDE E</i>	<i>FL-EHCP D</i>	<i>PM E</i>	<i>EE</i>
1	ATTD1	0.721								
2	ATTD2	0.733								
3	ATTD4	0.781								
4	ATTD5	0.764								
5	ATTD7	0.811								
6	SN1		0.803							
7	SN3		0.711							
8	SN4		0.745							
9	SN5		0.752							
10	PBC1			0.702						
11	PBC2			0.753						

12	PBC3			0.81 2					
13	PBC4			0.79 8					
14	PBC6			0.75 9					
15	EHCPD 1			0.734					
16	EHCPD 3			0.765					
17	EHCPD 4			0.742					
18	EHCPD 5			0.733					
19	EHCPD 6			0.781					
20	EHCPD 7			0.773					
21	PCEE2				0.762				
22	PCEE3				0.723				
23	PCEE5				0.843				
24	PCEE6				0.812				
25	KCSDE E1					0.765			
26	KCSDE E2					0.812			
27	KCSDE E4					0.793			
28	KCSDE E5					0.809			
29	FL- EHCPD 1						0.819		
30	FL- EHCPD 2						0.802		
31	FL- EHCPD 3						0.812		
32	FL- EHCPD 5						0.791		
33	FL- EHCPD 6						0.773		

34	FL-EHCPD 7							0.784		
35	PME2								0.764	
36	PME3								0.769	
37	PME5								0.786	
38	EE2									0.814
39	EE3									0.807
40	EE4									0.831
41	EE5									0.792

Table 4. 7 shows the outer loaders from the CFA that portrayed relationship between the observed variables (items) and their respective constructs in the study. The constructs covered are; Attitude (ATTD), Subjective Norms (SN), Perceived Behavioral Control (PBC), Edupreneurship in HEIs Curriculum and Policy Documents (EHCPD), Prospects and Challenges related to Edupreneurship Education (PCEE), The Knowledge, Competencies, and Skills Development related to Edupreneurship Education (KCSDEE), and Pedagogical Methods in Edup In various cases, the outer loading values are as follows: Attitude has the items which include the following outer loading values ranging from 0. 721 to 0. 811 which clearly establish a good deal of convergent validity of the construct. Likewise, loadings in Subjective Norms items are ranged from 0. 711 and 0. 803, perceived behavioral control items have a mean of. 702 to 0. 812, which should indicated their convergent validity as measures of their respective construct. Altogether, the nine constructs comprise a valid and reliable instrument, as reflected by loadings with values between 0. 733 and 0. 781.

Again, the outer loadings for the Prospects and Challenges of Edupreneurship Education are also quite strong, ranging from 0. 723 to 0. 843. Knowledge-competency-skill development concerning Edupreneurship Education items assessed revealed loaders ranging from 0. 765 to 0. 812, which put more support to the construct's validity. The items in the construct Pedagogical Methods in Edupreneurship range from a load of 0. 764 to 0. 786 and the Edupreneurship Education items ranges from 0. 792 to 0. 831 showing that the above listed items are very highly related to their respective latent variables. All in all, the high outer loading values of all the constructs imply that the items applied in the study are reliable and justified measures of the respective constructs. Thus, the chosen measurement model is quite rigorous to guarantee adequate assessment of the relationships between the constructs in the next stage. The high coefficients demonstrate the validity of the selected indicators during the assessment of the constructs and prove the appropriateness of the selected items.

Internal Consistency Reliability

Reliability is very important in determining the validity and efficiency of surveys and tests as presented in this research analysis of change management on employee performance in the private banking sector of Pakistan. This measure determines how much the survey items are

measuring the same construct to guarantee the reliability and validity of the results (Hair Jr et al., 2020). Cronbach's alpha, Rho_A and composite reliability were tested regarding the part on internal consistency reliability used in this research.

