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# Evaluation of Views of Professors and Students and Student Need for Topics of Suggested Entrepreneurship Course Syllabus in Paramedical Sciences, 2014

Afshin Amini,[1] Farshad Fatahi,[2] Narjes Alsadat Nasabi,[3,*] and Mahbobeh Abdolahi Pori Haghighi[4]

[1]Department of Anesthesiology, School of Medicine, SUMS, Shiraz, Iran
[2]General Practitioner and the Head Office of Entrepreneurship, SUMS, Shiraz, Iran
[3]Candidate in Human Resource Management, Tehran University, Alborz Campus
[4]Accounting and entrepreneurship expert, SUMS, Shiraz, Iran

[*]*Corresponding author*: Narjes Alsadat Nasabi, Ph.D. Candidate in Human Resource Management, Tehran University, Alborz Campus, E-mail: nargesnasabee@yahoo.com

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## Abstract

**Background:** Development, maintenance, and improvement of entrepreneurial behaviors in students are the focus of entrepreneurship education.
**Objectives:** This study aimed to compile entrepreneurship education topics in paramedical sciences with respect to the labor market and working nature of the intended courses based on the views of professors and students.
**Methods:** In this descriptive-analytical study, the views of professors (65) and students (531) from five schools of Shiraz University of Medical Sciences were used to design and compile applicable and scientific topics for entrepreneurship education. A questionnaire containing specialized open-ended and closed-ended questions related to entrepreneurship skills was completed by both target groups and used for data collection. The validity of the questionnaire was approved by expert professors, and its reliability was confirmed by Cronbach's alpha (0.71). Data was analyzed using SPSS (version 19), mean, T-test, and content analysis at a significance level of 0.05 (confidence interval = 95%).
**Results:** This study determined the skills and subsets of each and suggested topics for an educational program. Moreover, it showed that, at a significance level of 0.05, there is a statistically significant difference in the views of professors and students regarding each skill ($P < 0.001$).
**Conclusions:** It is essential and would be efficient to expand entrepreneurship executive programs beyond the current courses to include the basics of creativity and entrepreneurship and courses and seminars with the following contents: writing a business plan, management principles, principles of negotiation and effective communication, teamwork, business launching and management, marketing principles, an introduction to law, financial affairs, and risk management.

*Keywords:* Entrepreneurship, Students, Education, Syllabus, Paramedicine

## 1. Background

"Entrepreneurship" was first proposed by Cantilon in the 18th century (1). This concept includes subtle and wide dimensions and can be defined as:

-The opportunity to identify and apply resources in critical conditions; to create and develop business opportunities (2).

-Integration of formal learning in order to develop job opportunities and making money (3).

At a broader level, entrepreneurship is a process that provides society with entrepreneurs who have entrepreneurial behaviors (4). These people are flexible in hard working conditions and are able to succeed in today's working conditions (5). Entrepreneurship is considered one of the criteria of development and promotion. It involves starting a new business and developing new products or services (6).

In this process, the risks of entrepreneurship are managed and a new enterprise is designed; profit and value are developed through new methods, and innovative methods and opportunities are explored to develop a new product, provide a unique service, and create value (7).

Today, the development, maintenance, and improvement of entrepreneurial behaviors are focal points of entrepreneurship (8) and of helping individuals become entrepreneurs.

An entrepreneur is a person who seeks opportunities and directs innovation which is essential for economic improvement (9). Having an attitude specific to professional improvement is not necessary to becoming an entrepreneur; rather, entrepreneurship is a career for which one can plan or it is a procedure available to many people who have imagined it (10). Therefore, specifying scientific

and applicable content for training individuals, especially students, to become entrepreneurs is one of the necessities of a system that implements and supports entrepreneurship and private business.

Since most of the current entrepreneurship curriculum is specially designed for the Ministry of Sciences and is different from that of specialized working areas in the Ministry of Health, treatment and medical training, the need for more relevant topics is substantial. Thus, the main aim of this study was to specify and compile an entrepreneurship syllabus in paramedical sciences based on the views of students and professors at different schools of Shiraz University of Medical Sciences.

