

***Title: Teachers' Creativity and Students' Entrepreneurial Intentions:  
A Perspective from an Emerging Economy***

***By: Sadia Zaman Khan***

***MPhil Scholar, LMS Department***

***National Defence University, Islamabad***

***Abstract***

**Objective:**

Drawing from the insights of The Social Cognitive Theory, the present study aimed to investigate the role of teachers through their creative disposition in the formation of students' entrepreneurial intentions.

**Method:**

In order to obtain a better understanding of the relationship among variables of interest, quantitative approach was employed by collecting data from 305 students studying in 14 universities in the capital territory of Pakistan through a weblink questionnaire as well through physically administered questionnaires. SPSS was used to test the theoretical model.

**Findings:**

Findings of the study suggest that teachers' creativity in the form of its three dimensions positively yet moderately impacts the entrepreneurial intentions of students. These results are indicative of the fact that teachers bear the responsibility to develop and enhance the entrepreneurial intentions of their students through their own creativity and teaching competence. In doing so, they can also contribute to the knowledge, values and related competencies of the students.

**Significance of the study:**

Economies around the globe, even the developed and developing economies are facing downsizing, job shortages and ever rising unemployment levels which is putting pressure on the

educational systems to train and educate youth in producing jobs rather than seeking jobs. Assessing the entrepreneurial intentions of students is of considerable importance because of its impact on the unemployment and teachers can play a crucial role in promoting students' creativity thinking abilities, their entrepreneurial intention and subsequent activities and behavior related to entrepreneurship.

**Key words:** Teachers' creativity, entrepreneurial intentions, economic development, Pakistan, students, Social Cognitive Theory

## Introduction

In recent years, especially after Covid 19, many countries including the industrialized and developed countries have suffered from economic recession and higher unemployment rates. Globally, economic activity has slowed down tremendously, so much so that it is expected to come down to 3.2 percent in 2022 and further to 2.7 percent in 2023 as opposed to 6 percent in 2021 (IMF, 2022). Inflation figures are the highest than seen in several decades. This bleak outlook can be attributed to lingering effects of COVID-19, Russia's invasion of Ukraine and the tightening financial conditions in most parts of the globe.

These current situational factors have urged the policy and political decision makers in many countries to pay more attention to the potential role of the entrepreneurs as drivers of economic prosperity. New and vibrant entrepreneurial activities must come up which are also deeply rooted in the local economy. In addition to this, there is a need to enhance the capabilities of the entrepreneurs so that they can develop and manage business ventures. As per Zhou et al. (2022), entrepreneurship, creativity and innovation have become an integral part of the economic and social reforms leading towards economic development and prosperity, especially in recent times. In the business world, it has become a reckoning force as it provides new platforms for doing things in a better way and innovative ways and gives rise to healthier competition (Farrukh et al., 2017). It has the potential to provide opportunities to masses to reap financial benefits as well as enjoy independence (Aparicio et al., 2016).

Entrepreneurial intention has been researched to be the best predictor of whether an individual is going to be an entrepreneur in the future (Kautonen et al., 2015; Krueger et al., 2000; Liñán &

Chen, 2009). It precedes entrepreneurial behavior and is significant in understanding the entrepreneurial process (Henley et al., 2017). There is no denying the fact that education plays an important role in forming an intention and improving the managerial skills of the students so that they can support business activities (Fayolle & Gailly, 2015). Several studies stress upon the importance of the teachers' quality in achieving educational excellence (Açıkgöz, 2005) while several other point out that education's successful implementation in the practical fields depends on the teachers' interventions in the classrooms (Gibb, 2005). Moreover, other than parents, entrepreneurs and teachers are taken as influential figures in shaping up the entrepreneurial intention of the students and following a future career in entrepreneurship (Rahman & Day, 2014). From the students' point of view, they link their satisfaction and achievement to their teacher who taught them in the most suitable manner (Stronge, 2018) which confirms that students' learning comes mainly from teachers of their preference which is attributed to their certain characteristics. These characteristics range from the communication skills of the teachers and relationships teachers develop with their students (Sanchez, 1997) to the enthusiasm and competence of the teacher for a content area (Stronge, 2018). Using these characteristics and teaching creatively, teachers can lead students towards formation of entrepreneurial intention and subsequent development of their business entities, thus, which can play an important role in the country's development, at both micro and macro levels.

In Pakistan which is a densely populated country with population of 229,723,948 as of July 2022 (United Nations, 2022) which makes it world's fifth-most populous country and second-largest Muslim population (The World Factbook, 2022), a large number is added to its workforce every year making it the ninth largest labour force in the world (PIDE, 2021) with majority of population, approximately 55.31%, under 25 years of age (CIA - The World Factbook, 2022). This youth bulge can be taken as an advantage only when their potential is correctly harnessed towards entrepreneurial activities contributing to economic development of the country.

Pakistan produces about 445,000 university graduates every year, as per latest HEC data available (Saeed, 2021). This is in addition to the number of students (approximately 315,000 per year) graduating from the vocational training institutes in Pakistan. As per UNESCO - Institute for Statistics (2022), 59,784 Pakistani students are studying abroad. On the other hand, as per (World Bank, 2022), Pakistan's unemployment rate is gradually increasing. It increased from 4.40% in

2020 to 6.50% in 2021 with a 2.1% increase whereas by the end of 2022, it is expected to reach upto 12% (Global Economic Model, 2022) (Trading Economies, 2022). This situation also worsened after the spread of Covid-19 when estimated 20.71 million people were left jobless after the suspension of economic activities and imposition of lockdown (Pakistan Economic Survey 2021-22, 2022).

One would expect a reasonable number of start-ups in Pakistan every year considering the number of university graduates adding up every year and the ever increasing rate of unemployment, however, figures depict a picture otherwise. Pakistan's current global entrepreneurship index was at level of 17.3 index in 2019, showing an improvement of 10.61%, up from 15.64 index previous year (GEDI - The Global Entrepreneurship and Development Institute , 2022). Its current ranking on the Global Entrepreneurship Development Index (GEDI) is 120.

Government is recognizing the need to teach entrepreneurship in colleges and universities in order to develop the necessary skills of students for self-employment and curbing unemployment in the country as well as meeting the demand of the business sector of diversely-skilled workforce having the capability to fir into the corporate world. However, there is a lack of entrepreneurial intention in the university graduates (Anjum, V, et al., 2020) owing to several reasons. Students are afraid of taking risks and facing new challenges due to inadequate support. Main challenges include lack of awareness and initiative to start a new business (Anjum, Farrukh, et al., 2020). Women entrepreneurs face different kinds of challenges as entrepreneurship is mostly male-dominated and competitive (Elliott et al., 2020).

It has been researched that students are better able to demonstrate their entrepreneurial behavior and may even improve it if they have had a prior exposure to entrepreneurship through “hands on” teaching techniques like brainstorming sessions, class presentations, discussions and practically developing business plans (Pihie & Sani, 2009), therefore, the objective of this study is to provide evidence in the context of Pakistan that universities should consider and plan creative teaching approaches to improve the outlook of students towards establishing business ventures of their own after completing their degrees.

Pakistan has huge potential in terms of talented youth which can be exploited further through the provision of real-time knowledge, designing stimulating projects and application of the

entrepreneurship related knowledge through creativity, innovation, uniqueness and initiation (Ahmed et al., 2019). This study will provide an insight on the role of teachers' creativity as this alternative course of action which can be adopted to promote entrepreneurial intentions of students through strategies to improve the creative teaching quality with the perspective of enhancing entrepreneurship in Pakistan. Thus, we come to the following main question;

*In a developing country like Pakistan, what can be done for shaping and developing the entrepreneurial inclinations and intentions of the students engaged in higher studies?*

Following sub questions are derived from the above main question;

Q.1- Does teaching creativity affect the entrepreneurial intention of the students which will lead to a positive decision taken by them to pursue entrepreneurship as a career?