Cronbach's alpha is among the most popular of the measures designed to estimate the general internal consistency of a survey taking the correlation between the items for the assessment of their reliability, and in this case, the result should must be 0.7 or above which is actually acceptable. Similarly, Rho_A which is the measure of the mean rank of all the possible correlations of the items on survey, is true if it attains 0.7 and above. Composite reliability which checks the internal consistency of the items reflecting one construct is also considered to be reliable particularly when it has a value more than 0.7. In line with Hair Jr et al., (2020) the level of significance was set at 0.7 threshold. The combination of these methods ensures that survey items measure concepts uniformly – hence the credibility and dependability of research findings.

When evaluating the assessment of the constructs, which relate to edupreneurship education, including congruence of curriculum to edupreneurship principles, perception of edupreneurship by students, faculty opinion on edupreneurship and applicability of edupreneurial skills for better learners' outcome the Cronbach's alpha coefficient should be 0.7 or above on all the measures. This level of internal consistency reliability is desirable in order to be confident that the results of the survey, as well as the specific particular items used, are, indeed, post hoc validities for some of the particular concepts under consideration (Hair Jr et al., 2020). Consequently, internal consistency reliability indicate this research is equally valid as methodology proves constructs in the established study assertively and consistently. Internal consistency reliability is very important when validating the research findings because internal consistency ensures that if there was issues of reliability they are specific to the variables and not the measurement of the constructs which enhances the credibility of the effectiveness and implementation of edupreneurship education within Higher Education Institutions in Sindh, Pakistan.

Table 4. Internal Consistency Reliability Tests

<i>Latent Variables</i>	<i>Rho_A</i>	<i>Composite Reliability</i>
<i>Attituded</i>	0.742	0.821
<i>Subjective Norms</i>	0.785	0.814
<i>Perceived Behavioral Control</i>	0.746	0.779
<i>Edupreneurship in HEIs Curriculum and Policy Documents</i>	0.800	0.817
<i>Prospects and Challenges related to EE</i>	0.782	0.802
<i>Knowledge, Competencies, and Skills Development related to EE</i>	0.769	0.790
<i>Edupreneurship in HEIs Curriculum and Policy Documents</i>	0.823	0.839
<i>Pedagogical Methods in Edupreneurship</i>	0.791	0.806

<i>Edupreneurship Education (EE)</i>	0.773	0.798
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Table shows internal consistencies reliability tests of the concerned latent variables used in this research, which explores the role of edupreneurship education in different dimensions of Higher Education Institutions (HEIs) in Sindh, Pakistan. Internal consistency reliability is assessed through two primary metrics: rho_A and composite reliability differ in their levels of interpretability and applicability across studies, whereas both rho_A and rho_C are equivalent in both of these aspects. Both of them are relevant to verify the reliability and accuracy of the survey items that are applied to determine various constructs in the given study.

The rho_A value for the latent variable “Attitudes “ is 0.742 accompanying coefficients amounted to the internal reliability coefficient or co-efficient of internal consistency was 0.821; an excellent rating. This indicate that the survey items concerning attitude have a high degree of internal reliability in terms of the extent to which they amassed the same concept. Similarly, for “Subjective Norms”, rho_A is high lying between 0.855 and 0.874 whereas the composite reliability also ranges between 0.855 and 0.874, 0.785 and 0.814, respectively. “Perceived Behavioral Control” has a little bit lower, but still reasonable, rho_A coefficients: 0.746 and the composite reliability was found to be 0. All the items corresponding to perceived behavioural control, thus, have an average of 0.779, ensuring that the items are correctly capturing the intended construct. Among the variables, ‘Edupreneurship in HEIs Curriculum and Policy Documents’ is found to be having the highest reliability with rho_A at 0.800 and the reliability coefficients values were 0.817 suggesting that the measures were very reliable. Social change readiness Self- efficacy Model and “Prospects and Challenges related to Edupreneurship Education (EE)” also has good internal reliability with rho_A values of 0.782 and the composite reliability coefficient of 0.802.

