CIBTech Journal of Zoology ISSN: 2319–3883 (Online)
An Open Access, Online International Journal Available at http://www.cibtech.org/cjz.htm
2018 Vol.7 (S1), pp.1-16/Mojtaba et al.

Research Article

DETERMINATION OF THE COMPETENCIES OF TRAINERS; CASE STUDY OF IRAN TECHNICAL & VOCATIONAL TRAINING ORGANIZATION (TVTO)

[1]Mojtaba Momeni Ghehi , [2]Amir Mahmood zadeh and [3]Kamran Yeganegi*
[1] Futurology Department , PhD student , Shakhes Pajouh Institute , Isfehan , IRAN,
[2] Futurology Department , Shakhes Pajouh Institute , Isfehan , Iran; [3]Department of Industrial Engineering, Islamic Azad University, Zanjan Branch, Zanjan, Iran
**Author for Correspondence*

ABSTRACT
This paper aimed to determine the competencies of trainers of Iran Technical & Vocational Training Organization (TVTO). The research methodology was applied in terms of purpose and qualitative-quantitative in terms of data collection method. As far as the qualitative method is concerned, data-based opinions were used; and as far as the quantitative part is concerned, the descriptive (survey) method was used. The statistical population consisted of the experts in the qualitative part (experienced technical and vocational trainers and faculty members) and all TVTO's trainers in the quantitative part. The statistical sample consisted of 35 participants in the qualitative part and 388 participants in the quantitative part. While considering six vocational districts, targeted sampling method was used in the qualitative part and random cluster sampling method was used in the quantitative part. The data collection tool included deep and exploratory interviews in the qualitative part and a questionnaire in the quantitative part. The contents of the questionnaire were obtained from the results of interviews. The validity of the questionnaire was determined using the content validity; and the reliability of the questionnaire was calculated using Cronbach's Internal Correlation method. The data analysis tool, in the qualitative part, was open, axial, and selective coding based on the Strauss and Corbin coding system (1993). The data analysis tool, in the quantitative part, consisted of descriptive statistics (tables and charts, central tendency and dispersion indices), and inferential statistics (confirmatory factor analysis and structural equation modeling). SPSS and LISREL were used as the data analysis tools. Research findings showed that the professional competencies of trainers consisted of pedagogical and technical competencies, as well as the competency to commercialize the ideas and professional ethics and behaviors. In addition, there was a significant difference between the level of these competencies and the desired level.

Keywords*: Technical & Vocational Training Organization (TVTO); Trainer; Determination of competencies*

INTRODUCTION
Today, Iran's training system is subject to severe shocks that sometimes endanger its existence. On the one hand, the increase in population, community's demand for proper job, and failure of theoretical trainings to meet the community job demands, the academic system is accused of inefficiency in terms of non-flexibility, and on the other hand, the continuous advancement of technologies and their adoption in the world of work have prevented technicians from updating their knowledge through receiving flexible trainings from the formal trainers. It seems that the world of the future will focus on informal learning, cooperation between training institutions and the world of work, the internationalization of education and trainings, the recognition of trainers' competencies in the training fields proportionate to the world of work, the interaction between the education system and the society and decline of academic and theoretical education monopoly. Therefore, it seems that, with a degree of certainty, one could hope to predict the success of training through training institutions and work-based trainings (Holacorb, 2008). The emphasis on freedom to choose the vocational training type, the flexibility of learning, and personalized learning are of the characteristics of the work-based trainings. The belief in the success of

work-based trainings will be accompanied by the full confidence if the core of these training, i.e. the trainers, are associated with degrees of competency. Competency is in fact the flexibility, tolerance of uncertainty and positive attitude toward change; and competency patterns are descriptions that can be used at the organizational and personal levels in determining competencies. Such a pattern can be used when a curriculum is designed and planned considering the technical and vocational training, as well as the flexible and continuous training required by the labor market. This pattern can help professionals and institutions improve the quality of the occupational position of the trainers of work-based trainings, leading to the satisfaction of those trained in this area. Therefore, the purpose of this study is to provide a model for the professional activities of trainers which contains the expertise, knowledge, skills and experience required for the success of trainers in a work-based training system.

2. Competency

Undoubtedly, human resource managers can identify the skills, knowledge and abilities they need using the competency models, and develop an improvement plan to enhance their competencies. The second chapter provides a brief history of the competency models of trainers developed over the years. It also explains the research related to the suitability of trainer.

2.1 The history of competency

The concept of competency was first introduced by McClelland (1973) in an article titled "Testing for Competency rather than Intelligence". McClelland regarded competency as a behavioral and psychological feature associated with successful outcomes in work and life. Then, Boyatzis (1982), in an article entitled "A Competent Manager as a Model for Effective Performance" expanded the use of the concept of competency in the field of human resource management, and defined competency as a combination of motivation, attributes, skills, social role, self-image or the body of work-related knowledge (quoted from Baladi, 2010). Boyatzis (1982) regards competency as one of the basic characteristics of a person, which leads to superior performance in the job. He states that when the conditions of organizational environment, job demand and competencies match with each other, an effective performance model is created (Ozilak, 2006). McLagan (1996) examines occupational competencies as characteristics created in individuals, such as the knowledge and skills required for performing a job effectively. Competencies are the real function of individuals in a particular situation (Bonder, 2000). Oxford dictionary (2006) defines competency as the power, ability, and capacity to perform a task. Timothy (1999) sees competency as a set of visible functional dimensions including the knowledge, skills, attitudes and behaviors of individuals, as well as teamwork, processes and organizational capacities that are associated with high-performance, leading to the competitive advantage of the organization. Spencer and Spencer (1993) recognized competency as a combination of the characteristics, skills, attributes, knowledge and basic motivations of a person associated with the successful job performance. At the Jansburg conference (1995), Lucia & Lepsinger recognized competency as a cluster of knowledge, skills, and attitudes about the essential part of a job that is related to job performance and can be assessed against accepted standards and modified through education and improvement. Typically, the studies on job competency emphasize the concepts such as basic attributes, skills, characteristics, knowledge and attitudes related to the successful performance of a job (Ozlik, 2006).