The primary goal of developing entrepreneurship is to train confident people who are aware of opportunities, those who are more willing to start an independent business (11). Hence, recent research has focused on the effect and importance of educational programs aimed at fostering entrepreneurship (12). Entrepreneurship as a scientific field just like other disciplines has a set of scientific and practical principles that lead to the rejection of the assumption that entrepreneurship cannot be acquired (13).

Entrepreneurship can be learned or at least developed through education (14). In their 1991 study, Hayes and Robinson concluded that developing educational programs and teamwork is essential for increasing the quality of entrepreneurship training. According to Hayes and Robinson, entrepreneurship education has come a long way in the past 20 years; yet, there are several weak points in the field. Investigating these weak points will contribute to recognizing the needs of entrepreneurship education (15).

In 2012, Brancu et al. investigated the entrepreneurship motivation of students. They found that, since entrepreneurs are sensitive to their environment, they can be influenced by media or cultural contents. Therefore, it is possible to build the culture of entrepreneurship in students through education (16). According to Cinneide and Garavan, the three major educational activities of entrepreneurs are knowledge, skills, and perceptions. However, most formal entrepreneurship education deals with "knowledge" in a comprehensive and analytical way (17). Hence, the key objective of a successful business is to develop new knowledge in order to create and sustain a competitive advantage. The major challenge is that "skills" are not sufficiently taken into account, and "perceptions" are also often ignored.

To achieve this objective, it is necessary to offer courses which improve students' skills of communication, management, development of new products, access to technological innovation, and creative thinking (18). These courses must seek to improve and promote motivation and tendencies such as independence, innovation, opportunity and venture seeking, commitment to work, problem-solving, and enjoying uncertainty and ambiguity (19). Entrepreneurship is one of the most efficient ways to facilitate business initiation in students who have graduated. Various studies in Europe have shown that such an education makes people more responsive, venturesome, and successful in business challenges. In other words, it makes them entrepreneurs (20).

Entrepreneurship education is increasingly being developed in Iranian universities. The aim of designing these educational programs is to engage students in practical experiences and to train a workforce with entrepreneurial traits. These programs will help students develop new ideas and put them into practice. Different educational procedures are used to promote students' skills in initiating business enterprises (21). Fayolle et al. suggested that entrepreneurship education should practically measure and examine job opportunities provided for students as well as change their attitudes (22). Moreover, the education should ensure that people can manifest their entrepreneurial behaviors and make use of the learning advantages in public and private workplaces (23).

Finally, according to Moghimi and Ahmadpour, the large gap that exists between current and desired situations of educational components necessitates disciplined and comprehensive educational programs for developing the entrepreneurial spirit and skills (13).

Several studies have investigated entrepreneurship and factors affecting it. In 2012, Hong et al. reviewed students' behavioral and psychological characteristics and their personal background in entrepreneurship. They analyzed external factors affecting entrepreneurship. Their findings showed that entrepreneurship education decreases risks, increases profits, and as a result, it indirectly affects decision-making. Furthermore, entrepreneurship education has a significant influence on training and fostering entrepreneurs, promoting the quality of entrepreneurship, and improving commercial awareness (24). In their study, Jones and English stated that it is possible to increase student confidence, skills, and knowledge and to enable them to start a business through entrepreneurship education (3).

In 2014, Kuttim et al. studied entrepreneurship education among university students and their tendencies toward entrepreneurship. According to their results, students believe that lectures and seminars are not as essential as practicing group formation or directing and coaching by students. Engagement in these practical programs improves the entrepreneurial tendencies of students (23). Therefore, practical entrepreneurship experiences affect students' interests in entrepreneurship (6).

In 2013, Sudharson in his article titled "An organizational perspective of knowledge communications in developing entrepreneurship education for engineering students" concluded that entrepreneurship education may prepare students to initiation entrepreneurial activities (6).

The number of entrepreneurship programs at universities and higher education centers has increased from a few programs in the 1970s to 1600 programs in 2002 (25). An interim program of entrepreneurship was held at Harvard university for the first time in 1947. In the late 1950s, Japan became the first country to work classically on this issue, disseminating entrepreneurship culture from high schools and providing training. In Japan, entrepreneurship has been extended to universities. Between 1970 through 1992, over 96% of industrial innovations which elevated the country's position in the global economy to a superior level was accomplished by entrepreneurs (26). In 1970, Southern California University launched a Master's degree program for economic management centered around entrepreneurship. Sinceits beginning, this course has consistently gained ground among academic courses. By the 1980s, more than 300 training centers added courses related to entrepreneurial education and businesses development and administration to their curriculum.

