

Entrepreneurial Self-Efficacy and its Dimensions in Higher Education

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Abstract

The aim of this study is to evaluate entrepreneurial self-efficacy and its dimensions in higher education institutions Isfahan, Iran. A descriptive and analytical research method was utilized. The Statistical population included all faculty members of Isfahan universities. The findings showed in Isfahan University that entrepreneurial self-efficacy and its dimensions (developing new product and market opportunities; building an innovative environment; initiating investor relationships; defining core purpose; coping with unexpected challenges; and developing critical human resources) mean scores were lower than average level. The five dimensions of entrepreneurial self-efficacy Isfahan University of medical Sciences were higher than average level while the lowest mean is related to building an innovative environment. Significant differences were also observed regarding demographic variables. This paper shows to the importance of analyzing entrepreneurial self-efficacy dimensions in Iranian universities. It offers practical help to universities to develop means to identify, measure, manage and value their entrepreneurial assets.

Keywords: Entrepreneurial, Self-Efficacy, faculty members, higher education.

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Introduction

Higher education plays a significant role in laying the substance for capability progress for sustainable entrepreneurship. Usually, however, educational scholars emphasis either on the issue of education for sustainability or on entrepreneurship education. There is little effort from an educational point of view which discovers and/or crosses the boundaries of these two disciplines, let alone work in which an effort is completed to integrate these perspectives (15).

Self-efficacy completely orient to psychology aspects that emerged in empire of behavior organizations and include most relevant aspects, at least for organizational behavior text since self-efficacy is based on social cognitive theory. First self-efficacy definition officially proposed by Bandura (1999) through social cognitive theory that take in social environment and cognitive elements, in addition to behavior itself (1-3). It is known as Bandura's Social Cognitive Theory (SCT). Referring to SCT, the self-efficacy is defined as

personal adjustment or acceptance in "how well one can execute action that required to deal with prospective Conditions". Luthans (2001), in chapter 9 of Organizational Behavior believed that self -efficacy is explained in terms of psychological task in environmental events, personal aspects in form of cognitive, affective, biological variables, and behavioral patterns" Self-efficacy positively orient to psychology aspects (17). It is defined as personal adjustment or belief in "how well one can execute action that required to deal with prospective situations" (1-3), and it is recognized as behavior trait/personality characteristic (16). An entrepreneur must have a strong motivation or personality trait to "trigger" his alertness, particularly to mobilize continuous interface with environment. Thus, an entrepreneur wants to have entrepreneurship self-efficacy (ESE) to develop more alert and sensitive to chances that still not uncovered in environment (9).

Bandura (1997) gets personal experience as the first and the most dominant source of self-efficacy. In the context of entrepreneurship, that means

previous (successful) experience in entrepreneurship with the experience in setting up corporations, and the experience in working corporations. The second main source of self-efficacy, according to Bandura (1997), is indirect experience or modeling, based on observation of behavior of additional person (role models) and the significances of that behavior. The third presumed source of self-efficacy (Bandura, 1997) is verbal persuasion. If the reliable person (family member, friend, teacher), suitably provides real support or encouragement to a certain activity, it is very probable that more efforts will be put in that activity, which will consequently result in an enlarged SE. Finally, a fourth source of self-efficacy according to Bandura (1997) is to assessment the physical indicators, respectively physiological and affective states that can arise in an accompanying activity.

In the context of entrepreneurial behavior, or psychology of entrepreneurship, the SE is intensively surveyed in the nineties of the last century. The term entrepreneurial self -efficacy (ESE) denotes person's belief in his/her own ability to establish an organization (5). Greater ESE implies more intrinsic motivation for ingoing into entrepreneurship, and greater asset of efforts and perseverance over the problems. ESE has emerged as the single largest predictor of entrepreneurial intentions and entrepreneurial behavior, but also as a significant predictor of later achievement of the organization (6). Such findings are explained with the argument that private organization is the "extension" and "spitting image" of the owner. Finally, entrepreneur's abilities became the capabilities of the organization, and his/her vision and goals become the vision and objectives of the organization (6).

