

## Original Article

# Correlation of Dimensions of an Effective Teacher with Students' Entrepreneurial Motivation

Bijan Rezaei Ph.D.<sup>1\*</sup>, Parisa Javdaneh M.A.<sup>1</sup>, Hoda Najafpour M.A.<sup>1</sup>, Behzad Karami Matin Ph.D.<sup>2</sup>

1. Dept. of Entrepreneurship Management, School of Social Sciences, Razi University, Kermanshah, Iran

2. Dept. of Public Health, Kermanshah University of Medical Sciences, Kermanshah, Iran

\*Address for Correspondence. Department of Entrepreneurship Management, School of Social Sciences, Razi University, Kermanshah, Iran, Zip-code. 67146-73175, Tel (Fax). +988338359036, Email. rezaee61@yahoo.com

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## Abstract

**Introduction:** This study was conducted to evaluate the association of dimensions of an efficient teacher with entrepreneurial motivation from the viewpoint of students.

**Methods:** The study population of this research included 110 pharmacy students (above third semester) at Kermanshah University of Medical Sciences, among whom 86 students were selected as the study sample through simple random sampling using Cochran formula. The effective teacher questionnaire (researcher-made), with Cronbach's alpha of 0.95, and the entrepreneurial motivation scale, with Cronbach's alpha of 0.81, were used to collect the data. The collected data were analyzed by SPSS.21 software using correlation coefficient and simple linear and simultaneous regression analysis.

**Results:** The results showed a significantly positive correlation between personality traits from among the dimensions of effective teacher and students' entrepreneurial motivation ( $P < 0.01$ ). Other dimensions had a slight impact on students' entrepreneurial motivation.

**Conclusion:** The personality traits of an effective teacher can significantly explain entrepreneurial motivation. Thus, personality traits are the most essential factors to be used to achieve educational objectives and to inspire entrepreneurial motivation.

**Keywords:** Entrepreneurship, Motivation, Education, Students

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## Introduction

In the recent era, as communities, economies and organizations are rapidly developing with an increase in population, entrepreneurship is required in a multifaceted interaction, i.e. in the economic development and growth, in the domain of job creation and in making changes through innovations and improving processes, so that the efficacy and operationalization of entrepre-

neurship in various concepts can be considered a major parameter to differentiate the developed and third world countries (1). Experience has shown that education along with other facilitating factors have a unique position in entrepreneurial development. The higher education system is certainly one of the largest and most complex human achievements and industries.

The concepts of entrepreneurship and development as well as knowledge production at universities are also of great importance. Universities, owing to having basic features like human capital, i.e. students and faculty members, are appropriate locations for knowledge-based innovation. Hence, university, as the most important source of production and development of new information, can contribute to better dissemination of entrepreneurship (2). While talking about education or higher education, concepts such as teacher and teaching become more evident than other related variables. In fact, the basic components of education in every university are student, teacher and educational environment. It is evident that disruption in any of these three components will reduce the quality of education.

According to the systematic design of education, the teacher is the most fundamental element involved in the accomplishment of educational objectives. The teacher can even make up for the deficiencies in textbooks and educational equipment, or conversely convert the most successful teaching environment into a passive and unappealing one, due to inability in making a favorable rapport (3). The effectiveness of a teacher, at a large scale, depends on his/her technical competence or expertise in teaching, job skills and individual qualifications. An efficient teacher generally creates spaces in all domains in which students gain insight, recognize and develop their potential talents and proceed in the direction of their professional and personal abilities in the best possible way (4). Based on the above discussion, research on effective teacher at university can help discover the shortages and compensate for educational deficiencies because this issue presents a rather comprehensive image of the quality of education at university, leading to reinforcement of strengths and elimination of weaknesses in teaching entrepreneurship by teachers. Accordingly, university should act more effectively in planning in-service training courses and favorably predict and meet the real needs of teachers in this regard.

The results of a study on the indicators of effective teaching at universities and higher education institutions and its accomplishment at Isfahan University showed that in the qualitative part, the top national teachers emphasized three categories, including appropriate starting and ending of the course, question-oriented teaching along with students' participation and some specific teaching considerations. In the quantitative part, however, the faculty members of Isfahan University, with a score of 3.60, considered lesson presentation indicators to be more than average level. The performance of faculty members in terms of faculty and academic rank showed

no significant difference, but their performance with regard to experience was different (5).