The number of training centers increased to 1050 after the 1990s (27). Entrepreneurship education grew significantly, and more than 2200 related credits are offered at 1600 educational centers in the United States (25). Entrepreneurship education started very late in Iran, and thus, this country is several years behind other countries engaged in entrepreneurial activities (28).

Entrepreneurship skills can be acquired (29). They can be learned through various methods and procedures (29). The modern world of business emphasizes entrepreneurship education and its ongoing significance among students. In addition, acquiring entrepreneurial knowledge and skill is considered one of the qualifications for starting a competitive business. Graduate students should be prepared to grow in the unstructured, uncertain conditions of an entrepreneurial environment and overcome its difficulties (30).

Teaching entrepreneurship in different years of higher education will have a significant effect on fostering an entrepreneurial spirit in students (31). Entrepreneurship learning increases the probability of success in graduate students in starting an independent business (32).

The findings of Edet and Ekpoh's study also showed that entrepreneurship can be acquired. They suggested that all students be taught at least one entrepreneurship course. Their results are consistent with the findings of other researchers (33). Previous studies demonstrated that practical entrepreneurial training and real life experience increases the tendency to enter this domain (22, 34-38). Therefore, the curriculum should be designed based on this effect (39). In spite of the fact that several studies have examined the effect of entrepreneurship education on attitudes towards it, Lorz reported that entrepreneurship education has no effect on the tendency to enter this domain (40).

One major concern is how to identify and implement efficient, practical entrepreneurship courses and skills. According to professors and students, university curricula should include entrepreneurship courses for acquiring entrepreneurial traits and actualizing the competencies of today's students and prospective entrepreneurs.

## 2. Objectives

The main objective of the current study was to design and compile entrepreneurship educational topics based on the views of professors and students of Shiraz University of Medical Sciences, based on the working nature of the courses as well as the labor market. This study was designed and implemented in order to enhance the entrepreneurship capabilities of students (potential entrepreneurs) and graduates and to increase their number.

## 3. Methods

This study was descriptive-analytical in nature and practical in objective. The knowledge and views of professors and students from 5 schools of Shiraz University of Medical Sciences (school of nursing and obstetrics, school of health, school of rehabilitation, school of paramedical sciences, and school of medical management and informatics) were used to design and compile scientific and practical topics for paramedical students. The educational courses of each school are shown in Table 1.

Given the limited number of expert professors for each field of study, the questionnaires were sent to all of the professors and collected at a time defined by them (census sampling). Data was also collected from 3rd and 4th semester students of associate's and master's degree programs and from 7th and 8th semester undergraduate students (object-based sampling). These students were chosen, because they were about to be graduated and would start working; in addition to having passed most of their courses, they could provide the researchers with better and more reliable data because of their familiarity with the specialties and intricacies of their field of study. The inclusion criterion was the professors' and students' personal

**Table 1.** Descriptive Data

| School | Field of Study | Students (N) | Professors (N) |
|---|---|---|---|
| **Health and nutrition** | General health/ occupational health/ environmental health/ epidemiology/ health education/ entomology ergonomics/ nutrition sciences | 162 | 33 |
| **Medical management and informatics** | Medical records/ health information technology, management of health care services/ medical economics/ medical informatics | 112 | 8 |
| **Nursing and obstetrics** | Nursing/ obstetrics/ operating room/ medical emergency/ anesthesia | 256 | 40 |
| **Rehabilitation** | Physiotherapy/ sport physiotherapy/ speech therapy/ work therapy | 60 | 26 |
| **Paramedical sciences** | Radiology/ laboratory sciences | 155 | 9 |
| **Total** | | 745 | 116 |

consent. Unreliable questionnaires were excluded from the study.

The instrument of the study was a questionnaire containing specialized open-ended and closed-ended questions in the field of entrepreneurship skills completed by both target groups. This questionnaire was designed to assess the skills required for preparing graduates for exposure to real life projects. This researcher-made questionnaire was developed based on related scientific texts, the viewpoints of expert professors, and entrepreneurship consultants of "Jihad Daneshgahi." The first part of the questionnaire requested demographic information; the second part contained closed-ended questions, and the third part contained open-ended questions. The specialized, closed part included four categories: personal skills (7 questions), management skills (10 questions), technical skills (11 questions), and general skills (3 questions). Fourteen questions comprised the third part.