De Noble et al. (1999) describe this in the concept of ESE. They explain ESE as "a construct that measures a person's belief in their own abilities to make on the various skill requirements essential to pursue a new venture opportunity." There are six dimensions including developing new product and market opportunities (contains a person's belief to be able to create new products and to find opportunity, in order to have solid foundation to launch a venture), building an innovative environment (involves a person's belief to be able to encourage others or his/her team to try a new idea or to take innovative action), initiating investor relationships (implicates a person's belief to be able to find sources of funding for their venture), defining core purpose (involves a person's belief to be able to be clear with his/her vision and to sustain the vision, and clarify it to his/her team and investors), coping with unexpected challenges (involves a person's belief to be able to accept and deal with ambiguity and uncertainty in

the start-up entrepreneur) developing critical human resources (involves a person's belief to be able to recruit and retain important and talented individuals to be the members of the venture). Few studies examined the association between entrepreneurship and technical and vocational education and training (14) and measuring entrepreneurial self-efficacy among technical and vocational students has been almost overlooked (24). This lack of knowledge and considerate about entrepreneurial competence may face educators with serious challenges in developing effective curriculum structure and content in addition to teaching and learning strategies based on the specific philosophy, nature, and purpose of entrepreneurship education in technical and vocational schools (20,13,10,11). Teacher self-efficacy enhances teacher's tendency and capability to measure their instructional performance when students fail and increases their commitment to teaching profession (7). Principally, little empirical evidence exists on measuring teachers' and students' ESE while, previous research findings indicated that teacher's self-efficacy affects and is affected by students' efficacy (23). Teachers with high sense of self-efficacy are more likely to be successful in providing an effective learning environment and developing students' knowledge and skills. Importantly, teachers' and students' efficacy are reciprocally related (4). However, our considerate about entrepreneurship teacher's efficacy, the sources that build their sense of teaching efficacy, and the contextual factors that affect their teaching efficacy formation and improvement is limited (21). Entrepreneurial organizations raise and survive through the talent of the entrepreneur to continuously innovate to lead or react to shifts in dynamic situations involving customers and competitors (19). However, previous studies, such as the work of Hallak et al. (2012), examined the relationship between ESE and performance at the latent construct level and used the parceling method to operationalize the multi -dimensional construct of ESE into a latent construct. This study purposely focuses on examining the Entrepreneurial Self-Efficacy and its dimensions at Isfahan universities (12).

Methods

The present study employs a questionnaire survey approach to collect data for testing and research Question. Variables in the questionnaire comprise background information, Entrepreneurial Self-Efficacy in higher education. All variables require five -point Likert style responses ranging from "strongly disagree" to "strongly agree". The population for the study is 680 faculty members in 2 universities comprise Isfahan University and

Isfahan University of medical Sciences. This study uses a stratified random sampling method to select 340 faculty members. The authors distribute 340 questionnaires and ask for the questionnaires to be completed by faculty members. Of the 320 returned questionnaires, 20 are incomplete. The residual 320 valid and complete questionnaires are intended for the quantitative analysis. Data were composed by three questionnaires:

To measure the level of Entrepreneurial Self-Efficacy, this study used a questionnaire which is a modification from the instrument developed by De Noble et al. (1999). The instrument consisted of 23 items, which covers 6 dimensions of Entrepreneurial Self-Efficacy, including developing new product and market opportunities; building an innovative environment; initiating investor relationships; defining core purpose; coping with unexpected challenges; and developing critical human resources (8). To verify the questionnaire

validity face and content method and authority opinions were utilized.

Reliability coefficient of questionnaire was estimated through Cranach's alpha coefficient ($r=0.92$). To show the differences Entrepreneurial Self-Efficacy among universities types, t-test, Fisher test, MANOVA were employed. A multiple comparison post hoc test with least significant difference (LSD) was used to determine which universities types were significantly different from the others.

Results

Most respondents (23.3%) aged 45 to 50 years; most of them (93%) possessed PhD degree. Most faculty members (39.9%) had between 10 and 20 years of service. 34.1% of the examinees included female and 65.9% male.

Table 1: Entrepreneurial Self-Efficacy mean, standard deviation Isfahan University ($\bar{X} = 3$, $df = 240$)

Indicators Entrepreneurial Self-Efficacy(dimensions)	\bar{X}	S	SK	\bar{X}_d	tob	P
developing new product and market opportunities	2.62	0.67	0.05	0.12	2.270	0.024
building an innovative environment	1.93	0.71	0.05	-0.58	-10.77	0.000
initiating investor relationships	2.22	0.58	0.04	-0.28	-6.39	0.000
defining core purpose	2.45	0.51	0.03	-0.04	-1.06	0.023
coping with unexpected challenges	2.50	0.60	0.05	-0.01	-0.21	0.000
developing critical human resources	2.17	0.68	0.05	-0.33	-6.47	0.000
Total	2.39	0.45	0.03	-0.10	-3.07	0.003

Table [1] shows that the means of all Entrepreneurial Self-Efficacy dimensions were about lower average in Isfahan University, with developing new product and market opportunities

the highest ($M = 2.62$) and building an innovative environment the lowest mean ($M = 1.93$).