Q.2- Which dimension of teachers' creativity significantly impacts the entrepreneurial intention?

## **Literature Review and Hypotheses Development**

### **Teachers' Creativity**

In this century of information technology, dynamics of teaching have been modified. In the past, teachers were considered to be sources of knowledge only, however, now possession of creative skills is considered to be an inevitable characteristics of the teachers of today and the coming future. They need to set a new path and pace for modelling the knowledge of future generation (Neto et al., 2017). It is very difficult to find perfectly creative teachers as well as absolutely non-creative ones (Ambrose, 2005) which makes this phenomenon hard to define. For this reason, teachers' creativity has been researched more and more in the recent years but it is still considered to be a difficult concept to specify into details (Serdyukov, 2017). Some relate it to their own education and trainings while some emphasize its positive impact on the students and their creativity. Some are of the view that almost all teachers engage in creativity every day in the shape of planning and improvising lessons, meeting the needs, abilities and interest of their students and conforming to the formal curriculum using only the available resources (Rejskind, 2000).

As per NACCCE (1999) report, teaching creativity is “*teachers using imaginative approaches to make learning more interesting, exciting and effective*” (NACCCE, 1999). Teachers’ creativity can be defined as integrating various educational policies, models and theories about teaching and learning in unique ways in order to meet the diverse needs of the students. Therefore, the main function of creative teachers is to overcome obstacles both for themselves as well as the students. There are no definite or explicit solutions in which teachers can address learning dilemmas, hence, they resort to myriad ways to conduct teaching and facilitate learning in the classrooms (Bramwell et al., 2011).

Teachers’ creativity is witnessed in the way teachers deliver more meaningful and interesting lessons for the students along with engaging in active interaction during the entire process. It also involves flexibility on part of the teachers in responding to the needs, ideas and interests of the students as well as in performing their professional duties (Dobbins, 2009; Wibowo & Saptono, 2018b).

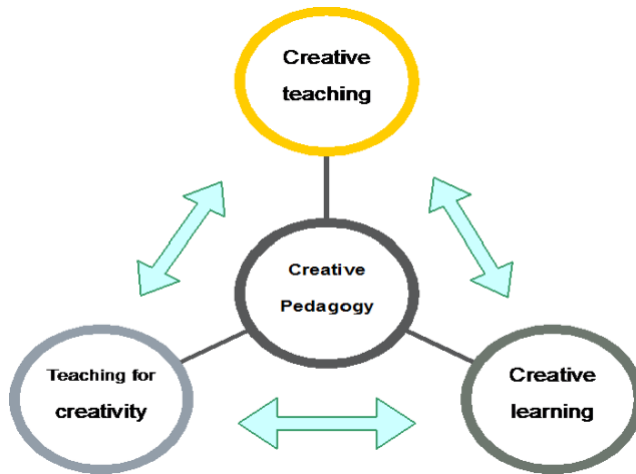
## **Framework for Creative Teaching**

Recent studies focusing on importance of creativity in teaching conclude that creative pedagogy is not developed in a vacuum, rather it is inextricably tied to various factors like content and various domains (Baer, 2016). Learners are viewed as the center of teaching and learning processes with teachers playing an active role in the production of knowledge through their expertise, experiences and ideas. A framework illustrating the relationship between creativity and pedagogical practices in education has been given by Lin (2009) which has the elements of creative teaching, teaching for creativity, and creative learning (Figure 2.1).

The concepts of *creative teaching* and *teaching for creativity* are frequently found in contemporary educational discourse (Lapeniene & Dumciene, 2014). Teachers’ creativity in the classrooms consist of creative teaching, teaching for creativity and creative learning; all three of which are interrelated and contribute towards the success of teachers in the classrooms (Rashmi, 2012).

**Figure 2.1**

***The Three Interrelated Elements of Creative Pedagogy (Lin, 2009)***



These three elements interact with and support each other in order to achieve creativity as an outcome. The interaction is observed between the creative teacher in the form of effective teaching and creative learner in the form of effective learning.

**Creative teaching** is considered to be an art (Craft, 2001) and a teacher can be termed as creative when he/she uses the existing knowledge with new and creative processes to nourish cognition in order to obtain a useful outcome of learning. Creative teaching behavior is manifested when teachers make use of dynamic and energetic approaches in various ways in order to motivate students intrinsically to learn enthusiastically (Simonton, 2012). This could be a planned activity before teaching or opted for a response towards the needs which arose in a certain learning context (Ayob et al., 2013). Teaching creatively requires relevant skills and dispositions (Pugliese, 2010), however, teachers' personal creativity can be enhanced by developing a range of skills which teachers can apply to different situations (Davis & Rimm, 2004). Thus, creative teaching involves teachers' personality, their personal Creativity and manifesting that creativity in everyday classrooms activities and practices (Lapeniene & Dumciene, 2014). As per Cremin (2009), four features namely relevance, ownership, control and innovation have been agreed to be associated with creative teaching.

**Teaching for Creativity** becomes possible only if teachers willingly teach creatively (Lapeniene & Dumciene, 2014). It may also arise spontaneously from situations in which teachers did not specifically intend it (Fryer, 1996). Teaching for creativity revolves around teachers identifying the creative strengths of their students and fostering their creativity (Cremin, 2009). The National Advisory Committee on Creative and Cultural Education proposes that teaching for

creativity's first task is 'to encourage young people to believe in their creative potential, to engage their sense of possibility and to give them the confidence to try' (quote NACCCE, 1999).

**Creative Learning and** teachers' creativity go hand in hand. Creative teaching leads to creative learning by stimulating the creative and true potential of the learners by implementing new methods, ideas and tools (Horng et al., 2005) where creative learning is defined in terms of a developmental model for students where students learn new ways of creative thinking and behaviour (Dobbins, 2009; Jeffrey & Craft, 2004; Zhou & Luo, 2012). Creativity in teaching is effective in deepening students' understanding and helps them to deal positively with change and diversity. Teachers' creativity enables students to learn in a less monotonous and fun environment (Torrance, 1972). It can help students develop and improve the necessary emotional and cognitive skills by making learning more meaningful and experiential (Hu et al., 2016).

Creative teaching is an imaginative, innovative and dynamic approach linked to creative learning (Jeffrey & Craft, 2004). Teachers play a significant role in helping students explore multiple ideas through creative learning strategies, thus, fostering creativity (Cropley, 1992). Thus, creative teaching is to teaching for creativity and creative teaching also leads to creative learning.

## **Dimensions of Creative Teachers**

In an ever-changing environment in the 21<sup>st</sup> century, teachers, at every level, are challenged daily to develop and practice creativity in the form of various dimensions which promote innovation, problem solving and critical thinking. Creative teaching is based on the teachers' ability to use their imagination, originality and sound judgment while employing engaging methods in the class rooms (Sawyer, 2011). This may be a mental capability such as vivid imagination or based on teachers' experience. Imagination enables the individuals to visualize dynamic processes and generate new ideas that they have never experienced. As per Chen & Yuan (2021), imagination leads towards innovation and idea generation and has a positive effect on teachers' creativity. Some important dimensions as used by Cheng (2001) in proposing a scale for assessing creative teaching are having creative ideas, creative teaching and divergent thinking abilities, having interactive discussions and open mindedness, promotion of autonomous learning and challenge presenting.