Each closed-ended question had 10 items. Respondents chose one item based on the importance of the subject mentioned in the question. The questionnaires had different wording, but the same content based on the target group (students or professors). Expert professors confirmed the validity of both questionnaires (5 professors with Ph.Ds. in entrepreneurship and one professor with a Ph.D. in educational planning). In a pilot study on 30 students and 24 professors, the Cronbach's alpha coefficient of the closed-ended questionnaire was reported to be 71%. The questionnaire was also validated in the final study. Table 2 shows these coefficients.

Data were analyzed using SPSS, version 19. For the second part of the questionnaire, mean scores for the views of professors and students were compared and the status of each skill was determined. Content analysis of qualitative data was used for the open-ended questions. Finally, the results were evaluated in the presence of entrepreneurship professors, and suggested topics for each skill and its subsets were specified. The T-test was used to examine any significant differences in the views of professors and students. This test was conducted for all the intended skills of the closed-ended questionnaire. This study obtained ethical approval from the ethics committee of Shiraz University of Medical Sciences.

**Table 2.** Cronbach's Alpha Coefficient of the Categories of Closed Questionnaire

| Cronbach's Alpha Coefficient | Value |
|---|---|
| **Total Cronbach's coefficient** | 0.71 |
| **Cronbach's coefficient of personal skill** | 0.68 |
| **Cronbach's coefficient of management skill** | 0.89 |
| **Cronbach's coefficient of technical skill** | 0.70 |
| **Cronbach's coefficient of general skill** | 0.65 |

## 4. Results

Sixty-five out of 116 and 531 out of 746 reliable questionnaires were obtained from professors and students, respectively. Response rates were 56.03% and 71.2% for professors and students, respectively. Table 3 shows the data obtained from open-ended questions to determine entrepreneurship fields as well as courses widely used in different fields of study.

The views of the target groups regarding entrepreneurship possibilities in different fields of study were varied. It is important to put these ideas into practice, especially in areas in which the unemployment rate is high.

Table 4 shows the results of students' and professors' views about the skills required for entrepreneurship. According to university professors, verbal communication skills, human relationships, planning and setting goals, leadership and providence, and decision-making are of great importance to a successful entrepreneur. Students, on the other hand, believed that human relationship skills, planning and setting goals, leadership and providence,

**Table 3.** Results of the Content Analysis of Open-Ended Questions of the Questionnaire

| School | Field of Study | Entrepreneurship Possibilities in the Field of Study | Courses Widely Used in Employment |
|---|---|---|---|
| **Health and nutrition** | Nutrition | Establishment of office or establishment of foodstuff factories | Diet therapy, traineeship |
| | Medical entomology | Sericulture, Apiculture | Epidemiology, pesticides, Research methodology |
| | General health | - | Technical skills, IUD |
| | Professional health | Establishment of counseling office for providing services related to safety and assessment of harmful factors of workplace | Industrial safety |
| | Epidemiology | Establishment of research companies, receiving projects of universities and Ministries | Methods in Epidemiology |
| | Environmental health | - | Water and wastewater, Health care in public places |
| | Health education | - | Health education, communications, Healthcare in schools |
| **Nursing and obstetrics** | Nursing | Providing services at home | Diet therapy, traineeship, transfer of the injured patients, pulmonary and cardiac revival |
| | Medical emergencies | Counseling clinics, private Nursing Agency | Internal medicine, medical emergencies in specific situations, patient evaluation |
| | Operating room | - | Surgical technology |
| | Obstetrics | - | Pregnancy and delivery, women diseases family planning |
| **Rehabilitation** | Physiotherapy | Establishment of water therapy centers, amendatory sports, marketing of physiotherapy Equipment | Electrotherapy, Hand Treatment methods, marketing for Equipment of physiotherapy |
| | Speech therapy | - | Practical courses |
| | Work therapy | Marketing of medical equipment related to rehabilitation | Treatment methods, training workshops |
| **Paramedical** | Radiology | Establishment of private clinics | Practical methods and protocols |
| | Laboratory sciences | Establishment of medical equipment companies. establishment of laboratory | Parasitology, blood chemistry, mycology |
| **Medical management and informatics** | Medical documents | - | Information technology and coding, |
| | Medical informatics | Establishment of software companies for producing management and Health care software | Statistical software such as HIS, SPSS, technology of disease coding |

management and persistence, resistance and perseverance are more important factors for entrepreneurship. The suggested topics of educational courses are shown in this table.