2.2 Professional competency

By examining the literature on the subject of competencies and examining the definitions of competency, the lack of a definite definition and terminology about competency and its meaning are first determined. Boyatzis (2006) acknowledges competencies as the basic characteristics of individuals which are related to their effective and excellent performance in a job through a range of causes and effects. Chun (2000) considers competency as a combination of motivation, abilities, knowledge, and skills of individuals used to ensure superior and beyond-expectation performance in a particular job or position. Ley (2006) describes competencies as the cognitive (such as knowledge and skills), emotional (like attitudes and values), behavioral and motivational characteristics of individuals which enable them to perform

successfully in a particular job or position. Draganidis & Mentzas (2006) know competency as a combination of explicit and tacit knowledge, behavior and skills that give individuals the potential to perform their tasks effectively (quoted from Abtahi and Montazeri, 2007). Klemp (1979) regards competencies as personal attributes or characteristics leading to the effective performance. Therefore, professional competencies include all work-related behaviors that can be measured and are related to the organizational goals and are a tool for controlling individuals. Professional competencies create a common language that continuously meets the expectations and performance of employees. Spencer and Spencer (1993) used superior and effective performance as a benchmark and standard in the competency studies, and considered it as an equivalent to the acceptable levels of work. Lucia & Lepsinger (1999) highlighted the importance of competencies related to performance expectations and expertise, and introduced those competencies directly related to the selection, training, improvement, evaluation and planning processes (McClure, 2005). According to Pritchard (2002), competencies consist of knowledge, skills, abilities, personality traits that help to diagnose superior performance from moderate performance with respect to specific situations (McClendon, 2007).

Competency is a set of abilities and capacities that enable their holders to have a proper performance within the framework of internal and external organizational constraints in fulfilling their roles and duties and, in addition, ensures organizational success (Saemian, 2008). In the review of literature on human resources management, the competency has also been defined as the set of knowledge, skills, personality traits, interests, experiences, and job-related capabilities which enable their holders to perform their responsibilities at a level above the average. In fact, competencies provide a pattern that indicates a person with superior performance in the assigned job (quoted by Dianti and Erfani, 2009).

Competency is a set of features a person has and assures the organization to transfer the work to that person with confidence and that person will do the work in accordance with the expectations and standards of the organization (Abilly et al., 2004). Competencies of an employee must address and meet the demands of a job (Kurdistani, 2008). Competencies generally have four features (Babaei Zakili, 2007):

1- They are related to a job or organization,
2- They have positive relationship with individual's better performance, or successful role-play,
3- They can be defined as visible behaviors in a job,
4- They are measurable and trainable

Occupational competencies create standards and frameworks for effective performance. In general, competencies provide a competitive advantage approach in the organization. In practice, some organizations delay the use of competencies due to lack of a clear guide. Different types of competencies include a different set of roles, grades, and outcomes. Competencies require the development of knowledge and skill models for the implementation of active roles and they are also a tool for predicting future skill conditions (Ernie, 2008).

Dingle (1995) defines competency as the personal attributes, which define a superior performance or the ability to perform an effective activity, while Kennie & Green (2001) regard competency as an integral part of the technical, cognitive, and professional competencies (Lizieri, 2003). Competency refers to the level of knowledge, skill, personal and personality traits that allows a person to do something above average (Abilly et al., 2004). Haunstein (2000) describes job competencies as the features associated with superior or effective performance, and a set of behaviors or activities associated with a variety of knowledge, skills, and motivations that are behavioral, technical, and motivational prerequisites for successful performance in a specific role or job (quoted by Karami, 2008). The National Mall Park Service Employees recognizes professional competency as a body of knowledge, skills and ability in a particular occupation that allows a person to succeed in accomplishing his/her duties (Byham, 2002). Brockbank, Yenng & Lack (1995), Blancero' Boroski & Dyer (1996), Mirabil (1997), Armstrong (1999), Katano (2001), and Bonder (2003) defined competency as the knowledge, skills, abilities and other required behavioral characteristics associated with the desired job performance. Other scholars such as

Fleishman, Wetrogen, Unlman, Marsholl & Mies (1995) argue that competencies represent a combination of motivation, attributes, self-concept, attitudes, values, knowledge content, or cognitive behavioral skills that distinguishes between moderate and superior employees.

Strcbler & Green (1999) also described competencies as a written description of work habits and minimum measurable performance standards. McLagan (1996), Slivinski (1996), Mitrani, Dalziel, and Fitls (1992) have also considered competency as an individual fundamental trait, which is causally associated with an effective or superior performance in a job (Dehghanan, 2007). With definitions of competency, it seems that it is like an umbrella covering anything that directly or indirectly affects the job performance. Competency shows an image of a developed person that has the perfect preparation for a job in every aspect. In fact, competency has a kind of systemic attitude towards employees including all the traits, attributes, skills, and attitudes related to effectiveness in performing duties and responsibilities (Dianati and Erfani, 2009).

2.3 Professional competency levels

In most related sources, competency has dimensions of knowledge, skills, abilities and attitudes. As one of the competencies of employees, knowledge is the basis of developing skills and attitudes, and it does not have much effect on the development of employees' professional and occupational competencies on its own. Skill is the ability to practically implement science which is developed through repeated use of knowledge in the real environment. Skill development results in the improved performance. The ability prepares a person to perform physical and intellectual work. In fact, ability determines the capacity to do intellectual work (Fathi and Shabani, 2007). Attitude is about the human's image of the world and its surroundings, and a framework that defines and shapes the field of thought and practice (Dianti and Erfani, 2009). In this research, the professional competencies of managers are examined based on the dimensions of knowledge, skills, abilities and attitudes.

Newman (1996) suggests occupational competencies based on the dimensions of knowledge, skills, abilities and behaviors required for the successful performance of an occupation. Knowledge represents the insight, understanding, and practical skills that individuals need in order to be able to do their job with an intelligent approach. Mirabil (1991) recognizes skills as the abilities gained through training. Abilities refer to the inherent capabilities or latent talents such as creativity, general intelligence, or physical skill. Behavior includes everything that a person does. Spencer and Spencer (1993) identified motivation, personality traits, self-concept, knowledge and skills as the dimensions of occupational competencies. Motivation, personality traits and self-concept predict actions, and the behavioral skills predict the outcomes of the job performance. Although more emphasis is placed on the visible features of the individuals, knowledge and skills are more appropriate dimensions for improvement. Individual motivations and attributes are often hidden aspects of personality which are difficult dimensions in the assessment and improvement of employees. According to Weatzel and Whiton (1997), knowledge includes the information that individuals need while doing their job. Skills introduce the mastery level required during the execution of the work. Ability is a sustainable feature in the individuals which enables them to work. Behavior also involves personality traits (McClure, 2013). Schlieber (2014) believes that the professional competency includes the technical competency which is related to the abilities required to perform the tasks, i.e. the basic competencies that are related to understanding how tasks are performed. The intelligent competency is related to the ability to integrate actions through active perception that results in learning and change. Applied competencies are related to the abilities to perform a set of tasks through understanding and thinking. Professional competency measures the performance of individuals. This measure can be used to hire and promote the employees, make substitution decisions, and guide the training and development. The use of competencies has been a key success for many universities and organizations that have experienced rapid and extensive changes (Parsian and Arabi, 2002).