Different characteristics of teachers displaying creativity have been highlighted by various researchers. The NACCCE (1999) report highlights that creative teachers have a firm belief in their identity, values and principles and accordingly, they are flexible in what they do. They adjust their styles of teaching and related strategies according to varying situations. Creative teachers are always willing to take risks. They readily explore their teaching talents as well as in other areas of interest and if required, they don't shy away from learning even from their students. They have the flexibility to leave their structured lessons behind and adjust those according to the need (Ireson et al., 1999).

Hocenski et al. (2019) studied teachers' creativity in 11 European countries and concluded that creative teachers are willing to try out new things and put more effort in their work. They demonstrate a willingness to learn new things which shows the desire to continuously improve themselves and to display competence in personal as well as professional life. A synthesis of behaviors and methods including eight items for building creativity in classrooms was proposed by Sawyer (2012). These items include *openness displayed by the teacher* in both attitude and perspective, *deliberately cultivating surprise and the unexpected* in order to arouse the curiosity of the students, *provision of conducive environment to operate while taking risks and developing students' self-efficacy*.

## **Entrepreneurial Intentions**

In the past few decades, entrepreneurial intention has been developed and studied extensively due to it being an important predecessor for entrepreneurial activity or entrepreneurship. Entrepreneurship is an essential factor in promoting economic and social development of a country (Liñán et al., 2011; Zhang et al., 2014). On a micro level, individuals find entrepreneurship to be a highly satisfying choice for a potential career (van Praag & Versloot, 2007). Entrepreneurs intend to pursue new business possibilities and opportunities, enter new markets and offer new products and services which is all intentional behavior. *Entrepreneurial intentions* can be explained as the motivational factors influencing individuals to pursue entrepreneurial ventures (Hisrich et al., 2017). These motivation factors indicate the amount of effort the people are willing to make towards a particular behaviour. The stronger is the intention to engage in a behavior, better should

be its performance (Ajzen, 1991). When an individual perceives the entrepreneurial action to be feasible and desirable, his intention gets stronger (Hisrich et al., 2017).

There is a growing body of literature arguing that intentions play a very relevant role in the decision to start a new firm (Liñán & Chen, 2009a). Entrepreneurial intention (EI) is termed as “the particular and conscious state of mind that precedes action and directs attention toward entrepreneurial behaviors such as starting a new business and becoming an entrepreneur” (Moriano et al., 2012). EI is the desire of the individual and determination which leads to the creation of business after undertaking necessary steps (Esfandiar et al., 2019). In simple words, it is the inclination and aspiration of an individual to be an entrepreneur in some future time. Entrepreneurship is not a one-off thought, rather a way of life. Deciding to adopt entrepreneurship as a career path requires a different thought process which is quite detailed and elaborate. In this process, one identifies and then prioritizes opportunities over threats in order to be successful. Hence, to conduct research is a pre-requisite for investigating the entrepreneurial intention (Krueger et al., 2000). When an action is performed or business is started with an intention, it will have better prospects of progress in the business due to better readiness as compared to someone without the intention for starting a business venture.

## **The Social Cognitive Theory**

Initially proposed as a comprehensive model of learning in 1963 by Bandura and Walters, which integrated the previous behavioral and cognitive theories and named as The Social Learning Theory, it emphasized upon the role of imitation as its most crucial element that made it innovative and influential (Bandura & Walters, 1963). A major revision of the theory was proposed by Bandura in 1977 in which he shifted the perspective to a more cognitive one stating that learning is a cognitive process which takes into account the social context rather than it being a purely behavioral process (Bandura, 1977).

Albert Bandura developed The Social Cognitive Theory (SCT) as an extension of The Social Learning Theory (SLT) in 1986 and stated that learning is a social process of knowledge acquisition which occurs through the reciprocal interaction of the person, his behavior and the surrounding environment. People observe the behavior of a model and the consequences of that

particular behavior. They then remember the sequence of events and use that information to guide them in their subsequent behaviors (Bandura, 1986, 2008). One of the unique feature of SCT is its emphasis on the social environment in which individuals acquire and maintain behavior.

The SCT demonstrates that various inter related factors like behavioral, cognitive and personal factors move in bidirectional manner with the environmental conditions (Bandura, 1986, 1992), whereas the intention and decision to be an entrepreneur is also affected by interrelated factors, having both internal and external aspects. Therefore, SCT is an effective theoretical framework for studying entrepreneurial intention. It sought to address the dynamic process through which various factors such as cognitive and behavioral factors interact during the process of making a decision about launching of an entrepreneurial venture.

The Social Cognitive Theory has gained considerable importance in recent times and is of particular interest to educators, parents and policymakers because of its applicability to learning, its practicality and its explanatory power in understanding human development and learning processes. It explains the social context and the important role played by parents, teachers and peers as social models in the development, individual learning and acquisition of knowledge (Bembenutty et al., 2016). The concept of social role model emerges from SCT where an individual's social behaviors and cognitive processes are influenced to a great extent by observing the actions of others. It further states that new behaviors can be acquired or learnt through **observing and imitating** others. Thus, learning is a cognitive process taking place in the social context. This theory inter-relates the individual's behavior or personal qualities and cognitive factors which mutually influence each other and proposes five important steps of learning: **observation, attention, retention, reproduction, and motivation** (Bandura, 1977, 1986, 1997; Bandura & Walters, 1963).

The figures of parents, teachers and entrepreneurs have been researched to be the most likely role models to influence students' entrepreneurial motivation and a future career in entrepreneurship (Rahman & Day, 2014). Teachers are the most likely role models available in the field of entrepreneurship education who can arouse in their students an interest in the creation of a new business venture and provide them with necessary skills to follow entrepreneurial intentions in an efficient and effective way (Abbasianchavari & Moritz, 2021). Students identify and try to follow

those teachers who have the related knowledge and themselves possess the characteristics associated with an entrepreneurship. In this way, such teachers become role models for the students in entrepreneurial behaviour whether they themselves have created a company or not. Students of such teachers are expected to have a more positive attitude towards entrepreneurship. This leads towards the conclusion that teachers can play a vital role in entrepreneurship education and in forming entrepreneurial intention (Seikkula-Leino et al., 2010).

Creativity has been researched to be an antecedent to entrepreneurial intention (Tantawy et al., 2021) and creativity can be transferred from teachers to the students through creative teaching (Machali et al., 2021). The entrepreneurial education is aimed at inculcating creativity among the students (Yar Hamidi et al., 2008), therefore, teachers can play an essential role in driving students' creativity which in turn supports formation of entrepreneurial intention. Entrepreneurship education provides knowledge about entrepreneurship, develops creativity of the students, builds up a positive mindset and develops necessary skills for creating opportunities and setting up new business ventures (Mason & Arshed, 2013). This discussion helps in concluding that teacher creativity is crucial in promoting students' creativity, leading to students' intention and subsequently entrepreneurial activities (Beghetto & Kaufman, 2014; Lin, 2011; Oosterbeek et al., 2010; Yar Hamidi et al., 2008).