The T-test was used to review the significant difference in views between students and professors. Table 5 shows the results of the T-test at the significance level of 95%. The statistical differences in views between students and professors in each of the technical, management, personal, and general skills as well as their subsets were significant in terms of t-values and p-values. The research hypothesis was that the statistical difference in views between students and professors is significant. The results of the data analyses also showed that there is a significant difference in the views of both groups; hence, the research hypothesis was confirmed.

Content analysis and the professors' views were used to obtain the final chapter topics according to data analysis. Thirteen main categories were identified: principles of management, teamwork, business plan, principles of negotiation, planning principles, innovation, risk management, crisis management, an introduction to law, an introduction to finance, marketing principles, launch and manage business, and change management. Finally, these 13 topics were introduced as educational course topics designed to meet the intended needs of professors and stu-

dents.

## 5. Discussion

Entrepreneurship has been a controversial issue in recent years, and it can be fostered by education. Today, entrepreneurship focuses on the development, maintenance, and improvement of entrepreneurial behaviors in people (8).

According to McMullan and Ling, however, the major challenge in the field of entrepreneurship education is developing and strengthening students' skills and changing their perceptions. Education should enhance students' skills in areas such as communications, new product development, having creative thinking, and access to technological innovation. Hence, the present study focused on developing executive courses such as the basics of creativity and entrepreneurship. It also emphasized feasibility studies on courses and seminars on developing a business plan, management principles, principles of negotiation, effective communication, teamwork, launching and managing a business, marketing principles, an introduction to law, and finance, as well as risk management. Entrepreneurship education can be one of the most effective ways to facilitate the entrance of graduates into the labor market. Several studies in Europe have shown that people are becoming more responsive and are becoming successful entrepreneurs or, at least, beginning to think about it through such educational topics (20).

Entrepreneurs need different skills to gain success in innovation promotion and organizational business development. They should predict an organization's future and the changes that will probably occur due to organizational capabilities to justify and approve a business. This capability requires understanding strategy, markets and other organizational capabilities. Entrepreneurs should understand how business innovations can have different effects on various organizational units. They should learn how to deal with these issues (41). This is fulfilled by designing educational programs that take into account individuals' needs and activities.

Since the ministry of education should constantly change according to the ongoing needs and demands of the market on the ground of entrepreneurship (42), it is recommended that Shiraz University of Medical Sciences compile and plan entrepreneurship educational courses for paramedical students based on the suggested topics. This will help students establish independent businesses and will lead to the development of the private sector and logical downsizing of the government body. The suggested courses can be offered as optional courses with definite topics and contents. Initiating centers and offices to support entrepreneurs' projects and ideas and helping put them into practice should be given a higher priority. However, it is essential to examine the execution of any suggested topic and to evaluate and compare the effects of each course on entrepreneurship. Universities should also focus on evaluating the effectiveness of entrepreneurship educational courses.

The main strength of this study is the compilation of new topics for entrepreneurship courses. The small statistical sample, restricted to Shiraz University of Medical Sciences, was a limitation.

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## Footnotes

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**Table 4.** Mean Score for Views of Students and Professors; the Relationship Between Educational Topics and Compiled Skills