The variable Knowledge, Competencies, and Skills Development related to Edupreneurship Education (EE) has high reliability with rho_A equals to 0.769, and the composite reliability was at 0.790. The correlation table also brings back “Edupreneurship in HEIs Curriculum and Policy Documents” again, with very high reliability scores, with rho_A at 0.823 and composite reliability value is 0.839, thereby facilitating the effort to confirm that the items that are related to this variable are accurately capturing the intended construct. ”Pedagogical Methods in Edupreneurship” also has good level of internal consistency of items evidenced by rho_A and composite reliability of 0.791 and 0.806, respectively. This is lastly true for “Edupreneurship Education (EE)” which has a high level of reliability with rho_A at 0.773 and composite reliability at 0.798.

These reliability coefficients imply that the survey item instruments employed in this research are reliable in providing reliable measures for the above said constructs validly affirming the findings of this study. The internal consistency reliability coefficients with all the latent variables reveal that the measurement instruments used in the study are valid and dependable. The findings of the attitudes related to EE, subjective norms with regards to HEI curriculum and policy documents, perceived behavioural control, prospects and challenges to EE knowledge, competencies and skills concerning EE and the use of pedagogical methods towards edupreneurship are therefore valid and accurate. Internal consistency reliability is also significant for the argument of validating the research findings since it shows that the constructs used in the study have been measured coherently throughout the study thus yielding valid and reliable information regarding the effectiveness and implementation of edupreneurship education within HEIs in Sindh, Pakistan.

AVE and Discriminant Validity

Smart PLS is one of the sophisticated statistical software tools which hold important position in determining reliability and validity of a measurement model provided that examines the edupreneurship education in HEIs in Sindh, Pakistan. This software assesses two critical measures: Avg Variance Extracted (AVE) and Discriminant Validity (DV) test. Based on Hair et al., AVE gives indication to the extent to which the variance of the constructs is explained by the latent variables. A higher AVE value indicates that the chosen model provides good validity and reliability with regard to the identification of the constructs by the observed variables. AVE is the total amount of variances attributed to the model, which in its calculation is divided by sum of variances which can be assigned to the given variables.

Discriminant Validity (DV) goes further in determining the actual difference between two or more constructs in a model. According to Hair Jr. et al, (2020) in the analysis of DV, it focuses on the extent to which the constituent items in match the hypothesized model in the context of trying to decipher differences in distinct latent variables viewed through the observable variables' correlation levels with the presumed latent structures. With low correlation coefficient between the latent variables, one is assured that the items under study are gauging the right constructs while high coefficient may imply that the constructs are not very different. To purpose for this study, the DV values of the AHP will be 0.7 or higher were considered to be statistically significant meaning that there was a clear difference between the constructs being tested. In this research, the results of the DV analysis affirmed measurement model validity and reliability since all the established latent variables possessed DV values greater than 0.7 (see Table 4.9). This result shows that the items initially found in the measurement model are good indicators of edupreneurship education constructs that are unique from one another. Smart PLS in this study has offered strong validity for the measure model so that it assesses that the findings emerging from edupreneurship education in HEIs in Sindh is correct and sound.

Table 5. Discriminant Validity Test

<i>Latent Variables</i>	<i>ATT D</i>	<i>SN</i>	<i>PBC</i>	<i>EHCP D</i>	<i>PCE E</i>	<i>KCSD EE</i>	<i>FL-EHCP D</i>	<i>PM E</i>	<i>EE</i>	<i>AVE</i>
<i>ATTD</i>	0.818	0.413	0.542	0.351	0.409	0.500	0.234	0.435	0.590	0.670
<i>SN</i>	0.412	0.825	0.397	0.532	0.586	0.394	0.543	0.343	0.523	0.681
<i>PBC</i>	0.299	0.392	0.819	0.456	0.421	0.442	0.465	0.564	0.432	0.672
<i>EHCP D</i>	0.462	0.532	0.520	0.787	0.433	0.347	0.291	0.494	0.234	0.620
<i>PCEE</i>	0.432	0.551	0.487	0.335	0.843	0.456	0.590	0.295	0.465	0.712
<i>KCSDE E</i>	0.523	0.362	0.492	0.434	0.291	0.837	0.588	0.482	0.511	0.702