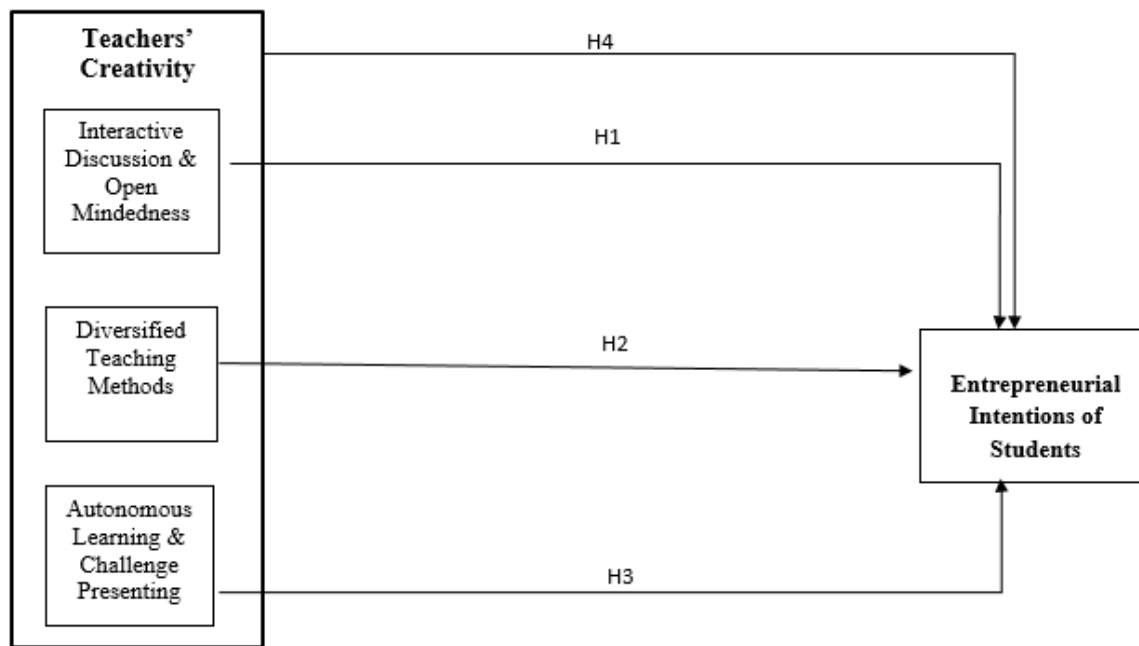
The role of teachers, as social role models, is significant in shaping students' self-efficacy and ultimately determine their career aspirations (Krueger et al., 2000). Teachers in this role and capacity can persuade and provide opportunities to their social models that is students thus increasing their self-efficacy (Bandura, 1992). They can provide relevant information about career aspirations and road map for youth while assisting them in coping frustration and overcoming obstacles (Auken et al., 2006). Thus, in line with the above discussion, following hypotheses are developed for the current research:

- H1 Teachers' Creativity in the form of Interactive Discussion & Open Mindedness has significant impact on Entrepreneurial Intentions of Students.
- H2 Teachers' Creativity in the form of Diversified Teaching Methods has significant impact on Entrepreneurial Intentions of Students.

- H3 Teachers' Creativity in the form of Autonomous Learning & Challenge Presenting has significant impact on Entrepreneurial Intentions of Students.
- H4 Teachers' Creativity has significant impact on Entrepreneurial Intentions of Students.

**Figure 2.2**

*Conceptual Diagram*



## Research Methodology

The aim of the study was to examine the formation of entrepreneurial intention in the youth of Pakistan specifically students, therefore, data was taken from the university students through survey questionnaire method done in a non-contrived, natural settings. Participants filled out close ended questionnaire based on Likert five point scale. A total of 360 questionnaires were filled and in the end 305 valid responses were taken for the research purposes. A mix sample of students who

had and those who had not previously studied entrepreneurship or gained knowledge related to entrepreneurship during the course of their education was taken.

### **Sample Characteristics:**

An equal, unbiased chance of participation was given to the targeted population for the purpose of conducting this study without any personal selection of any particular gender. Table 1 shows that 56.1% percent of male students filled out the survey questionnaires whereas 43.69% female students participated. These numbers are in line with the latest available male to female ratio of students in tertiary education in Pakistan which shows that till 2018, 44.8% students were females, according to the World Bank collection of development indicators, compiled from officially recognized sources (The Trading Economics, 2022).

***Table 1***

#### ***Gender Distribution***

| <b>Gender</b> | <b>Frequency</b> | <b>Percentage</b> |
|---------------|------------------|-------------------|
| Male          | 171              | 56.1              |
| Female        | 134              | 43.9              |
| Total         | 305              | 100.0             |

Source: Primary Data

Further characteristics of the sample selected are given below:

The minimum age of the participants considered for the study was at 18 years because from this age onwards, students are better equipped and mature enough to form an entrepreneurial intention. Different age-brackets were formed for the purpose of collecting data. From a total of 305 respondents, 179 forming a percentage of 58.7% were from the age bracket of 18 to 22 years of age, 81 participants of the study were from the age group of 23 to 27 years of age which is 26.6% of the total participants of the study, 24 participants making up a percentage of 7.9% are from the

age group 28 to 32 years and finally 21 participants were from age group 33 years and above which was 6.9% of the total percentage.

The education-wise distribution of the respondents has been done in three groups from minimum education of undergraduate, then graduates having the degree of Bachelors and post graduates including Masters and PH.D qualifications. According to the data, 183 out of 305 respondents were from the undergraduate group which is 60% of the total sample of the study. This group forms the majority of the respondents. 56 respondents were from the category of graduates which is 18.4% of the total percentage whereas 66 respondents were from the category of post graduates which is 21.6% of the total sample of the research study.

## Measures

The study used measuring scales developed and used in previous studies and are listed in table 2. Different dimensions of teachers' creativity have been suggested by different researchers like Cheng (2001) suggested five dimensions for defining and measuring creativity and further developed "teaching creativity inventory". Following Cheng's constructivist approach and methods of evaluation, Huang (2006) designed a creative teaching instrument again based on five dimensions which were further modified into creative teaching behavior scale comprising of three dimensions by Huang & Yeh (2008). For the purpose of present study, researcher has adopted this scale for measuring teachers' creativity according to the participants, aim and dimension wise implications of the study. A five-point Likert scale has been used for all the items of the questionnaire with responses ranging from (1 = Strongly Disagree to 5 = Strongly Agree).

**Table 2**

### ***Summary of Instruments***

| Variable             | Source             | No. of Items |
|----------------------|--------------------|--------------|
| Teachers' Creativity | Huang & Yeh (2008) | 19           |
| Self-efficacy        | Wang et al. (2016) | 8            |

## Data Analysis and Results

Data collected from the respondents was coded using MS Excel to enter in the statistical software (SPSS) 25th version which is the software used to analyze the data and computed results.

**Table 3**

***Values of Cronbach Alpha***

| Variable                                     | No of Items | Cronbach's Alpha |
|----------------------------------------------|-------------|------------------|
| Interactive discussion and Open mindedness   | 6           | 0.875            |
| Diversified Teaching Methods                 | 8           | 0.895            |
| Autonomous learning and Challenge Presenting | 5           | 0.821            |
| Entrepreneurial Intention                    | 6           | 0.935            |

The values of Cronbach's Alpha (as given in table 3) were all above 0.82 which is considered very good and it can be safely concluded that the questions used in the instruments were valid indicators of what was intended to be measured.