Another study on the characteristics of a good teacher from the perspective of the teachers and students of Zanjan University of Medical Sciences indicated that the most important features of a good teacher were teacher availability and timely class attendance in the domain of educational regulations based on the opinion of the students and teachers, respectively; teacher's mastery of the subject matter in scientific domain from the viewpoint of both groups; responding to the learners' questions and posing questions in each session in the domain of assessment and monitoring for the students and teachers, respectively; and eloquence of expression in the ethical domain in the view of both groups (6).

Further, a study carried out in 2015 on the desirable features to define and describe an effective teacher on 1145 Romanian teachers revealed a positive correlation between teacher quality and enthusiasm, creativity, flexibility, adaptability and learner's success categories (7).

In a study on the analysis of students' perception of effective teaching, Deal concluded that students considered an effective teacher as a person who is ready to listen to them, encourages interaction, is knowledgeable in his field, is sensitive and helpful, and understands and makes students understood. These teachers also provide a challenging and cooperative environment in which students feel they are part of the learning process. There are other studies on the effective factors involved in entrepreneurial motivation (8).

A study analyzing the factors affecting entrepreneurial motivation among students showed that individual skills, attitude, subjective norms, perceived environmental support, perceived environmental dynamicity and perceived behavioral control were the most significant factors influencing students' entrepreneurial motivation (9). Also, Baghersad et al. examined the effect of entrepreneurial education on entrepreneurial motivation among students of technical and vocational courses. They found that entrepreneurial education affected students' entrepreneurial motivation and possibility perception (10).

Moreover, Wilson et al. carried out a study in the U.S. on two groups of teenagers and master students. They reported that entrepreneurial education played a key role in enhancing self-efficacy and encouraging economic activity. In addition, the findings showed that entrepreneurship education to promote self-efficacy was more effective for women than men (11).

Furthermore, another study evaluated the impact of teaching how to recognize entrepreneurial opportunities on the entrepreneurial intention of nursing students. The results indicated no significant difference between entrepreneurial intention before and after the training program of recognizing entrepreneurial opportunities. Among the factors affecting entrepreneurial intention in this study, subjective norms were found to have a significant difference before and after running the program (12).

In the end, given the shortage of studies on the role of teachers in encouraging students' entrepreneurship as well

as lack of a comprehensive theory about characteristics of an effective teacher, the present study was aimed to explain the components of an effective teacher and to analyze the correlation between the dimensions of an effective teacher and entrepreneurial motivation from the perspective of students (Table 1). Various characteristics of an effective teacher (personality traits, teaching method and communication skills) were evaluated, and the correlation between the dimensions of an effective teacher and entrepreneurial motivation among the students of School of Pharmacy at Kermanshah University of Medical Sciences was also investigated.

**Table 1. Dimensions and characteristics of an effective teacher**

Dimensions of an effective teacher	Description of features
<b>Personality traits</b>	Updated knowledge of teachers, motivating students to study, emphasizing individual research by students, assessing students based on classroom activities, respecting students and considering their needs, believing in students' creativity and ideation, considering the strengths and abilities of students rather than focusing on their weaknesses, paying heed to students' views even if they are against the teacher's, self-confidence and decisiveness, accepting criticism, respecting the students, punctuality and timely class attendance
<b>Teaching method</b>	Using the teaching aids, preparing the class for discussion and thinking, conveying the materials clearly, organizing, arranging and sequencing the materials, ability to connect the course subjects to future career responsibilities, mastery of the content, presenting the new materials related to course, introducing the resources related to the course, assigning the homework related to the syllabi, changing theoretical subjects to practical workshops, teaching based on the key points of the topics, using new educational technologies, reinforcing students' creativity and innovation by posing open-ended questions and running the class using brainstorming technique
<b>Communication skills</b>	Inducing students to participate in discussion, reviewing the materials and solving problems, easy access to teachers outside classroom hours, friendly relationship with students and fair assessment

## Methods

This study was designed as a descriptive-analytical one using applied research method. In the first section, to obtain the opinions and research findings of experts in the field, the written documents, including the results of studies and articles containing their perspectives about the dimensions and components of effective teacher were evaluated. In the second section, from among the descriptive methods, coefficient correlation and regression analysis were used. The study population of this research comprised of 110 pharmacy students (above third semester) of Kermanshah University of Medical Sciences. The study sample was calculated to be 86 students who were selected via simple random sampling using Cochran formula.