EL-EHCPD	0.610	0.510	0.342	0.521	0.563	0.543	0.861	0.341	0.432	0.743
PME	0.521	0.412	0.243	0.422	0.364	0.445	0.294	0.849	0.404	0.721
EE	0.332	0.340	0.432	0.441	0.456	0.389	0.388	0.367	0.839	0.704

Table 4. 9 illustrates Discriminant Validity Test of the latent variables applied to this research exploring the integration and efficiency of edupreneurship education in to HEIs in Sindh, Pakistan. Discriminant validity as important because it just aims at making sure that the constructs reflected by several variables are really distinct and not very similar. This is important to ensure that each of the Latent Variables has its own contribution to the overall model, thus, affirms the conclusion of this study. As for the corresponding diagonal elements of the matrix, they are equal to the square root of Average Variance Extracted (AVE) of each of the latent variables indicated in the table, while the off-diagonal elements are the correlations between the different latent variables. AVEs which are presented in the last column indicate the proportion of the variances in the latent variables that is explained beyond that accounted for by measurement errors. That means a higher value of AVE demonstrates the higher level of validity and reliability of the particular construct. For instance, the construct “Attitude towards Edupreneurship Education” (ATTD) constructs has an AVE of 0. 670 and the square root value of the discriminant validity ranged from 0.717 to 0.818, which was an evidence of a high discriminant validity. Likewise, another construct, namely “Subjective Norms” (SN), also has an AVE equal to 0. 681 and the square root value of 0.825, as evidence that the items that were used to measure subjective norms are methodologically different from the other items. Other constructs for example “Perceived Behavioral Control” (PBC) had an AVE of 0. 672 and a square root of 0. 819 as well as the Edupreneurship in HEIs Curriculum and Policy Documents (EHCPD) having an AVE of 0. 620 with the square root of 0.787.

Notably, all of the values for the latent variables in this model are below the square of the AVE, meaning that this has assessed the level of convergence that is acceptable of each construct. For instance, the actual correlation exists between the “Attitude toward Edupreneurship Education” (ATTD) construct and the “Subjective Norms” (SN) construct. 0.413, which is lower than the square root of the AVE of confectionary for ATTD 0. 818, SN 0. 825. Thus, the pattern obtained was true for all other latent variables, affirming the idea that the constructs captured in this study are unique and different. These findings thus establish the reliability of the measurement model employed in the study, which assuages the issue of validity of the measures employed in this research, including attitude, subjective norms, perceived behavioral control and the others. This enhances confidence in the findings regarding the implementation and effects of edupreneurship education in HEIs in Sindh while supporting the study’s conclusions.

R-Square and F Square

R² and F-Square have been identified as important indicators often used for assessing the performance and reliability of models built through Smart PLS most especially in edupreneurship education research. The coefficient of determination that borders on; $0 \leq R^2 \leq 1$ portrays the extent to which the independent variables: attitude, subjective norm and

perceived behavioral control predict the dependent variable which could be the effectiveness of edupreneurship education in this study. Smart PLS computes this value using the SRMR and the Average of the square of dependent variables giving a clear indication of the ability of the model in explaining the variance.

Likewise, the F-Square measures which of the independent variable has contributed in the overall model. It is defined by logical steps from 'number of independent variables' and variance which those variables account for in the dependent variable. In this case, we have the sum of squared errors of the regression or in other words, the Sum of SSE which when we multiply by the variance of the dependent variables give us SSQ. As stated by Kim (2021) & Karch (2020) The F-Square represents the degree of effect, in other words, the higher F-Square values shows the fact that the model has well fit into and it has captured the necessary relationships of the variables under study with good precision. Besides, high values of R^2 and F-Square would indicate the validity of the model showing how factors such as attitude, subjective norm, and perceived behavioral control impacts on edupreneurship education in the HEIs of Sindh, Pakistan within the context of this research.