For the purpose of present study, linear regression was checked for four hypotheses H1, H2, H3 and H4 which show the direct effects of the independent variables Interactive Discussion and Open Mindedness, Diversified Teaching Methods, Autonomous Learning & Challenge Presenting and Teachers' Creativity respectively on the dependent variable Entrepreneurial Intentions of Students. To test these models, a linear regression analysis test was applied to the statistical software SPSS and data was processed with respect to four different models, results of which are discussed below:

**Table 4**

### ***Model Summary for All Hypotheses***

| Model | R                  | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |     |               |
|-------|--------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
|       |                    |          |                   |                            | R Square Change   | F Change | df1 | df2 | Sig. F Change |
| 1     | 0.321              | 0.103    | 0.100             | 1.04780                    | 0.103             | 34.916   | 1   | 303 | 0.000         |
| 2     | 0.354              | 0.125    | 0.122             | 1.03489                    | 0.125             | 43.400   | 1   | 303 | 0.000         |
| 3     | 0.386              | 0.149    | 0.146             | 1.02072                    | 0.149             | 53.084   | 1   | 303 | 0.000         |
| 4     | 0.413 <sup>a</sup> | 0.170    | 0.168             | 1.00780                    | 0.170             | 62.271   | 1   | 303 | 0.000         |

From table 4 we can see that the values of adjusted R Square are 0.10, 0.122, 0.146 and 0.168 showing that 10%, 12.2%, 14.6% and 16.8% variance in the dependent variable (Entrepreneurial Intentions of Students) is explained by a unit change in the independent variables Interactive Discussion & Open Mindedness, Diversified Teaching Methods, Autonomous Learning and Challenge Presenting and Teachers' Creativity respectively. All the relationships are hence, also proved to be significant.

**Table 5**

### ***Test Results for All Hypotheses***

| Model      | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig   | Decision  |
|------------|-----------------------------|------------|---------------------------|-------|-------|-----------|
|            | B                           | Std. Error | Beta                      |       |       |           |
| 1 (CID_TC) | 0.421                       | 0.071      | 0.321                     | 5.909 | 0.000 | Supported |

|            |       |       |       |       |       |           |
|------------|-------|-------|-------|-------|-------|-----------|
| 2 (CDT_TC) | 0.491 | 0.074 | 0.354 | 6.588 | 0.000 | Supported |
| 3 (CAL_TC) | 0.509 | 0.070 | 0.386 | 7.286 | 0.000 | Supported |
| 4 (CTC)    | 0.636 | 0.081 | 0.413 | 7.891 | 0.000 | Supported |

---

For H1, table 5 shows that the beta value of the independent variable Interactive Discussion & Open Mindedness on entrepreneurial intentions of students is 0.321 and the significance level is 0.000 which is less than 0.05 therefore, it can be concluded that there is a positive impact of Interactive discussion and Open mindedness of the teachers on the Entrepreneurial Intentions of Students.

For H2, the values ( $\beta = 35.4\%$ ,  $t\text{-test} = 5.354$  and  $\alpha = 0.000$ ) given in table 5 show that the significance level is again 0.000 (less than 0.05) therefore, it is concluded that there is a positive impact of Diversified Teaching Methods on the Entrepreneurial Intentions of Students. This means that if teachers indulge in diversified teaching methods in their class rooms, students' entrepreneurial intentions will increase.

For H3, table 5 shows that the independent variable Autonomous Learning and Challenge Presenting has the values ( $\beta = 38.6\%$ ,  $t\text{-test} = 7.286$  and  $\alpha = 0.000$ ) which means there is a positive impact of Autonomous Learning and Challenge Presenting on students' Entrepreneurial Intentions. This means that if teachers encourage autonomous learning of their students by giving them challenging tasks and assignments then students' entrepreneurial intentions are positively impacted.

For H4, the independent variable Teachers' Creativity has the values ( $\beta = 41.3\%$ ,  $t\text{-test} = 7.891$  and  $\alpha = 0.000$ ) which shows a positive impact of Teachers' Creativity on the Entrepreneurial Intentions of Students. This means that students' entrepreneurial intentions are significantly impacted if teachers show creativity in their classrooms through various practices. Based on the above discussion, we conclude that there is empirical evidence support to accept all the stated hypotheses.

## Discussion and Conclusion

Results of this study show that Interactive Discussions and Open Mindedness has  $\Delta R^2$  value of 10% and  $\beta = 0.321$  ( $t=5.909$ ,  $p<0.01$ ) with Entrepreneurial Intentions and Diversified Teaching Methods has  $\Delta R^2$  value of 12.2% and  $\beta = 0.354$  ( $t=6.588$ ,  $p<0.01$ ) with the same. Similarly, Autonomous Learning and Challenge Presenting has  $\Delta R^2$  value of 14.6% and  $\beta = 0.386$  ( $t=7.286$ ,  $p<0.01$ ) and finally, the overall impact of combining all three dimensions of Teachers' Creativity was checked and it was identified that Teachers' Creativity on a whole has  $\Delta R^2$  value of 16.8% and  $\beta = 0.413$  ( $t=7.891$ ,  $p<0.01$ ) with Entrepreneurial Intentions.

Regression results for the hypothesized relationships support the acceptance of all four hypotheses. Findings of this study suggest that teachers' creativity demonstrates a moderate and positive correlation with students' entrepreneurial intention. Teachers' Creativity on a whole had the most substantial positive influence on entrepreneurial intention (16.8%). Therefore, teachers have the responsibility to ensure that they kindle the flame of entrepreneurial intention in their students through their creativity and competence.

These findings are in line with the results given by the previous researches. It has been proposed that the entrepreneurial directed student centered learning approach helps in building an entrepreneurial mindset. Creative teaching methods are crucial if students are to be given a better understanding of entrepreneurship, its implications and challenges associated with it in real scenarios. Creative teaching methods inevitable for serving the above purpose are inclusive of and brain storming sessions and practical development of business plans (Pihie & Sani, 2009). Creativity of teachers plays an essential part in entrepreneurship education which effectively forms the intentions of the entrepreneurial students, therefore, teachers teaching entrepreneurship should focus on building and improving their creative skill (Beghetto & Kaufman, 2014). The results of another study suggest that teachers' innovativeness and ability to take calculated risks can be enhanced by HEIs in order to develop the entrepreneurial competences of students. Teachers with low levels of innovativeness and risk-taking abilities do not develop students' entrepreneurial competences (Joensuu-Salo et al., 2021). In a recent study, lecturers' creativity was found to be having significant association with entrepreneurial intention among technical college students.

This study further revealed that entrepreneurial intentions of students were also predicted by attitude towards behavior and perceived behavioral control (Alshebami et al., 2022).

This finding can be explained in a number of ways in context of Pakistan. The focus of Higher Education Commission (HEC) has shifted recently on entrepreneurial education. Though many universities have started teaching courses on Entrepreneurship, however, there is still a large percentage of student body who either have not been exposed to entrepreneurial education or they are unaware of the use of the entrepreneurial aspect of their education (Farrukh et al., 2017). Incubation centres have also started working in universities in bigger cities, but their outreach is too limited and while collecting the data, researcher found out that many students are still unaware of the facilities provided by these centres. However, this situation can be reversed effectively by hiring creative teachers and then supporting them in enhancing the required entrepreneurial knowledge, polishing the relevant skills and bringing on the required values and competencies.

## **Implications for practitioners**

The findings of the present study provide some noteworthy implications, both theoretical and practical, for the universities, the education sector at large and drivers of the public policy for enhancing and encouraging entrepreneurial intentions among Pakistani students.

Effective entrepreneurial education provides students chances of practicing whatever they have learnt in the entrepreneurship courses, therefore, allowing them to enhance their knowledge and skills. Students will gain better provided they have better opportunities of practicing their knowledge into practical experiences. Such a creative and innovative educational system has the capability to arouse students' entrepreneurial orientation and inclinations (Piperopoulos & Dimov, 2015; Shinnar et al., 2014; Wu & Wu, 2008).

More recently, with the increased importance being given to entrepreneurship in the 21<sup>st</sup> century, entrepreneurial education has improved through a surge in the number of courses being offered and programs being followed, however, there are practical limitations to the process which inhibits the desired results to be achieved. Entrepreneurial education is not made part of the curriculum

from school levels, moreover, it is applied more in business colleges and universities rather than public ones operating at all levels (Altan, 2015).