Haunstein (2000) distinguished competency in three individual, organizational, and strategic levels. At the individual level, competency includes potential knowledge and skills, capabilities, and competencies of the employees. At the organizational level, competency includes a special way in combining the

various resources of the organization with each other. At the strategic level, competency includes the creation and preservation of competitive advantage through the combination of knowledge, skills, structures, strategies and processes (Karami 2007). Focusing on competencies at the individual level through providing guidance for changing behaviors, enables the individuals to play an active role in their own development. The emphasis on the organizational competencies in the management and development of performance paves the way for the human resource management. While maximizing the individuals' performance in following specific job-related goals and behaviors, it aligns individuals' performance with values and strategies. One can measure the performance of individuals using competencies. These measurements can be used in employment, succession-related decision-making, and guidance for education and development. The use of competencies has been a key success for many universities and organizations that have experienced rapid and widespread changes (Bamburger and Moshulem quoted by Parsian and Arabi, 2002).

Professional competencies can be analyzed in three levels of core competencies, functional competencies and technical competencies. Core competencies include a set of common competencies based on the mission and values of the organization for all occupational levels in the organization. Functional or group competencies are common features shared by different occupations within the family of occupations. The technical competency includes a set of technical and professional features and requirements considered in a particular occupation. In the structure of the organization's competency system, core competencies are the cornerstone of functional competencies and, at the same time, support technical competencies (Dehghan, 2007).

Prescott (1999) indicates that the managers generally recognize the importance of occupational competencies in addressing the needs of the organization. He believes that the occupational competencies provide the ethical solutions to identify the needs of human resources by the administrative and financial affairs unit; pave the way for coherent understanding of culture and its impact on the strategy implementation and the organization improvement; are the abilities to design and improve motivational systems that will motivate the individuals to realize the goals of the organization; and make us understand the cooperation in training courses to meet the needs of the organization. According to Ireland (1994), the results of similar research show that competencies are related to the strategic management functions of human resources such as organizational effectiveness and change processes. The concept of competency requires tools and conditions to facilitate change processes and provide the possibility to direct change (McCandon, 2015).

3. Iran Technical and Vocational Training Organization

The formal technical and vocational training system of Iran was formed by the establishment of the Iran-Germany School in 1286, but World War I closed Iran's only formal technical and vocational training institution in 1296. Subsequently, technical and vocational training was included in various forms in the program of Ministry of Education. However, since all human resources did not study or drop the school out, the establishment of a center to provide comprehensive technical and vocational training was introduced as a necessary requirement, and after a while, its duties were assigned to the Ministry of Labor and Social Affairs; until after the victory of the Islamic Revolution, an organization called the Technical and Vocational Training Organization (TVTO) was established to take practical measures in this regard (Hatamyan, 2001; Yeganeh, 1986).

As a result, TVTO, affiliated to the Ministry of Labor and Social Affairs, was established through merging three pedagogical units, namely Directorate General for Vocational Training of the Ministry of Labor and Social Affairs, the Internship Fund and the Internship Center in 1980 (It was first established under the name of the Labor Camp Organization and was renamed the Internship Center in 1967).

At the beginning of its formation, this organization was named the Technical Training and Human Resources Organization, and had the responsibility of providing employment services as well as human resources and labor market issues, along with providing vocational training. But in 1981, with the

approval of the Delegation of Ministers (Cabinet), the human resources were separated and its name was changed to Technical and Vocational Training Education Organization.

4. Review of literature

Keim (2003) investigated the relationship between personality attitude and professional competency in the organization and the study results showed that thirty-seven personality traits, 18 professional competencies before employment in the organization and 43 professional competencies after the participation in training courses were created; and most of those competencies created after the courses were very important. Therefore, identification of personality attitudes and professional competencies requires training courses in order to develop the career of employees.

In a research, Peak (2005) explored the characteristics of training courses and the effectiveness of training among the organizations that receive services from the external training providers. In this research, the evaluation of pedagogical effectiveness as a function of the nature of the relationship between the organizations referred to and the external providers of training, the pedagogical (training) needs assessment and the nature of the courses were examined. It also examined the relationship between the assessment of the effectiveness of training courses and the organizations receiving the training courses. This study evaluated four training effectiveness variables: training assessment, participation in training courses held in the organizations and training institutions, training needs assessment and the nature of training courses. The results showed that most of the organizations participating in the training courses were privately owned industrial enterprises; and the jointly-held training courses led to the improvement of employees' performance. In addition, there was not a significant relationship between training needs assessment and the effectiveness of training courses.

Caster et al. (2005) divided trainers' competencies into five following main categories and subcategories:

1- Having specialized knowledge in related fields, knowledge development and keeping knowledge up-to-date

2- Communicating, which involves communicating with students with different backgrounds, conducting tasks, and analyzing and clarifying the students' views

3- Organizing which includes determining the students' performance system, managing time and setting a curriculum in accordance with organizational goals,

4- Pedagogy, which includes four factors of helping students and determining learning needs, setting curriculum based on the needs of different students, designing activities to facilitate learning and development of learners, the use of information technology in training,

5- Behavioral competency which includes having a democratic approach, pre-functional thinking, curiosity about updates, honesty and integrity.

In their research on teachers, Grant and Gilt (2006) concluded that effective teachers believe that all students can succeed and have high expectations for them. They form learning groups in the classroom and communicate with the family of students. They are always learning and adapt education to the needs of students. They believe in the skills and knowledge of learners, and use them in the teaching. They supervise themselves as well as their beliefs and practices, and avoid mischief and prejudice.