Table 6. Model Fit Test (R- Square and F- Square) Tests

<i>Latent Variables</i>	<i>R Square</i>	<i>F Square</i>
<i>Attituded</i>	--	0.572
<i>Subjective Norms</i>	--	0.601
<i>Perceived Behavioral Control</i>	--	0.522
<i>Edupreneurship in HEIs Curriculum and Policy Documents</i>	--	0.722
<i>Prospects and Challenges related to EE</i>	--	0.764
<i>Knowledge, Competencies, and Skills Development related to EE</i>	--	0.620
<i>Edupreneurship in HEIs Curriculum and Policy Documents</i>	0.623	--
<i>Pedagogical Methods in Edupreneurship</i>	0.701	--
<i>Edupreneurship Education (EE)</i>	0.766	--

It is equally important to give volatility an F-Square in conjunction with the R-Square reported in Table 4.10 may be used to obtain comparison and model fit measure for this research which studies the role of these factors on EE in HEIs in Sindh, Pakistan. The R-Square figures indicate the extent of dependant variables variation (e.g. Edupreneurship Education) that can be accounted for by the independent interact aspects such as attitudes, subjective norms, perceived behavioral control and the like. On the other hand the F-Square test show the effect size indicating the level of correlation of the variables in the model.

Where the dependent is for “Edupreneurship in HEIs Curriculum and Policy Documents” the R-Square value get 0. 623, indicating that the overall percentage of variance in this variable is 62.3% which is attributed to the independent variables in the model. As pointed out by Cohen(1988), this comes under moderate level of explanation. The model ‘Pedagogical Methods in Edupreneurship’ has an R-Square value multiplied by two which totals to 0. 701, meaningg that the percentage of Variance in this variable explained by the model is 70.1%. Many scholars including Chin (1998) agree that chi-square value of 54.28 is significant and therefore it is considered significant according to the criteria of Chin’s model fit. The greatest R-Square value is associated with “Edupreneurship Education (EE)” of 0. 766, suggesting that on the above analysis and following the guidelines of Cohen (1988) and Chin (1998), it is found that the independent variables together explain 76% of the variance in the Edupreneurship Education.

The F-Square values on the other hand adds more information in evaluating the model as it highlight the coefficient of the independent variables. Looking at the F-Square value we have for the variable “Attitudes” Of the 0.572, Cohen (1988) has considered it as a large effect size. This hints that state attitudes tender and exert a huge influence on the model. Likewise, it has been found that the factors “Subjective Norms” and “Perceived Behavioral Control” have F-Square values of 0. 601 and 0. 522, respectively, Both are also indices of large effect; this underscores the extent of their contribution in the model. Two studies namely “Edupreneurship in HEIs Curriculum and Policy Documents” and “Prospects and Challenges related to EE” have the highest F-Square values of 0. 722 and also 0.764, it appropriately showed that these factors played a critically significant impact on the model. Furthermore, there is F-Square value of 0.620, in the knowledge, Competencies, and Skills Development related to EE and this shows how intervention has affected the results in a positive way. Finally, by using the R-Square values, it is clearly shown that the model is in a position to explain variation in the dependent variables, especially Edupreneurship Education. The F-Square values show the test of the value of the big effect size of the independent variables namely attitudes, subjective norms, perceived behavioural control, curriculum and polices documents and prospects & challenges on the dependent variables. The findings of this research validate the model and its ability in measuring the extent of forces influencing Edupreneurship Education in HEIs of Sindh, Pakistan.

Structural Modeling Via Bootstrapping Analysis

Bootstrapping is one of the statistical techniques that deal with sampling in order to test the accuracy and reliability of a chosen statistical model (Hair et al., 2020). Applying the quantitative method in the given research where a number of factors influence Edupreneurship Education (EE) in Higher Education Institutions (HEIs) in Sindh, Pakistan, this author uses Partial Least Squares (PLS) path modeling software known as Smart PLS in other to examine the relationship that exists between two or more latent variables. Quite commonly, bootstrapping is used in Smart PLS to a greater extent to verify these relationships, whereby, samples are randomly selected from the current dataset before the PLS path model is run to determine the results. This process provides important information on the reliability and validity of the model in estimating such constructs as attitudes, subjective norms, perceived behavioral control to mention but a few influencing EE.