Universities need to enhance activities which support individual creativity and arrange students in various activities in an attempt to promote entrepreneurial intentions amongst them through related lectures, student based creativity programs and other entrepreneurship programs. Secondly, universities must provide facilitates and foundation for new startups by developing business incubation centers, laboratories and internet networks so that the quality of learning involving entrepreneurship can be improved (Saptono et al., 2019).

An important implication is related to teachers' further education and ongoing training programs. Educational policy makers must pay special attention to continuously train their teaching staff entrepreneurially as well in the field of creativity and innovation so that they learn to enhance their creative mindsets and teach entrepreneurship in an effective and efficient way. Teachers can increase their competence in the entrepreneurship education by engaging in advanced studies and participating in seminars, lecture and professional trainings. Department heads, principals or individuals in relevant positions in the concerned departments can play their part by arranging such facilities and forums for the teaching staff. Impact of such measures will be manifold: teaching staff will get more trained and equipped to teach creatively in the class rooms and entrepreneurship education will flourish as students will become creative through the creative teaching they will get in their class rooms (Machali et al., 2021).

Teachers and those involved in designing curricula in the education system must take on responsibility to design course outlines and curricula with the intention of guiding and leading the young, energetic brains through various stimulating learning experiences (Altan, 2015). Moreover, entrepreneurship related curricula should focus also on aspects such as sustainability, environmental management and other cross-cultural trainings so that students gain an in-depth knowledge about the related aspects as well.

## **Limitations and Future Research Recommendations**

Findings of the current study should be used with caution due to the contextual limitations discussed below along with recommendations for future researches. Current study is cross

sectional in nature and such studies assume that parameters of the model remain stable over a period of time. Furthermore, mediation in such studies may generate biased results. A strong mediator in a cross sectional study may prove to be weak one in a longitudinal analysis or may not even prove to be a mediator at all (Maxwell et al., 2011). Future researchers can focus on conducting longitudinal study which will give it the additional benefit of considering a wider range of individual and environmental factors.

Moreover, for the present study, data has been collected from universities of Islamabad and Rawalpindi. Future recommendations include conducting research from rural and urban, smaller and bigger geographical areas with diverse cultural, ethnic and financial backgrounds in order to give the findings of the research more generalizability. Respondents from these universities were students (with an average age of 18 to 22 years) which covers only one aspect of the population of prospective entrepreneurs. Future researches can study different groups of potential entrepreneurs and see whether there is any difference in the entrepreneurial intentions of other groups or not.

This study did not consider to segregate the business students from non-business ones while conducting this research. Although, respondents did reply to the question of studying entrepreneurship as a course, but the study did not consider the influencing factor of educational background on the entrepreneurial intentions of students. Therefore, future researches may consider to analyze the impact of formal business and entrepreneurial education in different contexts on the formation of entrepreneurial intentions of students. Another important limitation involves the type of questions used in the instruments especially the measurement of the creativity construct. The answers obtained from the respondents were based on their perception about their teachers' creativity which may not be their actual creative ability.

## **Conclusion**

Teachers are the drivers for change in the class rooms. The learning environment provided by them can either enhance or dampen creativity in their students. Moreover, the exact same environment may be perceived in a variety of ways by their students; some may get inspired by it while some may find it suffocating. Therefore, teachers need to develop an understanding of what their students perceive as productive and creative in order to help them to bring out the best in them.

This further requires for them to act in encouraging ways, providing timely and supportive feedback to the students as and when required and act as an inspirational role model during the everyday act of teaching. If teachers do not recognize and demonstrate their own creative skills, they may not be able to develop the entrepreneurial skills and creativity of their students. In this scenario, students will be unable to adjust to the fast-changing entrepreneurial environments (David et al., 2018). Creative change can be brought about in schools, colleges and universities provided all relevant parties like teachers, their supervisors and administration work in close collaboration (Bramwell et al., 2011).

## References

- Abbasianchavari, A., & Moritz, A. (2021). The impact of role models on entrepreneurial intentions and behavior: A review of the literature. *Management Review Quarterly*, 71(1), 1–40. <https://doi.org/10.1007/s11301-019-00179-0>
- Açıkgöz, F. (2005). A STUDY ON TEACHER CHARACTERISTICS AND THEIR EFFECTS ON STUDENTS ATTITUDES. 13.
- Ahmed, N., Arshad, M., & Nawaz, M. H. (2019). Developing Entrepreneurship in Pakistan through Higher Education. *Global Social Sciences Review*, IV(IV), 119–125. <https://doi.org/10.31703/gssr.2019> (IV-IV).16
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alshebami, A. S., Seraj, A. H. A., & Alzain, E. (2022). Lecturers' Creativity and Students' Entrepreneurial Intention in Saudi Arabia. *Vision: The Journal of Business Perspective*, 097226292210995. <https://doi.org/10.1177/09722629221099596>
- Altan, M. Z. (2015). Entrepreneurial teaching & entrepreneurial teachers. 6, 16.
- Ambrose, D. (2005). Creativity in Teaching: Essential Knowledge, Skills, and Dispositions. In *Creativity across domains: Faces of the muse* (pp. 281–298). Psychology Press.

- Anjum, T., Farrukh, M., Heidler, P., & Díaz Tautiva, J. A. (2020). Entrepreneurial Intention: Creativity, Entrepreneurship, and University Support. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 11. <https://doi.org/10.3390/joitmc7010011>
- Anjum, T., V, R. B., & Nazar, N. (2020). Mediating Role of Attitudes to Enhance the Creativity Disposition towards Entrepreneurial Intention. *International Journal of Psychosocial Rehabilitation*, 24(03), 542–553. <https://doi.org/10.37200/IJPR/V24I3/PR200811>
- Aparicio, S., Urbano, D., & Audretsch, D. (2016). Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological Forecasting and Social Change*, 102, 45–61. <https://doi.org/10.1016/j.techfore.2015.04.006>
- Auken, H. V., Fry, F. L., & Stephens, P. (2006). THE INFLUENCE OF ROLE MODELS ON ENTREPRENEURIAL INTENTIONS. *Journal of Developmental Entrepreneurship*, 11(02), 157–167. <https://doi.org/10.1142/S1084946706000349>
- Ayob, A., Hussain, A., & Majid, R. A. (2013). A Review of Research on Creative Teachers in Higher Education. *International Education Studies*, 6(6), p8. <https://doi.org/10.5539/ies.v6n6p8>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
- Bandura, A. (1992). *Exercise of personal agency through the self-efficacy mechanism*. Hemisphere Publishing Corp.
- Bandura, A. (1997). Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.
- Bandura, A. (2008). *Social Cognitive Theory of Mass Communication*. 35.
- Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York, Holt, Rinehart and Winston.