Table 2: Entrepreneurial Self-Efficacy mean, standard deviation Isfahan University of medical Sciences ($\bar{X} = 3$, $df = 142$)

Indicators Entrepreneurial Self Efficacy(dimensions)	\bar{X}	S	SK	\bar{X}_d	tob	P
developing new product and market opportunities	3.27	0.94	0.08	0.27	3.50	0.001
building an innovative environment	2.50	0.83	0.07	-0.09	-1.35	0.000
initiating investor relationships	3.21	0.76	0.06	0.21	3.34	0.001
defining core purpose	3.27	0.89	0.07	0.27	3.60	0.000
coping with unexpected challenges	3.33	0.77	0.06	0.34	5.20	0.000
developing critical human resources	3.45	0.83	0.07	0.45	6.52	0.000
Total	3.26	0.67	0.06	0.26	4.47	0.000

[Table 2] regarding the five dimensions of Entrepreneurial Self-Efficacy Isfahan University of medical Sciences the highest mean belongs to

developing critical human resources ($M = 3.45$), while the lowest mean is related to building an innovative environment ($M = 2.50$).

Table 3: Paired comparison of Mean Differences and standard deviation of Entrepreneurial Self-Efficacy (dimensions)

Entrepreneurial Self-Efficacy	Demographic Variables		Mean Differences	Sig
building an innovative environment developing critical human resources	University Type	Isfahan University of medical Sciences and Isfahan University	0.8742	0.000
		Isfahan University and Isfahan University of medical Sciences	0.6358	0.005
developing new product and market opportunities	Service Background	Higher than 21 years and 1 - 10 years	0.4182	0.014

According to finding of multivariate analysis (MANOVA) showed that observed F at confidence level of $p \leq 0.05$ for Entrepreneurial Self-Efficacy(dimensions) according to demographic characteristics is significant. Eta square for sex, age, university rank are not significant. But Eta square for university type and service background is significant (Table 3).

Discussion

Self-Efficacy Theory posits that while an individual believes they can produce a wanted outcome through their activities, they are more likely to act and achieve the outcome (1-3). This is because their level of self-efficacy influences their incentive, exertions of effort, perseverance in the face of difficulty, emotional stability, and tension levels (1-3,23). Therefore, high levels of self-efficacy increases an individual's determination, leading them to make better in their drive for success (23). Therefore, high levels of self-efficacy increases an individual's.

Research results showed that in Isfahan University that entrepreneurial self-efficacy and its dimensions (developing new product and market opportunities, building an innovative environment, initiating investor relationships, defining core purpose; coping with unexpected challenges, and developing critical human resources) mean scores were lower than average level. Results of this study are almost compatible with studies that showed that the lack of knowledge and understanding about entrepreneurial competence may face educators with serious challenges in developing effective curriculum structure and content as well as teaching and learning strategies based on the specific philosophy, nature, and purpose of entrepreneurship education in technical and vocational schools (20,13,10,11). The findings showed the five dimensions of entrepreneurial self-efficacy Isfahan University of medical Sciences were higher than average level while the lowest mean is related to building an innovative environment. Significant differences were also observed regarding demographic variables. Entrepreneurial organizations grow and survive through the ability of the entrepreneur to continuously innovate to lead or react to shifts in dynamic situations involving customers and competitors (19). Finally, significant differences were observed between

entrepreneurial self-efficacy dimensions regarding demographic variables. the little empirical evidence exists on measuring teachers' and students' entrepreneurial self-Efficacy while, previous research findings indicated that teacher's self-efficacy affects and is affected by students' efficacy (23).

Conclusions

Teachers with high sense of self-efficacy are more likely to be successful in providing an effective education environment and developing students' knowledge and skills. Importantly, teachers' and students' efficacy are reciprocally related (4). As for Iranian universities in delivering knowledge services, the most valuable asset is the knowledge and experience of the staff. So, the first step is to promote the entrepreneurial self-efficacy and make the faculty members learn necessary knowledge within the shortest time, and shorten the time for troubleshooting, encourage faculty members to provide knowledge and share experience with others, thus creating an entrepreneurial self-efficacy enterprise culture.

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