To measure the students' entrepreneurial motivation, an 8-item standard questionnaire, rated based on five-point Likert scale from completely agree to completely disagree, was used. A total score of >24 indicated entrepreneurial motivation. The reliability coefficient of 86 returned questionnaires by the students was determined to

be 0.81 by SPSS.21 software using Cronbach's alpha. Also, to assess the students' opinions about effective teacher, a 30-item researcher-made questionnaire was used, items 1-12 measuring personality traits, items 13-25 evaluating teaching method and items 26-30 assessing communication skills. The internal consistency, as an index of reliability, was calculated to be 0.95 by SPSS.21 software using Cronbach's alpha. The content validity of the scale was confirmed by seven experts of entrepreneurship education at Razi University using content validity ratio (CVR). The CVR obtained for all items of the questionnaire was computed to be 0.78, which is an acceptable level considering the minimum acceptable level of CVR (0.75) based on Lawshe's table (13). Thus, it was confirmed that the necessary and important questions were used in this tool (14). The obtained data were analyzed by descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation coefficient, simple linear regression, and simultaneous multiple regression: Simultaneous multiple regression analysis is one of the multiple linear regression analyses in which all independent variables are simultaneously subjected to analysis and the effects of all

variables on dependent variable are simultaneously analyzed. In an ideal situation, there should not be linearity between independent variables of the study while performing regression analysis. To overcome this problem, the statistics of Variance Inflation Factor (VIF) and Tolerance Index should be calculated. A VIF >10 and a tolerance index close to zero indicate that there is linearity between independent variables and the

regression model is of no value. However, when these two statistics are close to each other, it is indicative of lack of linearity between independent variables, and shows the appropriateness of regression model.).

The conceptual framework of the study was drawn based on the definitions and concepts presented in this research (Figure 1).

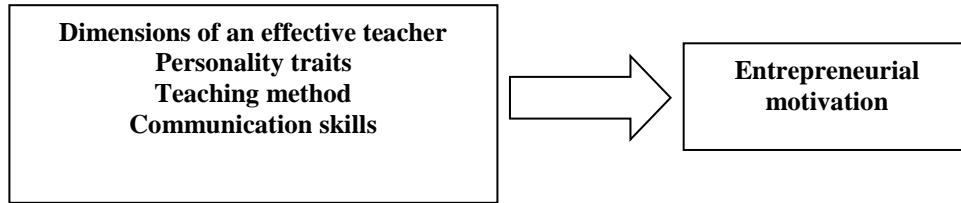


Figure 1. Conceptual framework of research

**Results**

The findings showed that the mean age of students was 22.01±9.04, 92% of students aged 19-25 years and 8% of them aged 26-29 years. Further, 34.5% of students were male and 65.5% were female, and the mean entrepre-

neurial motivation of all students was 31.25, indicating a high rate of entrepreneurial motivation among male and female students (Table 2).

Table 2. Descriptive indices of entrepreneurial motivation and dimension of effective teacher based on the participants gender

Variable	Gender	Frequency	Mean	Std. deviation	Range
Entrepreneurial motivation	Male	30	30.81	4.82	22.50
	Female	56	31.84	2.83	
	Total	86	31.25	3.64	
The dimensions of effective teacher	Personality characteristics	Male	30	37.26	9.74
		Female	56	38.64	8.25
		Total	86	38.16	8.77
	Teaching method	Male	30	32.58	8.85
		Female	56	34.79	8.02
		Total	86	34.03	8.34
Communication skills	Male	30	13.37	4.04	
	Female	56	13.45	3.79	
	Total	86	13.42	3.86	

To analyze the relationship between the dimensions of effective teacher and entrepreneurial motivation from the students' viewpoint, Pearson correlation coefficient was used because of the use of interval measurement scale for

dimensions of effective teacher and entrepreneurial motivation, normal distribution of dependent variable and parametric test (Table 3).

Table 3. Pearson correlation test

Variable	1-Personality characteristics	2- Teaching method	3- Communication skills	4- Entrepreneurial motivation
1-Personality characteristics	1	0.786** 0.001	0.725** 0.001	0.426** 0.001
2- Teaching method	-	1	0.760** 0.001	0.006 0.067
3- Communication skills	-	-	1	0.003 0.51
4- Entrepreneurial motivation	-	-	-	1

Significant level = 0.01 \*\*

The results also showed a significantly positive correlation between the dimensions of effective teacher at 1% level (personality traits, teaching method, communication skills). Moreover, among these dimensions, only a significant correlation was found between personality traits and entrepreneurial motivation

at 1% level. The results showed that only the t value of regression coefficient of personality traits is significant at 1% level. This indicates that personality traits dimension is a good predictor of students' entrepreneurial motivation (Table 4).