In a research, Tharenou (2007) explored the relationship between education and organizational implications by reviewing the results of previous studies. The results of the present study showed a positive significant relationship between education and human resource outcomes and organizational performance, but a weak relationship between training and financial implications. The relationship between the performance and organizational learning was investigated through interpersonal variables of staff attitudes and human resource capacities.

Wang (2008) evaluated the effectiveness of Emergency Training Courses for public health staff in China. The results of this study showed that training courses improve levels of knowledge, attitude and behavior of staff. In this research, the scores of the attitude and behavior of the participants were compared with the post-training scores, indicating a significant increase in the scores.

Gartmeier (2008) examined the relationship between research and professional competency in the dynamic study of the work environment in the nursing sector. The concept of research theory is activity-based. Job satisfaction in this research includes the interest in change and innovation and acceptance of responsibility for change. Regression and correlation analysis showed that the research activities such as participatory knowledge, critical discussion, testing and thinking about mistakes are significant predictors for professional competency.

In a research, Cox (2008) evaluated the professional competency of those assistants and secretaries who were selected members. In the present research, the professional competency was examined in five personal, communicative, administrative, computer and information processing dimensions.

The study results showed a significant difference between administrative and informational competency. Meanwhile, a significant difference was observed between administrative competency and the information processing competency. In a study entitled "A Perspective on the Performance of Pedagogical Evaluation in Organizations, with an Emphasis on the Introduction of a Coherent Model", Pineda (2009) indicated that training is a key strategy for improving human resources in achieving the organization goals. Governmental organizations and institutions invest a lot of resources in training, but rarely show the results of this investment. Due to the difficulty of evaluating and the lack of credible resources, only a few organizations make pedagogical evaluations. This study aims to introduce an evaluation model successfully implemented in Spain leading to the integration of all dimensions and impacts of training into a global standard for organizations. This model evaluates the satisfaction, learning, pedagogical aspects, impact, and usefulness of the training. The analysis of the pedagogical aspects allows the professional training methods to be used to improve the quality of education and address the problems of the pedagogical planning process and its improvement.

In a research, Chansiri (2010) explored the improvement of teachers' professional competency at the Office of the Primary Elementary Education Commission in the Thailand. Professional competency of teachers includes advancement, teamwork, good service, self-improvement, learner development, learning design, classroom management, and analysis. This research proposes 14 methods to improve the professional development of teachers or trainers. They include training, workshops, case study, scientific trips, coaching, continuing education, meeting and discussion, brainstorming, management games, seminars, controls, entrepreneurial activities, self-knowledge and being active.

Scott (2010) explored the relationship between working environment conditions, the ability and motivation to the level of changes in the training of new trainers. The present research showed that improving employees' competencies helps to achieve the goals of the organization; supporting the goals and initiatives of the organization is one of the essential functions of the pedagogical sector. The results of this study showed no relationship between the criteria of ability, motivation, work environment, and the changes in the training method by the new trainers. Studying each of the ability criteria in education or training will lead to the improvement of training courses and the correspondence of content and materials of the training courses with the occupational fields of individuals. Studying the motivation of employees in training courses will lead to the self-management of employees and their active participation in the organization. Examining each of the environmental factors will lead to learning the culture and atmosphere of the organization and the preservation of employees.

In a research titled "Competency Assessment", Antitha (2011) examined the gap between existing competencies and expected competencies of managers, and offers practical suggestions to fill the gap. He considers the competency as a combination of several criteria, such as motivation, self-analysis, attitudes or values, skills and attitudes, all of which are above average. Identifying and evaluating competencies helps to prepare young and adult employees for the organizational changes. A set of competencies provides a common view of the skills and behaviors that matters to the organization. Therefore, competencies play an important role in deciding whether to recruit new employees, plan successfully, improve work, shift jobs, assess training needs, and measure the performance for the organization.

In a study titled "A Model based on the Competency of Trainers", Laura (2013) aimed at reducing concerns in the Romanian education system, in order to define and reorganize professional competencies in the path of teachers' growth. The findings of this study showed that competency-based vocational training should be built on the basis of an active model and increasing sensitivity to the monitored training needs resulting from the socio-economic development of the system. In addition, the perspective of a professional competency model should be based on students' learning experiences.

In a study, Karbabaa (2013) investigated the competency of teachers in teaching foreign languages. The statistical population in this study consisted of 26 trainers in different units in Ankara. These teachers were from 2 to 26 years old. The methodology of this research was based on the qualitative activity. The results of the present study showed that the competencies of the trainers included the competences related to the active teaching, teaching methods, teaching techniques, evaluation skills, and increased teaching.

In a study on the competency training for basic education, Oslyvan, (2014) identified three essential pedagogical level-related competencies for teachers: Knowledge competencies, behavioral competencies as well as acquisition and presentation of values competencies. He believed that knowledge competency includes understanding how to explain the concepts to the audience, learn the basics and skills of teaching, and practice it in a best way, serve the role of facilitator in the process and control of learning, make the critical thinking institutionalized in himself and the students, and learn and teach the knowledge of inquiring. The researcher believes that the behavioral competency includes good pedagogical behaviors (behavior with students in pedagogical and research activities), administrative behaviors (good behavior with superiors and human resources working in the organization, and good behavior with colleagues). In this research, the researcher believes that the competencies of the acquisition and presentation of values include clarification of agreed values, and cooperation in providing a framework for writing and publishing academic values.

In a study titled "Identifying and Ranking the Emotional Intelligence Competencies of Senior Malaysian Trainers", Yosef et al. (2014) introduced competencies of spirituality, self-esteem in teaching, self-awareness, self-management, self-motivation, empathy, self-regulation, and social skills as emotional intelligence competencies. In this research, competencies of spirituality with a mean of 94.84, growth with a mean of 91.14, self-knowledge with a mean of 85.38, motivation with a mean of 84.61, empathy with a mean of 82.68, self-regulation with a mean of 82.48, and social skills with a mean of 79.88 had the greatest effects on the model.

In a study titled "Development of Necessary Competencies as the Factors Influencing the Skills of Managers", Burky et al. (2014) proposed three competencies as the core competencies for teachers and trainers of medical profession. These competencies include Knowledge, skills, attitude (K.S.A)[1]. He outlined a framework based on these three major components. He introduced "attitude" as the most important component of these three components of competency. The justification of the researcher in this regard is that, without this competency in the medical training profession, the learning process will not be realized, even if the trainer is knowledgeable with high rate of efficiency.