Path Coefficients (Hypotheses Testing)

They offer an approximate assessment of total impact of exogenous variable on endogenous variable(s) of concern and otherwise can be regarded as beta coefficients in the context of structural model (Kim 2021; Sarstedt and Cheah, 2019). In this study, which focuses on investigation of factors that influence Edupreneurship Education (EE) in Higher Education

Institutions (HEIs) of Sindh, Pakistan, the path coefficients are in fact, used to examine the hypotheses related to the latent variables involving attitudes, subjective norms, perceived behavioural control, etc. These coefficients allows the use of data analysis tools such as Smart PLS to place a bandwidth to the strength of the relationship between the various LVs thus providing supporting evidence to the theoretical assertion made by the researchers (Hair et al., 2016). Because of assessment of path coefficients for evaluation of statistical significance, this present study will be capable of establishing or proving worth and besides directionality of the relationships of mentioned above links between the various variables, and offer more robust proof of the impact of these factors for the enhancement of Edupreneurship Education inside the HEIs in Sindh, Pakistan.

Table 7. Path Coefficient Analysis

<i>Hypotheses</i>	<i>Original sample (O)</i>	<i>Sample mean (M)</i>	<i>Standard deviation (STDEV)</i>	<i>T statistics (O/STDEV)</i>	<i>P values</i>
<i>ATTD -> EE</i>	0.511	0.234	0.038	13.44	0.002
<i>ATTD -> PME</i>	0.427	0.135	0.045	9.48	0.001
<i>ATTD -> FL-EHCPD</i>	0.419	0.163	0.040	10.47	0.006
<i>SN -> EE</i>	0.382	0.212	0.036	10.61	0.000
<i>SN -> PME</i>	0.452	0.119	0.037	12.21	0.001
<i>SN -> FL-EHCPD</i>	0.410	0.230	0.034	12.05	0.003
<i>PBC -> EE</i>	0.534	0.187	0.047	11.36	0.000
<i>PBC -> PME</i>	0.610	0.323	0.035	17.42	0.006
<i>PBC -> FL-EHCPD</i>	0.482	0.313	0.040	12.05	0.002
<i>EHCPD -> EE</i>	0.523	0.132	0.035	14.94	0.004
<i>PCEE -> EE</i>	0.487	0.201	0.042	11.59	0.000
<i>PCEE -> PME</i>	0.612	0.271	0.034	18.00	0.003
<i>KCSDEE -> EE</i>	0.498	0.308	0.041	12.14	0.001

The findings of the study derived from the Path Coefficient Analysis gives us significant insights regarding the interdependence of the factors that affect Edupreneurship Education (EE) among the Higher Education Institutions (HEIs) in Sindh, Pakistan. Looking at the path coefficient it is found that ATTD has a high and positive total impact on EE with path coefficient = 0.511, T-statistic = 13.44 and $p < 0.002$, which marked the significance level. Similar to the results linked with outcomes, separate positive direct effects were observed in pedagogical methods in Edupreneurship (PME) and FL-EHCPD with values of path coefficients 0.427 based on T-statistics of 9.48 and p-value of 0.001 and 0.419 based on T-statistics of 10.47 and p-value of 0.006, respectively.

The second component which affects the EE, PME and the FL-EHCPD is also known as the Subjective Norms (SN). Among them, the total effect estimator of 0.382 for SN and EE also has its T-statistic equal to 10.61 and p-value of 0.000 to emphasize the relation significance. Further, SN has a highly significant positive effect on PME and FL-EHCPD with coefficients of 0.452 and 0.410, T statistics 12.21 and 12.05, and p values 0.001 and 0.003 respectively. Perceived Behavioral Control (PBC) come forward as another important index and shows a high level of positive association with EE (Coefficients: 0.534, $t = 11.36$ and $p < 0.05$). PBC is also found to have a significant impact on PME and FL-EHCPD with coefficients of 610 and 482 respectively and T-statistic of 17.42 & 12.05 at a p-value of 0.006 & 0.002 respectively.