- Beghetto, R. A., & Kaufman, J. C. (2014). Classroom contexts for creativity. *High Ability Studies*, 25(1), 53–69. <https://doi.org/10.1080/13598139.2014.905247>
- Bembenutty, H., White, M. C., & dibenedetto, M. K. (2016). Applying Social Cognitive Theory in the Development of Self-Regulated Competencies Throughout K-12 Grades. In A. A. Lipnevich, F. Preckel, & R. D. Roberts (Eds.), *Psychosocial Skills and School Systems in the 21st Century* (pp. 215–239). Springer International Publishing. [https://doi.org/10.1007/978-3-319-28606-8\\_9](https://doi.org/10.1007/978-3-319-28606-8_9)
- Bramwell, G., Reilly, R. C., Lilly, F. R., Kronish, N., & Chennabathni, R. (2011). Creative Teachers. *Roeper Review*, 33(4), 228–238. <https://doi.org/10.1080/02783193.2011.603111>
- Chen, H.-H., & Yuan, Y.-H. (2021). The Study of the Relationships of Teacher’s Creative Teaching, Imagination, and Principal’s Visionary Leadership. *SAGE Open*, 11(3), 215824402110299. <https://doi.org/10.1177/21582440211029932>
- Cheng, M. Y. V. (2001). *Creativity in teaching: Conceptualization, assessment and resources*. Hong Kong Baptist University.
- CIA - The World Factbook. (2022). <https://www.cia.gov/the-world-factbook/countries/pakistan/>
- Craft, A. (2001a). Little c creativity. In A. Craft, B. Jeffrey, & M. Leibling (Eds.), *Creativity in education*. London: Continuum.
- Craft, A. (2001b). An analysis of research and literature on CREATIVITY IN EDUCATION. 38.
- Craft, A. (2005). *Creativity in Schools—Tensions and Dilemmas* (1st ed.). <https://doi.org/10.4324/9780203357965>
- Craft, A. K., Jeffrey, B., & Leibling, M. (2001). *Creativity in Education* (Vol. 1st). Continuum, London. <https://books.google.com.pk/books>

- Cremin, T. (2009). Creative teachers and creative teaching. In Wilson, Anthony ed. *Creativity in Primary Education* (pp. 36–46). Achieving QTS Cross-Curricular Strand. [Http://www.learningmatters.co.uk/title.asp?Mybid=5...](http://www.learningmatters.co.uk/title.asp?Mybid=5...)
- Cremin, T. (2015). Creative Teaching and Creative Teachers. In *Creativity in Primary Education* (2nd, Chapter 3 ed., pp. 33–45). Sage.
- Cropley, A. J. (1992). *More ways than one: Fostering creativity*. Ablex Publishing.
- Davis, G. A., & Rimm, S. B. (2004). *Education of the Gifted and Talented*. Boston, MA: Pearson Education Press.
- Dobbins, K. (2009). Teacher creativity within the current education system: A case study of the perceptions of primary teachers. *Education 3-13*, 37(2), 95–104. [Https://doi.org/10.1080/03004270802012632](https://doi.org/10.1080/03004270802012632)
- Elliott, C., Mavriplis, C., & Anis, H. (2020). An entrepreneurship education and peer mentoring program for women in STEM: Mentors' experiences and perceptions of entrepreneurial self-efficacy and intent. *International Entrepreneurship and Management Journal*, 16(1), 43–67. [Https://doi.org/10.1007/s11365-019-00624-2](https://doi.org/10.1007/s11365-019-00624-2)
- Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research*, 94, 172–182. [Https://doi.org/10.1016/j.jbusres.2017.10.045](https://doi.org/10.1016/j.jbusres.2017.10.045)
- Farrukh, M., Khan, A. A., Shahid Khan, M., Ravan Ramzani, S., & Soladoye, B. S. A. (2017). Entrepreneurial intentions: The role of family factors, personality traits and self-efficacy. *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(4), 303–317. [Https://doi.org/10.1108/WJEMSD-03-2017-0018](https://doi.org/10.1108/WJEMSD-03-2017-0018)
- Fayolle, A., & Gailly, B. (2015). The Impact of Entrepreneurship Education on Entrepreneurial Attitudes and Intention: Hysteresis and Persistence. *Journal of Small Business Management*, 53(1), 75–93. [Https://doi.org/10.1111/jsbm.12065](https://doi.org/10.1111/jsbm.12065)
- Fryer, M. (1996). *Creative teaching and learning*. London: Paul Chapman Publishing Ltd.

- Gibb, A. A. (2005). The future of Entrepreneurship Education. Determining the basis for coherent policy and practice. In *The Dynamics of Learning Entrepreneurship in a cross cultural University Context*. University of Tampere Research Centre for Vocational and Professional Education.
- GEDI - The Global Entrepreneurship and Development Institute . (2022). Retrieved from Entrepreneurship and Business Statistics: [http://thegedi.org/global-entrepreneurship-and-development-index/\(2022\)](http://thegedi.org/global-entrepreneurship-and-development-index/(2022)). Global Economic Model.
- HEC. (2021). UNIVERSITIES STATISTICS.  
<https://www.hec.gov.pk/english/universities/pages/universitiesstatistics.aspx>
- Higher Education Commission, Pakistan. (2022). Retrieved from Recognised Universities: <https://www.hec.gov.pk/english/universities/pages/recognised.aspx#k=#s=231>
- Henley, A., Contreras, F., Espinosa, J. C., & Barbosa, D. (2017). Entrepreneurial intentions of Colombian business students: Planned behaviour, leadership skills and social capital. *International Journal of Entrepreneurial Behavior & Research*, 23(6), 1017–1032. <https://doi.org/10.1108/IJEBr-01-2017-0031>
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2017). *Entrepreneurship* (Tenth edition). Mcgraw-Hill Education.
- Hocenski, M., Turjak, S. Ja, & Sedlan-König, L. (2019). Entrepreneurial Education—Exploring Teachers’ Creativity in 11 Countries.
- Hu, R., Wu, Y.-Y., & Shieh, C.-J. (2016). Effects of Virtual Reality Integrated Creative Thinking Instruction on Students’ Creative Thinking Abilities. *EURASIA Journal of Mathematics, Science and Technology Education*, 12(3). <https://doi.org/10.12973/eurasia.2016.1226a>
- Huang, H. C. (2006). *The Relationships between Demographic Variables, Playfulness, Motivation of Teaching, Happiness and Creative Teaching among Junior High School Teachers*. Kaohsiung: National Sun Yat-Sen University.

- Huang, H. C., & Yeh, Y. C. (2008). The relationship between playfulness in teaching, motivation of teaching, perceived happiness in teaching and creative teaching among junior high school teachers. [Http://www.edubook.com.tw/tw/file/pdf/1100/31-2/04.pdf](http://www.edubook.com.tw/tw/file/pdf/1100/31-2/04.pdf)
- IMF. (2022). World Economic Outlook; Countering the cost-of-living crisis. <https://www.imf.org/en/Publications/WEO/Issues/2022/10/11/world-economic-outlook-october-2022>
- Ireson, J., Mortimore, P., & Hallam, S. (1999). The Common Strands of Pedagogy and Their Implications. In P. Mortimore, *Understanding Pedagogy and its Impact on Learning* (pp. 212–232). SAGE Publications Ltd. <https://doi.org/10.4135/9781446219454.n11>
- Jeffrey, B., & Craft, A. (2004). Teaching creatively and teaching for creativity: Distinctions and relationships. *Educational Studies*, 30(1), 77–87. <https://doi.org/10.1080/0305569032000159750>
- Joensuu-Salo, S., Peltonen, K., Hämäläinen, M., Oikkonen, E., & Raappana, A. (2021). Entrepreneurial teachers do make a difference – Or do they? *Industry and Higher Education*, 35(4), 536–546. <https://doi.org/10.1177/0950422220983236>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Lapeniene, D., & Dumciene, A. (2014). Teachers’ Creativity: Different Approaches and Similar Results. *Procedia - Social and Behavioral Sciences*, 116, 279–284. <https://doi.org/10.1016/j.sbspro.2014.01.208>
- Lin, Y.-S. (2009). *Teacher and Pupil Responses to a Creative Pedagogy – Case studies of two primary sixth-grade classes in Taiwan*. Exeter: University of Exeter.