A study titled "Improving the Competency of Trainers using the Tablet through a Research-Based Approach in the Classroom", Nasongkhla (2015), showed that the trainers' competency depends on key indicators such as (1) mental traits of trainers (2) scientific honesty (3) how to deal with technological challenges (4) coaching (5) reflection and (6) the amount of up-to-date articles. The research methodology was a mixed method (quantitative and qualitative).

In a study titled "A Competency Model for University Professors," Bilaskova (2015) announced that professional competencies (including benefiting from the most significant achievements of science, and combining science and practice in sharing knowledge with colleagues and other faculty members), pedagogical competencies (including facilitation of the scientific growth of students, training a combination of knowledge and skills to increase intellectual uplift and skills capacities of students and

improve their pedagogical skills), motivational competencies (including raising individual motivations, identifying and increasing the factors that improve the students' individual motivations and trying to satisfy these motivations and finding the ways and means to persuade the other colleagues to participate in scientific and skill cooperation), communication competencies (including identifying communication deficiencies, refining communicational processes and providing feedback to colleagues and students), and general competencies (including time management, self-introduction as a positive model to serve the students, personal self-development), service competencies (including the presentation and publication of scientific articles and providing social services to students, and the presentation and implementation of industrial projects and services for the improvement of community life) are integral to this model.

MATERIALS AND METHODS

The research methodology was applied in terms of purpose and qualitative-quantitative in terms of data collection method. As far as the qualitative method is concerned, data-based opinions were used; and as far as the quantitative part is concerned, the descriptive (survey) method was used. The statistical population consisted of the experts in the qualitative part (experienced technical and vocational trainers and faculty members) and all TVTO's trainers in the quantitative part. The statistical sample consisted of 35 participants in the qualitative part and 388 participants in the quantitative part. While considering six vocational districts, targeted sampling method was used in the qualitative part and random cluster sampling method was used in the quantitative part. The data collection tool included deep and exploratory interviews in the qualitative part and a questionnaire in the quantitative part. The contents of the questionnaire were obtained from the results of interviews. The validity of the questionnaire was determined using the content validity; and the reliability of the questionnaire was calculated using Cronbach's Internal Correlation method. The data analysis tool, in the qualitative part, was open, axial, and selective coding based on the Strauss and Corbin coding system (1993). The data analysis tool, in the quantitative part, consisted of descriptive statistics (tables and charts, central tendency and dispersion indices), and inferential statistics (confirmatory factor analysis and structural equation modeling). SPSS and LISREL were used as the data analysis tools.

RESULTS

The descriptive findings of the study showed that 73% of the trainers participating in the research were male and 37% female, 18.6% of the participants were between 25 and 30 years old, 18.8% between 31 and 35 years old, 21.9% between 36 and 40 years old, 25.74% between 41 and 45 years old, 20.8% between 46 and 50 years old, 47.7% between 51 and 55 years old; 56% of participants had undergraduate degrees, 39.17% had graduate degrees, and 4.89% have Ph.D. degree; 10% of participants had a working experience of 5 to 10 years, 14.4% between 11 and 15 years, 31.3% between 16 and 20 years, 22.6% between 21 and 25 years and 21.6% between 26 and 30 years of working experience. About 33 percent of the participants were engaged in the service sector, 30 percent in the industry, 17 percent in the arts and about 20 percent in the agricultural sector. The results shows that the highest mean score was related to the variables of morality, professional behavior and pedagogical competencies and the least amount was related to the commercialization competencies. Similarly, teaching competences accounted for about 0.56% of the total variance, with an estimate of 0.75. The competency of professional ethics, with an estimate of 0.71, accounted for about 50% of the total variance, and the professional competencies of trainers, with an estimate of 0.61, accounted for about 0.37% of the total variance.

The key components of the competencies of the TVTO's trainers included:

Training competencies, teaching competencies, behavior in the pedagogical environment competencies, managerial competencies in the classroom, specialized competencies of managers, including the competency to upgrade specialized knowledge, the competency of communication and information management, competencies of doing research, competencies of criticism and critical thinking, competencies of personal development, ethical qualities, and professional conduct and commitment,

including responsiveness, equity and accountability, as well as the competencies of the commercialization of knowledge, skills and technology, including competency in the management of ideas, market-building and marketing, and competencies of assigning value to innovation. The significance of these components was determined to be at the level of 0.95.

The inferential findings of the research showed that among different components of competency, the professional competency and pedagogical competency, with an average of 3.7, ethical and behavioral competencies, professional commitment, and technical competencies of the trainers with an average of 3.55 and competencies of commercialization of knowledge and technology, with an average of 2.9, constitute the current status of the competencies of the vocational training instructors (trainers). Research regression findings showed that among the identified components, the most effective ones are the competencies of the knowledge and technology commercialization, pedagogical competencies, ethics and professional behavior competencies, as well as technical (specialized) competencies.

Assessment of the current status of dimensions and components of professional competency shows that all of the existing components of the pedagogical competency of TVTO's trainers are higher than average. The study results also showed that all of the existing components of the dimension of professional competencies of TVTO's trainers are higher than average. All of the components of the competencies of assigning value to innovation are also higher than average, and the rest of the components are less than average. All of the existing components of ethical and behavioral competencies as well as professional commitment are higher than average.

Professional competencies refer to a set of personal knowledge and experiences, skills and attitudes of the TVTO's trainers, through which they seek to improve performance and provide high-quality training, as well as create learning experiences and training skills for all trainees. In this research, the most important professional competencies of trainers were competencies of knowledge and technology commercialization, pedagogical competencies, ethical and professional behavior competencies, as well as specialized competencies. An explanation will be further provided for each of the results.

5.1 Pedagogical competency

Pedagogical competencies include training, teaching, behavior in the pedagogical environment, managerial competencies in the classroom, as well as competencies of test-building, evaluation, and using the technologies in the workshops.