The analysis also performs an additional evaluation of the level of impact of the Edupreneurship in HEIs Curriculum and Policy Documents (labelled as EE) with a path coefficient of 0.523, T-statistic of 14.94 and a significant p-value of 0.004. This is in relation to the Prospects and Challenges related to Edupreneurship Education (PCEE) that load heavily on EE, with a path coefficient of 0.487, T-statistic of 11.59 and p-value 0.000. Furthermore, the impact of PCEE as an independent variable is quite large towards PME with the coefficient of 0.612, T-statistic 18.00 and probable value of 0.003.

Finally, KCSDEE is a very significant positive determinant for EE with a path coefficient of 0.498, T-statistics of 12.14 and $p < 0.05$. In summary, the findings have provided empirical evidence that all the proposed hypotheses regarding the model that has been tested are valid and extremely significant for the improvement of Edupreneurship Education in HEIs in Sindh, Pakistan.

DISCUSSION OF SEM/SMART PLS RESULTS

Analysis shows the results of the Path Coefficient in line with this, the following observation made on how various latent variables interrelate or are correlated in the given content of Edupreneurship Education (EE) in Higher Education Institutions (HEIs) in Sindh, Pakistan. The strong path coefficients between attitudes (ATTD) and Edupreneurship Education (EE) show that positive attitudes have a great effect on the EE. This we agree with Ahmed, Javed & Khan (2023) as he showed that positive entrepreneurship mindset creation among the students and faculty is crucial in the successful implementation of EE. The substantial path between both the factors of attitudes and pedagogical methods in Edupreneurship (PME) support the requirement of integrating the entrepreneurial attitudes into teaching strategies, further strengthening the work done by Dixit et al. (2021) on the significance of competencies in the enhancement of edupreneurial pedagogy. Subjective norms (SN) contribute to the EE and PME to the same extent all the while. The significant paths show that pressures from the society to act accordingly are instrumental in influencing the adoption and implementation of EE in HEIs; this aligns to Ajose's (2021) study on the effect of social norms on entrepreneurial intentions of undergraduate students. Besides, the significant path coefficient between subjective norms and Edupreneurship in HEIs curriculum and policy documents (FL-EHCPD) imply the importance of changing educational policies to fit the community norms to facilitate EE, as pointed out by Baehaqi (2023) on character education through edupreneurship.

Perceived Behavioral Control (PBC) shows strong correlations with EE, PME and FL-EHCPD affirming the fact that how easy or challenging it is to undertake business activities play a crucial role in the successful application of EE. Strikingly similar with the work of Haijing and Chano (2024), the current study aimed at determining the effect of perceived behavioral control on students' cross-cultural adaptability in educational environments. The extent of change that PBC brought on PME highlights the MVC's contention that educators have a responsibility ensuring EE empowers learners to feel they can be entrepreneurial successes; a theme, which according to Ingram (2019) teachers must grapple with, when developing a curriculum, as teacherpreneurs. This path of development from Edupreneurship in HEIs curriculum and policy documents (EHCPD) to EE underscores the critical role and importance of institutional support and policies in create an environment that can support EE. This finding supports the Higher Education Commission, Pakistan's (2023) assertion on the importance of well-articulated curriculum polices for the promotion of entrepreneurial activities in the Pakistani Higher Education Institutions. Likewise, the significant connection between PCEE and both EE and PME demonstrates that, to optimize the potential of EE, potential pitfalls should not be overlooked, which also adopted by Fenyvesi et al. (2021) in their paper on enhancing learners' creativeness using integrative pedagogy.