- Liñán, F., & Chen, Y. (2009). Development and Cross–Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, 33(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship & Regional Development*, 23(3–4), 187–215. <https://doi.org/10.1080/08985620903233929>
- Machali, I., Wibowo, A., Murfi, A., & Narmaditya, B. S. (2021). From teachers to students creativity? The mediating role of entrepreneurial education. *Cogent Education*, 8(1), 1943151. <https://doi.org/10.1080/2331186X.2021.1943151>
- Maria Lima Soriano de Alencar, E., & Maria Freire de Oliveira, Z. (2016). Creativity in Higher Education According to Graduate Programs’ Professors. *Universal Journal of Educational Research*.
- Mason, C., & Arshed, N. (2013). Teaching Entrepreneurship to University Students through Experiential Learning: A Case Study. *Industry and Higher Education*, 27(6), 449–463. <https://doi.org/10.5367/ihe.2013.0180>
- Maxwell, S. E., Cole, D. A., & Mitchell, M. A. (2011). Bias in cross-sectional analyses of longitudinal mediation: Partial and complete mediation under an autoregressive model.
- Moriano, J. A., Stephan, U., Gorgievski, M., Laguna, M., & Zarafshani, K. (2012). A Cross-Cultural Approach to Understanding Entrepreneurial Intention. *Journal of Career Development*, 39(2), 162–185. <https://doi.org/10.1177/0894845310384481>
- NACCCE. (1999). National Advisory Committee on Creative and Cultural Education: All our Futures: Creativity, Culture and Education.
- Neto, R. Do C. A., Picanço Rodrigues, V., & Panzer, S. (2017). Exploring the relationship between entrepreneurial behavior and teachers’ job satisfaction. *Teaching and Teacher Education*, 63, 254–262. <https://doi.org/10.1016/j.tate.2017.01.001>

- Oosterbeek, H., van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), 442–454. <https://doi.org/10.1016/j.euroecorev.2009.08.002>
- Pakistan Economic Survey 2021-22. (2022). Pakistan Economic Survey 2021-22. [https://www.finance.gov.pk/survey\\_2022.html](https://www.finance.gov.pk/survey_2022.html)
- PIDE. (2021b, September 27). 24pc educated people are jobless countrywide, Senate body told.
- Pihie, Z. A. L., & Sani, A. S. A. (2009). EXPLORING THE ENTREPRENEURIAL MINDSET OF STUDENTS: IMPLICATION FOR IMPROVEMENT OF ENTREPRENEURIAL LEARNING AT UNIVERSITY. 2, 6.
- Piperopoulos, P., & Dimov, D. (2015). Burst Bubbles or Build Steam? Entrepreneurship Education, Entrepreneurial Self-Efficacy, and Entrepreneurial Intentions. *Journal of Small Business Management*, 53(4), 970–985. <https://doi.org/10.1111/jsbm.12116>
- Rahman, H., & Day, J. (2014). Involving the entrepreneurial role model: A possible development for entrepreneurship education.
- Rashmi. (2012). Fostering Creativity; A four elemental model of creative pedagogy. Vol 3, Number 12.
- Rejskind, G. (2000). TAG teachers: Only the creative need apply. *Roeper Review*, 22(3), 153–157. <https://doi.org/10.1080/02783190009554023>
- Saeed, B. (2021). Dawn News. Retrieved from Strengthening IT skills: <https://www.dawn.com/news/1649873>
- Sanchez, P. A. (1997). Psychosocial factors and academic performance. University of Alicante-University of Alicante.
- Saptono, A., Purwana, D., Wibowo, A., Wibowo, S. F., Mukhtar, S., Yanto, H., Hadi Utomo, S., & Kusumajanto, D. D. (2019). Assessing the university students' entrepreneurial intention:

- Entrepreneurial Education and creativity. *Humanities & Social Sciences Reviews*, 7(1), 505–514. <https://doi.org/10.18510/hssr.2019.7158>
- Sawyer, R. K. (2011). What makes good teachers great? The artful balance of structure and improvisation. In *Structure and Improvisation in Creative Teaching*, ed R. K. Sawyer (pp. 1–24). Cambridge University Press.
- Sawyer, R. K. (2012). *Explaining Creativity: The Science of Human Innovation* (2nd Edition). New York, NY: Oxford University Press.
- Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J., & Rytola, T. (2010). Promoting entrepreneurship education: The role of the teacher? *Education + Training*, 52(2), 117–127. <https://doi.org/10.1108/00400911011027716>
- Serdyukov, P. (2017). Innovation in education: What works, what doesn't, and what to do about it? *Journal of Research in Innovative Teaching & Learning*, 10(1), 4–33. <https://doi.org/10.1108/JRIT-10-2016-0007>
- Shinnar, R. S., Hsu, D. K., & Powell, B. C. (2014). Self-efficacy, entrepreneurial intentions, and gender: Assessing the impact of entrepreneurship education longitudinally. *The International Journal of Management Education*, 12(3), 561–570. <https://doi.org/10.1016/j.ijme.2014.09.005>
- Simonton, D. K. (2012b). Teaching Creativity: Current Findings, Trends, and Controversies in the Psychology of Creativity. *Teaching of Psychology*, 39(3), 217–222. <https://doi.org/10.1177/0098628312450444>
- Stronge, J. H. (2018). Qualities of effective teachers.
- Tantawy, M., Herbert, K., McNally, J. J., Mengel, T., Piperopoulos, P., & Foord, D. (2021). Bringing creativity back to entrepreneurship education: Creative self-efficacy, creative process engagement, and entrepreneurial intentions.

- The Trading Economics. (2022). Pakistan—Percentage Of Students In Tertiary Education Who Are Female. <https://tradingeconomics.com/pakistan/percentage-of-students-in-tertiary-education-who-are-female-percent-wb-data.html>
- The World Factbook. (2022). Retrieved from Population by Country: <https://www.cia.gov/the-world-factbook/field/population/>
- Torrance, E. P. (1972). Can We Teach Children To Think Creatively?\*. *The Journal of Creative Behavior*, 6(2), 114–143. <https://doi.org/10.1002/j.2162-6057.1972.tb00923.x>
- United Nations. (2022). Retrieved from Department of Economic and Social Affairs, Population Division: <https://population.un.org/wpp/>
- UNESCO - Institute for Statistics. (2022). <http://uis.unesco.org/en/uis-student-flow>
- Van Praag, C. M., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29(4), 351–382. <https://doi.org/10.1007/s11187-007-9074-x>
- Wibowo, A., & Saptono, A. (2018a). Does Entrepreneurial Leadership Impact on Creativity and Innovation of Elementary Teachers? 21(2).
- Wibowo, A., & Saptono, A. (2018b). Does teachers' creativity impact on vocational students' entrepreneurial intention? 21(3), 13.
- Wu, S., & Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in China. *Journal of Small Business and Enterprise Development*, 15(4), 752–774. <https://doi.org/10.1108/14626000810917843>
- Yar Hamidi, D., Wennberg, K., & Berglund, H. (2008). Creativity in entrepreneurship education. *Journal of Small Business and Enterprise Development*, 15(2), 304–320. <https://doi.org/10.1108/14626000810871691>

- Zhang, Y., Duysters, G., & Cloudt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal*, 10(3), 623–641. <https://doi.org/10.1007/s11365-012-0246-z>
- Zhou, C., & Luo, L. (2012). Group Creativity in Learning Context: Understanding in a Social-Cultural Framework and Methodology. *Creative Education*, 03(04), 392–399. <https://doi.org/10.4236/ce.2012.34062>
- Zhou, H., Tian, J., Zhang, M., & Wu, Y. (2022). Gender-based differences in the relationships among proactive personality, perceived entrepreneurial support and entrepreneurial intention of Chinese private college students: A moderated mediation model. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020>