Fundamentally, the pedagogical competencies play an essential role in the effectiveness of TVTO's trainers. The qualitative and quantitative findings of the present study also confirm this reality. For example, one of the TVTO's trainers says:

The main task of a professional technical and vocational trainer is summarized in the workshop. A trainer should be in the true sense of the trainer, and this is the trainer who distinguishes himself/herself from a teacher of some spirit-less school classes and high-discipline college classes. In this case, the trainer does not treat the trainees as novices who want to learn a skill from the basic level, but as an experienced individual. I had a trainee, who really dismantled the car engines, but he was illiterate, and I say freely that I learned a lot from him. He came to the classes to study auto-mechanic in order to get a diploma, and this cooperation is still going on after 3 years. Therefore, it is very important to identify the needs of trainees and treat them properly in the workshop. An experienced applied science lecturer with a history of training at TVTO believes that: "The training workshop is the heart of skill learning, where the trainer and his/her teachings feed this heart like an oxygen-carrying blood. Therefore, in my opinion, if we are to consider only a competency for a trainer, then that is the pedagogical competency. I use the term competencies; because the trainer is not just a trainer in its skill-transferring sense, but also, the trainer must prepare a document of individual and skillful behaviors that is documented and draw the charts of progress and, in case of success, be a factor to increase the trainer's motivation. This is what I interpret as the learning engineering and management. Meanwhile, the testing method is very important in pedagogical competencies. A trainer should be a good test builder, which means that the trainer must be aware that the trainee's behavior has different aspects which must be considered at the workshop and they

are not just skill-related behavior. For example, trainees' behavior in managing time, interaction with other trainees and with the work and workshop equipment should be included in the test. Of course, this test should not necessarily result in a score; it can be descriptive; because this is the set of these behaviors that makes an individual successful in pursuing a job after completing an internship; and therefore it is very important." It has been probably mentioned in the interviews with trainers that these competencies are very sacred, and in fact, this is the current status of what our trainers execute. But there is one point that may have been neglected and ignored by the trainers, even though they execute it in practice; which is the trainees' self-direction. It means that in the trainer's pedagogical package, trainers' needs to do something for their trainees to make them leaders; so that as a result of these pedagogical interactions, the trainees find out their weaknesses and assess their skills. Of course, skills are not just technical, such as "in-person skills", but at the same time, they are the skills that trainers improve them and act as a stimulant within that person. Therefore, self-direction competency is very important for the trainers which should be addressed.

The quantitative results of this research also showed that pedagogical competencies are valuable as one of the professional competencies of trainers. The regression coefficient of the high path analysis of pedagogical competencies indicates that the pedagogical competencies play a major role in the considered model. Given that the educational competencies are one of the dimensions of the competencies of the trainers, the findings of this research are consistent with the findings of researchers such as Sobhaninejad and Tedjdan (2015), Molaeinejad and Decatouti (2015), Aghaei (2010), Karimi and Niknamami (2010), Sirkaya et al. (2015), Najullet, Bijard, Berklimans, Worlap and Wales (2007), and Moornlow (2007).

5.2 Technical (Specialized) competencies of trainers

In the present research, specialized competencies include competencies of professional knowledge enhancement, communication management, research and scholarship, as well as creative criticism. A faculty member familiar with the workshop environment of TVTO said that training should not be viewed as an occupation. Therefore, we should not say "the occupational competencies of trainers"; instead, we must say "the professional competencies of trainers" and we should distinguish between job and profession. Some have jobs, so we have to use the term "occupational competencies" for them; and we should use the term "professional competencies" for those who have a profession. Professional work is not the activities that are only performed at certain hours and days, but those integrated with the existence of humans, embrace them and encourage them to learn and develop their abilities. Professional trainers are looking for work continually, they ignore organizational positions and their approach focuses on increasing knowledge, ability and power of influence. Self-motivation and internal discipline are the characteristics of a professional person. These people do the job properly, not because of the fear of supervisors and observers and even the labor market, but because of the importance they attach to themselves, and their motivation is to serve the community, not just trainees, and increase the set of knowledge, information and theories, as well. A member of the faculty aware of trainers' issues in TVTO said: another strategy that can reflect the professional competency of trainers in the professional competencies system of TVTO is the influence of the trainer and as a result the research component. The research should not be restricted to the staff and expert levels of the organization or to the research department; and it should not be stated that "since the research budget of the organization is limited, research should not be carried out"; rather, as the main drivers of skill training, the trainers should take over the related affairs in the organization. It is imperative that teaching is combined with thinking, and trainers use their capacity and thought to act more efficiently in their professional responsibilities. Strengthening the scholar qualities of trainers can lead to the unity between the researcher element and the agent element, which in turn is an appropriate and practical solution to the problems arising from the separation between research and practice. However, the purpose of a scholar or researcher trainers is not to engage them in the organizational research, but to extend the research to "practical research" or

research in practice. Practical research means that the trainers face the factual situations with a research mentality.

"Practical research (or research in practice), is a research method, the subject of which is the act of teaching, and the researcher is often the trainer who aims at improving the teaching or training status". In other words, according to the great people, the essence of this approach is to invite practical agents to pursue research during the employment, which in fact invites the trainers to think and reflect on problematic situations and apply the problem-solving procedures or the skills of the scientific processes to find the right solution. In other words, practical research is a combination of practice and research and an attempt to identify pedagogical measures to improve the pedagogical environment. This is a missing link in vocational and technical training that should be considered in the Professional Competency Model.

"Generally, learning is a dynamic category that gradually changes from individual learning to organizational learning", said a faculty member engaged as an authority in the TVTO. Due to the need of TVTO to adapt to the changes in the environment that is the most fundamental element in the organization's existence and its flexible nature, the concept of "learning organization" is applicable in the TVTO. It is a concept that emphasizes the importance of learning for organizations. In the meantime, the role of TVTO's trainers in the organizational learning is very important. The professional development of TVTO's trainers is because of learning; in the sense that, the trainer should find the best ways for the issues and raise the professionalism of the organization by observing and interacting with others (trainers and labor market), observing challenges and needs, as well as studying and interacting again. For this reason, TVTO should fall into the category of dynamic and flexible organizations. "The most important pillar in promoting technical competency is the active participation of trainers at internal and external research institutes", said a TVTO's trainer. This practice can be achieved through participating in the international and domestic symposiums, and effective participation in technological exhibitions as well as skillful Olympiads as trainers, experts, etc. This aspect is very important, but what is more important is that the organization must provide the trainers with opportunities for updating, and again the more important thing is that the organization provides the opportunity for trainers to practice these capacities. For example, I am an auto-mechanic trainer and, with the aim of promoting professional competency, I participated in a training course about the repair of Xantia, but there was no Xantia in the TVTO. Therefore, I had no equipment there to make my knowledge operational; so I became desperate, and in this situation, promoting professional competency does not make sense. Other trainers have the same situation; opportunities must be provided to the trainers practically, so that the professional competencies can be manifested. The quantitative findings from confirmatory factor analysis also show that the special competencies have a special contribution to the professional competency model of instructors. The findings of this study are consistent with that of Urals (2011) who considered the competency of acquiring the knowledge of the day for trainers to be a necessity for university educators in his article titled "learning to train in the knowledge-based society", Akbari (2016) who considered research and planning competency as an essentiality for trainers, and Iseline and Aishak (2014) who found it necessary to establish communication among faculty members. Also, the results of the present study are consistent with the findings of the research conducted by Aghaei (2014), who referred to the agility in their professional competency model of Ministry of Education's teachers (flexibility, accountability, and ability to adapt to the current situation).