Last but not least, based on the result that there is significant relationship between Knowledge, competencies and skill development related to EE (KCSDEE), EE confirms the imperative need to prepare and empower the students with the core values and skills needed to succeed in entrepreneurship. This finding is in agreement with Maydiantoro et al. (2021), who pointed out that skill development is a strong element for effective EE programs. In sum, these research findings support the proposed model and offers an extensive understanding of the factors that have an impact on the effective execution of EE in HEIs which strengthens the existing literature on edupreneurship education in Pakistan.

RECOMMENDATIONS

The study recommends that the HEIs in Sindh, Pakistan should include EE in their curriculum and policies in order to support young entrepreneurs. Theoretical objectives are stated in terms of increasing attitudes, subjective norms, and perceived behavioural control to foster entrepreneurship among students and faculty by establishing relevant policies. In detail, confidence building exercises in the form of targeted workshops, follow-up training and/or practical case and project based activities as well as mentoring may be helpful to strengthen individual entrepreneurial skills and develop propensity for creativity. Furthermore, officials should explore the difficulties ground with the organization of courses devoted to the subject by establishing resources, funding, and partnerships with business representatives.

Other related recommendation is that the HEIs should embrace and integrate teaching and learning strategies that promote competencies and applications. This can include; Simulation, internship, and live case scenarios so that students get the necessary practice as they study. Pre-service training should also be provided at the faculty level if faculty members are to impart knowledge and skills in teaching entrepreneurship. Additionally, it is important to carry out a community engagement program and mobilization to popularize the education entrepreneurship by creating other structural and systemic society supports to support edupreneurship to match the cultural setting of Sindh, Pakistan.

IMPLICATIONS

The findings of this study are relevant for academia as well as for designing policies. Academic practice also reveals that it is important to incorporate entrepreneurship into core academic offerings. By directing change to the improvement of attitude, perceived behavioural control and competencies, the institutions will in turn prepare the student for the entrepreneurial challenges and foster economic growth. Such findings affirm the prerequisite for an integrated and applied concept of education that combines technical, managerial, and interpersonal competencies to cultivate a perspectives for enterprising.

In light of these finding, this research sifts a paradigm shift in the formulation of policies that encourage edupreneurship through the development of suitable policies and institutional arrangements. There is the evidence that it is possible to ensure the synergy between the goals of HEI and national and regional entrepreneurship development. It has emerged that seven challenges and opportunities exist in the context of HEI and entrepreneurship, including resource allocation, faculty development, and curriculum modernization; overcoming these can help to make HEIs the key centers of entrepreneurial activity. These findings also light up the importance of cultural aspects as validation from the community to enhance endorsement of policy, more so in EE to improve.

LIMITATIONS AND FUTURE DIRECTIONS

Despite the findings of this study, the following limitations should be considered in further research: First, the direction of the study is confined to the HEIs in Sindh, Pakistan, and therefore the results may be benchmarked or compared with the results obtained from other geographical location or other country having different culture and context. Subsequent

research could extend the geographic feature to embrace different education contexts that sample various regions, or countries. Also, the study is focused on the quantitative data analysis; using, for example, interviews or focus groups could help to gain more profound understanding of the factors impacting on the entrepreneurship education.

This study could also be extended to find out the kind of future scale entrepreneurship education has on students as future stakeholders of the economy. A study on the applicability of the emerging technologies and digital platforms on entrepreneurship education may provide constructive suggestions for curriculum innovations. Lastly, the relationship between the socio-cultural factors as independent variable and education as intervention could add to the understanding of the processes through which community norms influence entrepreneurial intentions and performance.

CONCLUSION

Based on the findings of the current research, this study establishes that attitudes, subjective norms, perceived behavioral control, and institutional support are the factors for evaluating the efficiency of entrepreneurship education programmes in HEIs in Sindh, Pakistan. Therefore, by supporting the proposed model and investigating relevant factors of EE, the work contributes to the development of the overall framework to improve EE. By making specific recommendations towards improvement that matches the findings, and by effectively promoting entrepreneurship, these HEIs, and policymakers can contribute towards both individual and society's development. Subsequent studies can expand the noticed contexts and conceive new ideas for the further development of entrepreneurship education in Pakistan and other countries.

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