**Table 4. Simultaneous regression analysis**

Independent variable	Unstandardized coefficients B	Standardized coefficients Beta	t	P value	Tolerance	VIF
Constant	3.436	-	17.738	< 0.001	-	-
Personality characteristics	0.325	0.456	0.507**	0.010	0.344	2.90
Teaching method	0.002	0.005	0.025	0.980	0.306	3.26
Communication skills	0.002	0.002	0.011	0.991	0.379	2.63
Significant level = 0.01 **			R= 0.566	R <sup>2</sup> = 0.321		

Based on the results of simultaneous regression analysis, personality traits was the only predictor of students' entrepreneurial motivation. Simple linear regression

analysis was used afterwards to evaluate the association between entrepreneurial motivation and personality traits (Table 5).

**Table 5. Simple linear regression analysis**

Independent variable	Unstandardized coefficients B	Standardized coefficients Beta	t	P value	
Constant	5.364	-	19.211	0.001	
Personality characteristics	0.431	0.561	0.859**	0.010	
Significant level = 0.01 **		R= 0.418	R <sup>2</sup> = 0.176		

As shown in the table, the multiple correlation coefficient (R) between the Personality characteristics and entrepreneurial motivation was 0.418, and coefficient of determination (R<sup>2</sup>) was 0.176. Thus, the regression equation is written as follows:

Entrepreneurial motivation = 5.364 + 0.431 (Personality characteristics)

## Discussion

The present study aimed to examine the correlation of dimensions of effective teacher with entrepreneurial motivation from the perspective of students. The findings showed a significantly positive correlation between personality traits from among the dimensions of effective teacher and entrepreneurial motivation in the opinion of students (P<0.01). Other dimensions, however, had a slight correlation. Therefore, it can be said with 99% confidence that entrepreneurial motivation will change in students by changing the personality traits of effective teacher. The results of this study were in line with those of previous ones (10, 15-17). Also, the results of regression analysis based on regression model indicated

that personality traits of an effective teacher was the only predictor of students' entrepreneurial motivation. This means that 17.6% of dependent variable changes (entrepreneurial motivation) can be predicted by the personality traits.

In fact, the personality traits of teacher are the first and most important factor that should be sought in a teacher. Enumerating the characteristics of teachers is not an easy job because various societies with different philosophies and attitudes have diverse expectations from the teacher. It can be argued that the personality traits of teachers involve their behaviors and practices, i.e. the type of behavior with students and respecting their creative ideas, and directing these ideas towards innovation and commercialization contributes to increasing students' entrepreneurship motivation.

The results of regression analysis revealed that 17.6% of dependent variable changes (entrepreneurial motivation) could be explained by personality traits, which is in line with the results of Talebi & Zare Yekta (16). The findings of the current study showed that parameters such as



respect for students and considering their needs, believing in students' creativity and ideation (9, 18), considering students' strengths and abilities rather than focusing on their weaknesses, paying heed to students' opinions, passing the training course (2, 10, 19, 11), personal skills, attitude, subjective norms, perceived environmental support, perceived environmental dynamicity and perceived behavioral control (9) and opportunity recognition training (12) can affect students' entrepreneurial motivation. Further, it was mentioned in this study that an effective teacher should respect students, have mastery over the course and apply various teaching methods to enhance students' entrepreneurial motivation.

On the other hand, trainers and curriculum developers play a pivotal role in encouraging and promoting creativity and creating an appropriate environment for entrepreneurship. They also have a key role in selecting and applying appropriate methods and strategies to fulfill this duty. In Iran, because most universities do not have experienced and skilled entrepreneurship trainers, it is necessary to run training courses for entrepreneurship teachers to help them update their knowledge about entrepreneurship, innovation and creativity and to assist them to learn effective entrepreneurship methods (20).

Based on the obtained findings, the following suggestions are presented: 1) Running entrepreneurship courses for teachers in all university majors to make them familiar with business and entrepreneurship environment in Iran, 2) Running entrepreneurship workshops, or presenting a one-unit entrepreneurship course for pharmacy and medical students, and 3) Encouraging effective teachers to share academic experiences and practical strategies of effective teaching and communication with students.

## Conclusion

The current study showed a significant correlation between personality traits from among the dimensions of an effective teacher and entrepreneurial motivation in the viewpoint of students. However, a poor correlation was found between other dimensions, teaching method and communication skills, and entrepreneurial motivation. Therefore, universities need to be directed toward entrepreneur universities by formulating required strategic programs. This needs establishment of a proper

framework along with structural and non-structural measures and development of entrepreneurship thinking at university environments, whose ground is fortunately suitable in Iran. The presence of effective teachers and faculty members at universities and development of skills and entrepreneurship thought, as one of the most important foundations of higher education system, is followed by development of entrepreneurial motivation and thought among students, owing to their impact on students' knowledge, thinking, attitudes and motivation.

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