| Type of Skill | Description | Mean Score for Views of Professors | Mean Score for Views of Students | Total Mean Score for Views | Standard Deviation | Suggested Topics |
|---|---|---|---|---|---|---|
| Personal skill | Internal control and discipline | 8.33 | 8.42 | 8.36 | 1.54 | Planning principles |
| | Venture | 6.89 | 7.27 | 7.08 | 1.72 | Risk management |
| | Innovation | 8.60 | 8.71 | 8.66 | 1.09 | Innovation |
| | Ability to manage change | 8.17 | 8.30 | 8.24 | 1.29 | Crisis management |
| | Basic change | 7.18 | 7.07 | 7.13 | 1.53 | Change management |
| | Persistence resistance perseverance | 8.71 | 8.87 | 8.79 | 1.41 | - |
| | Leadership and foresight | 8.69 | 8.79 | 8.74 | 1.19 | - |
| General skill | English language | 7.56 | 7.29 | 7.43 | 1.41 | - |
| | Computer | 7.59 | 7.27 | 7.43 | 1.59 | - |
| | Internet | 8.37 | 9.23 | 8.81 | 0.76 | - |
| Technical skill | Writing skills | 7.00 | 8.43 | 7.72 | 1.56 | Writing business plan |
| | Verbal communication skills | 8.68 | 6.88 | 7.78 | 1.25 | Negotiation and effective communication principles |
| | Environmental monitoring or evaluation | 8.36 | 7.97 | 8.17 | 1.12 | Risk management, Introduction to law |
| | Business management | 6.98 | 8.62 | 7.80 | 1.08 | Business management and establishment |
| | Technology | 7.96 | 8.51 | 8.24 | 1.16 | Marketing principles |
| | Interpersonal skills | 8.38 | 8.38 | 8.38 | 1.26 | Principles of negotiation and effective communication |
| | Listening skills | 7.97 | 7.50 | 7.74 | 1.43 | Principles of negotiation and effective communication |
| | Ability to organize | 8.04 | 6.99 | 7.52 | 1.59 | Management principles, group work |
| | Creating a network of collaborative management | 7.26 | 6.64 | 6.95 | 1.96 | Management principles, group work |
| | Coaching | 7.14 | 7.67 | 7.41 | 1.68 | Management principles, group work |
| | Acting | 6.76 | 8.32 | 7.54 | 1.29 | Effective communication, group work |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Management skills** | Planning and setting goal | 8.88 | 8.83 | 8.86 | 1.03 | Management principles, Writing business plan |
| | Decision making | 8.66 | 9.00 | 8.84 | 0.91 | Writing Business plan, principles of negotiation and effective communication |
| | Human Relations | 8.93 | 7.43 | 8.18 | 1.40 | Management principles, Negotiation and effective communication, group work |
| | Marketing | 7.12 | 6.43 | 6.78 | 1.74 | Marketing principles, |
| | Launch business | 6.89 | 6.22 | 6.56 | 2.00 | Launch and manage business, Risk management |
| | Finance and Accounting | 6.53 | 7.87 | 7.20 | 1.44 | Introduction to finance |
| | Management | 8.19 | 7.94 | 8.07 | 1.19 | Management principles Management principles, Risk management |
| | Control | 8.08 | 7.85 | 7.97 | 1.49 | |
| | Negotiation | 7.83 | 7.29 | 7.56 | 1.54 | Principles of negotiation and effective communication |
| | Development management | 7.52 | 7.27 | 7.40 | 1.52 | Launch and manage business |