5.3 Commercialization competencies (knowledge, skills and technology)

In today's world, one of the main tasks of the TVTO's trainers is wealth production and the creation of activities for rearing creative and entrepreneurial human beings. Therefore, trainers should have the competency of creating and producing national wealth. The qualitative and quantitative findings of this research showed that for the production of wealth and training entrepreneurs, TVTO's trainers should have the competencies of commercialization of knowledge, skills and technology. "For me, the competencies of commercialization of knowledge, skills and technology are descriptions of concurrent decisions and activities that optimize all the technical and commercial decisions required for the

successful introduction of a technology to the market, together with the process of technological development; and this is an intra-organizational work which is not related solely to the trainer, but requires interaction between various components of the organization, of which, a technical and vocational trainer is also a worthwhile part, said a member of the faculty who was previously in charge of one of TVTO's departments. In general, activities such as technology development, market research, funding by sponsors, participation in growth centers and incubators, and idea-catching can be specified in this project and the conditions should be such that the trainers would be involved in it. In this regard, one of the TVTO's trainers stated that: TVTO has provided the opportunity to execute the market-oriented training plan (production, distribution, marketing and sales plan) in technical and vocational training centers; aside from the shortcomings that this plan has, it is essentially a good plan. [TVTO] has allowed the plans to find value. At the same time, there are units from which workshops (centers) can accept orders and get paid. This, firstly, will provide funding for the training centers on the one hand, and provide incentives for the trainers to offer their work to the market in exchange for money, and make it possible to develop their skills at the workshops, on the other hand.

The quantitative findings obtained from confirmatory factor analysis also showed that the competencies of commercialization of knowledge, skills and technology have the greatest contribution to the development of the professional competency model of trainers. Findings of the present study are consistent with that of Abbasi et al. (2006), Patel and Asteh (2015), as well as McFarlane and Cheng (2015), who considered the qualifications and competencies of faculty members to be essential for the realization of dynamic universities, and with the findings of Abdollahi (2014), who recognized the competencies of the skills trainers in the Ministry of Education as the wealth production and value creation skills.

5.4 Competencies of professional behavior and ethics

Professional ethics deals with how an individual behaves and practices during the work. In fact, the goal of professional ethics is to create the ethical responsibility that individuals have in their job. Acquisition of the components of professional ethics and the promotion of professional ethics by trainers not only creates a joyful and favorable environment for increasing productivity, but also has an effective role in the society. In this regard, one of the trainers of TVTO said: "in the competency system of trainers, ethics and professional behavior are of great importance. It seems that ethical responsibility is very important. For example, a trainer has ethical responsibilities as a person working in the organization. These responsibilities are defined based on their occupation, which is training or coaching. The existence of professional ethics reduces tension. "Respect for the ethics and professional behaviors of TVTO trainers is very important and at the same time worthwhile, said another TVTO trainer. Trainers of TVTO should act with honesty, loyalty and accountability.

"Professional ethics and behavior deals with how trainers behave and act while performing a professional work", said a university professor about the role of professional ethics and behavior in a system of professional competencies. This can be performed by trainers in their roles as trainers, trainees, and performers of a professional work. This can also be done by trainers in their roles as trainers, examiners, and holders of silent behaviors. The result of professional ethics is professional accountability, and freedom of expression and belief. Another experienced TVTO trainers, with a history of vocational training, said that the respect for professional ethics and the role it plays in the system of competency is worthwhile. See our status. An organization's trainer, or an instructor at a Private Institute, sets out a series of questions that have been used in the previous tests and are always found in the bank of questions, instead of teaching standard headings. These questions are repeated frequently, and trainers practice them with trainees. Therefore, the professional competency of that trainer is questioned. Or, in another instance, i.e. a practical test, the trainer asks a part of the question to see if the trainee knows it. Here, it is evident that there is no observance of professional ethics. Quantitative findings suggest that the role of professional ethics in the professional competency model is very valuable and it is ranked third. The findings of the present study are consistent with the findings of the studies conducted by Kalhan (2015),

Molaeiejad and Decavati (2015), Nayini (2014) and Jilani (2014), where they have identified trainers' accountability as one of the important issues in the professional competency of trainers, and the study of Shoarinejad (2010) where fair-mindedness has been introduced as one of the most important elements of the trainers' success. The findings of this study also showed that all of the components related to the competency level of TVTO's trainers are higher than average.

The results of the present study showed that all the components related to the dimension of the competencies of TVTO's trainers are more than average. Among the competency components, "assigning value to innovation" is higher than the average, and the rest of the components are less than the average. All of the components of professional ethics, behaviors and commitment are higher than average. Therefore, there are some shortcomings in training the skills by the trainers, including the lack of learners' participation, the lack of using information technology and communication in training, and most importantly the lack of the necessary skills and knowledge in the production of wealth and added value. Essentially, the changing world needs more trainers who can develop their skills while they have the skills they need. For the growth and prosperity of these skills, trainers need to increase their competencies with self-esteem and self-motivation. The growth of capabilities, creativity and prosperity of talents are not possible with the prescriptive curriculum, and this requires changes in the trainers' training programs, school curriculum and teaching methods. The transformation of information and the acceleration of knowledge production trend and the abolition of current knowledge necessitated the development of research-doing spirit, lifelong learning, comparative studies, the use of the technologies of the day, predictive and creative thinking, and being aware of the needs of the market and community. However, the results of the present study showed that the TVTO's trainers are not competent in the field of idea generation and the ability to assign value to ideas, the effective presence in [business] incubators and start-ups to identify the existence of a proper market for the technology before proceeding to develop the technology by the trainer, absorbing funds from sponsors to practice the ideas, participating in the development of a business plan and patent, and the ability to create skills and produce concepts and ideas. In the rest of the cases, the overall skill level is ranked higher than the average. The results of the present study are consistent with the findings of Huntley (2003) Hoong et al. (2008), Karimi (2008), who measured teachers' skills at different levels.