**Table 5.** Results of T-Test on Views of Students and Professors

| Skill Type | Target Group | Mean | SD | t | P Value |
|---|---|---|---|---|---|
| **Internal control and discipline** | Professors students | 8.33 | 1.57 | 42.64 | < 0.001 |
| | | 8.42 | 1.62 | 119.23 | |
| **Venture** | Professors students | 6.89 | 1.69 | 32.83 | < 0.001 |
| | | 7.27 | 1.84 | 90.97 | |
| **Innovation** | Professors students | 8.60 | 1.14 | 60.66 | < 0.001 |
| | | 8.71 | 1.28 | 156.31 | |
| **Ability to manage the change** | Professors students | 8.17 | 1.33 | 49.34 | < 0.001 |
| | | 8.30 | 1.46 | 131.02 | |
| **Basic change** | Professors students | 7.18 | 1.46 | 39.40 | < 0.001 |
| | | 7.07 | 1.76 | 92.49 | |
| **Persistence, resistance and perseverance** | Professors students | 8.71 | 1.43 | 49.02 | < 0.001 |
| | | 8.87 | 1.61 | 126.54 | |
| **Leadership and foresight** | Professors students | 8.69 | 1.01 | 68.82 | < 0.001 |
| | | 8.79 | 1.57 | 128.86 | |
| **Personal skill** | Professors students | 8.08 | 0.86 | 75.69 | < 0.001 |
| | | 8.20 | 0.94 | 201.23 | |
| **Planning and setting goal** | Professors students | 8.88 | 1.07 | 66.44 | < 0.001 |
| | | 8.83 | 1.32 | 153.73 | |
| **Decision making** | Professors students | 8.66 | 0.79 | 88.25 | < 0.001 |
| | | 9.00 | 1.53 | 135.31 | |
| **Human relations** | Professors students | 8.93 | 1.24 | 57.76 | < 0.001 |
| | | 7.43 | 2.20 | 77.67 | |
| **Marketing** | Professors students | 7.12 | 1.59 | 35.92 | < 0.001 |
| | | 6.43 | 2.54 | 58.21 | |
| **Launch business** | Professors students | 6.89 | 1.59 | 34.90 | < 0.001 |
| | | 6.22 | 2.68 | 53.45 | |
| **Finance and accounting** | Professors students | 6.53 | 1.83 | 28.69 | < 0.001 |
| | | 7.87 | 1.87 | 96.83 | |
| **Management** | Professors students | 8.19 | 1.27 | 51.97 | < 0.001 |
| | | 7.94 | 1.64 | 111.25 | |
| **Control** | Professors students | 8.08 | 1.29 | 50.46 | < 0.001 |
| | | 7.85 | 2.14 | 84.54 | |
| **Negotiation** | Professors students | 7.83 | 1.49 | 42.14 | < 0.001 |
| | | 7.29 | 2.03 | 82.72 | |
| **Development management** | Professors students | 7.52 | 1.38 | 43.80 | < 0.001 |
| | | 7.27 | 2.56 | 65.23 | |
| **Management skills** | Professors students | 7.86 | 0.89 | 22.71 | < 0.001 |
| | | 7.61 | 1.35 | 129.30 | |
| **Writing skills** | Professors students | 7.00 | 1.95 | 28.81 | < 0.001 |

| | | | | | |
|---|---|---|---|---|---|
| | | 8.43 | 1.63 | 119.19 | |
| **Verbal communication skills** | Professors students | 8.68 | 1.30 | 53.46 | < 0.001 |
| | | 6.88 | 2.07 | 76.36 | |
| **Environment monitoring or evaluation** | Professors students | 8.36 | 1.25 | 53.59 | < 0.001 |
| | | 7.97 | 1.57 | 116.86 | |
| **Business management** | Professors students | 6.98 | 1.12 | 50.06 | < 0.001 |
| | | 8.62 | 1.59 | 124.25 | |
| **Technology** | Professors students | 7.96 | 1.09 | 58.84 | < 0.001 |
| | | 8.51 | 1.74 | 112.43 | |
| **Interpersonal skills** | Professors students | 8.38 | 1.24 | 54.24 | < 0.001 |
| | | 8.38 | 1.78 | 108.28 | |
| **Listening skills** | Professors students | 7.97 | 1.31 | 48.89 | < 0.001 |
| | | 7.50 | 2.10 | 82.15 | |
| **Ability to organize** | Professors students | 8.04 | 1.37 | 47.30 | < 0.001 |
| | | 6.99 | 2.38 | 67.44 | |
| **Creating a network of collaborative management** | Professors students | 7.26 | 1.60 | 36.51 | < 0.001 |
| | | 6.64 | 2.68 | 56.90 | |
| **Coaching** | Professors students | 7.14 | 1.87 | 30.66 | < 0.001 |
| | | 7.67 | 1.87 | 94.11 | |
| **Acting** | Professors students | 6.76 | 1.97 | 27.58 | < 0.001 |
| | | 32/8 | 1.48 | 128.84 | |
| **Technical skill** | Professors students | 7.68 | 0.99 | 62.58 | < 0.001 |
| | | 7.81 | 1.21 | 148.46 | |
| **English language** | Professors students | 7.56 | 1.56 | 39.03 | < 0.001 |
| | | 7.29 | 2.03 | 82.72 | |
| **Computer** | Professors students | 7.59 | 1.21 | 50.52 | < 0.001 |
| | | 7.28 | 2.56 | 65.23 | |
| **Internet** | Professors students | 8.37 | 1.14 | 58.94 | < 0.001 |
| | | 9.23 | 1.12 | 188.81 | |
| **General skill** | Professors students | 7.84 | 1.14 | 55.01 | < 0.001 |
| | | 7.93 | 1.36 | 133.83 | |