SUMMARY AND CONCLUSION

The efficiency of the vocational training system depends on the suitability of the trainers of this organization. This competency is created when the trainers of the organization have professional development. The professionalization of training depends on the professionalization of trainers. Therefore, due to the changes constantly made in the structure of technical and vocational training programs, recognition of continuous improvement and constant rehabilitation of the competencies of TVTO's trainers are essential. This is despite the fact that all countries have recognized the need for educated and skilled trainers. Many of them emphasize that the pace of new developments requires the creation of adequate opportunities for trainers to update their knowledge and skills. Therefore, all technical and vocational trainers must always update their knowledge and skills about other competencies in addition to their specialized training skills, so that they can apply it in their teaching (training). The first step in this study was to identify competencies and rank them. In this research, the main competencies of vocational and technical trainers were (in order of importance): competencies of commercialization of knowledge-skills and technologies, pedagogical competencies, as well as ethics, behaviors and commitment-related competencies. Assessment of the current situation shows that among the competencies, the commercialization-related competencies were at the lowest level, although they are of great importance.

ACKNOWLEDGEMENT
The authors would like to express their profound gratitude to Dr. Kourosh Parand, Esteemed President of the Technical and Vocational Training Organization, and his colleagues for their kind cooperation during the research.

REFERENCES
Abili, Khodayar et al. (2004). Competencies Roundtable; A Platform for Presence in the World Arenas, Management Magazines, *Tadbir Monthly*, 154, 5-11.
Abtahi, Hussein (1999). Training and Human Resource Improvement, Institute of Educational Studies and Planning Press, Tehran, Iran
Abtahi, Hussein and Montazeri, Mohammad (2007). Competency-Based Management and Its Role in Human Resource Management. *Journal of Management Studies*, 57, 1-16.
Aghajani, Hasanali, Kiakejori, Hasan (2011). A Model for Identification, Creation and Use of Opportunities in Entrepreneurship, *Proceedings of the "First National Conference on Industrial Management" (together with lectures), Tehran: The University of Tehran, Faculty of Management*.
Babaei Zakliki, Mohammad Ali (2007). "Fundamentals of Managerial Competency Formulation", a collection of lectures and training workshops, Specialized Conference on Evaluation and Development of Managers, Tehran: Ariana Industrial Research Group Press.
Badjoland, Reza; Cheraghi, Khalil; Boteh Kar, Mahtab (2013). Malaysia's Educational System with a Technical and Vocational Training Approach. Tehran: Technical and Vocational Training Organization.
Baladi, Manouchehr; Moshabbaki Esfahani, Asghar and Hadi; Panjeh, Abdullah (2010). Designing and Analyzing the Operational Model of Successor Development Practices using Multi-Criteria Decision-making Techniques (Case study: National Bank of Isfahan Province). *Quality Control Monthly Journal*, 7th year, issue 43.
Bambergger, Peter and Moshlem, Len, (2002). Human resources strategy (compilation, implementation, works), translation by Dr. Ali Parsayian and Dr. Seyyed Mohammad Arabi, Tehran, *Iranian Cultural Research Bureau*.
Bjekic D. Krneta R. & Milosevic D. (2010). Teacher Education from E-learner To E-Teacher: Master Curriculum. *Journal of Education Technology* **9** 202-212.
Bonder.S.L. (2000). The Evolution of Job Analysis: Competency Assessment Competent comes of age, Competency assessment.
Byham، M. (2002). Competency-based Human Resource System. DevDimens; **16**، 2 11-46.
Chansiri.W.(2010). Development of job Competency in civil Service Teachers under Jurisdiction of Office of the Basic Education Commission. European Journal of social Science –**17** (2).
Cox، l. (2008). Occupational competencies of Legal Secretaries and Paralagals as Perceived by Selected Members of Nals, the Association for Legal Professionals, A Dissertation Submitted to the Graduate faculty of Auburan University، Degree of Doctor of Education.
Huntly، Helen, (2008). Teacher's Work: Beginning Teacher's Conceptions of Competence، The Australian Pedagogical Researcher, **35** (1) 125-145.
Izadi, Samad and Karimi, Soleyman (2008). A survey on the Effect of IT Training Courses on Employees' Performance Improvement (case study of the Institute for Management and Planning Studies), *Journal of [Executive] Management*, **8** 4 (Successive 31).
Jahaniyan, Ramezan and Nowroozi Navy, Zahed (2011). The Effect of ICDL Training Courses on Improving the Performance of Employees, *Tehran University Quarterly Journal*, New Thoughts in Educational Sciences, Year **6** 2.
Keim. K. (2003). Personal Attributes and Occupational competencies Needed by EFNEP Paraprofessionals as Perceived by EFNEP Professionals. Department of Nutritional Sciences.

Klein. A.L. (1996). Validity and Reliability for Competency-based systems: Reducing litigation risks, Compensation and Benefits Review **28** 4 31-37.
Korthagen F.A.J. (2004). In search of the essence of a good teacher: towards a mreholistic approach in teacher education, Teaching & Teacher Education. **20** (1) 77-98.
Mcclendon. DC. (2007). Perception regarding Performance appraisals Competencies، and Professional Development needs among Human Resources directors in Texas public school districts. Submitted to the faculty of the graduate school of Texas A&M university-commerce.
Ricci.P. (2005). A Comparative analysis of Job Competency expectations for new hires: the relative value of a hospitality management degree. A dissertation submitted in partial fulfillment of the requirements for the degree doctor of education.
Sabetnezhad, Hamid Reza; Badjoland Reza; Shams, Somayeh (2013). German Education System, with the Approach of Tehran Technical and Vocational Training: *Technical and Vocational Training Organization.*
Shellabear S. (2002). Competency profiling: definition and implementation. *Training Journal*. 16-18.