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Empowerment of Trainees in Agricultural Schools for the Development of Professional Performance

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ABSTRACT

This research aimed to explore the empowerment of trainees of agricultural schools for the development of their professional performance. It was a survey study. The statistical population was composed of all trainees studying in agricultural schools in Iran in the 2020-2021 educational year, amounting to 1,119 students, out of whom 169 trainees were sampled by simple randomization. Due to the COVID-19 pandemic and the closure of the schools, the questionnaires were sent and received by e-mail from the provinces of Tehran, Khuzestan, Fars, Qazvin, Mazandaran, and Semnan. Data were analyzed by the structural equation method using Smart PLS3. Based on the results, the educational content, educational process, management process, technical trainer development, and supply of space, equipment, and technology in agricultural schools have positive and significant effects on the empowerment of trainees in these schools. The standardized path coefficients revealed that the educational content directly accounted for 67.2% of the variance in the trainees' empowerment. Also, 39.9, 31.1, 30.2, and 29.8% of the variance in the Iranian trainee's empowerment were captured by the educational process, management process, technical trainer development, and the supply of space, equipment, and technology, respectively.

Keywords: Agricultural vocational schools, Educational system, Efficient human resource, Training and development.

INTRODUCTION

Today, human resource is known to play the most important role in the process of production and service supply in human societies (Piwowar-Sulej, 2021). Human resource is directly related to change and influences the development and progress of society (Blaga, 2020). The supply of a workforce that possesses cognitive knowledge (knowledge of what), advanced skills (knowledge of how), systemic understanding (knowledge of why), and spontaneous creativity is an undeniable road that dynamic, alive, and progressive organizations need to deal with the challenges and barriers of the knowledge and wisdom era (Arman and Khosravi, 2013). The explicit message of these changes and modern world conditions for organizations and even nations is the message of production, transfer, application, and storage of knowledge and skills through effective and efficient approaches and strategies, e.g., training and development, learning organizations, knowledge management, and similar concepts (Guardia *et al*., 2019).

Modern organizations, which work in a knowledge-based atmosphere, need to promptly achieve capable, happy, and committed human resources (Lambrechts

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and Gnan, 2022). In fact, efficient human resource is the main index of an organization's superiority over other organizations (Abeysekera, 2021). On the other hand, identifying, fostering, and updating the capacities, capabilities, and potentials of human resources play a decisive role in the survival of organizations in competitive environments (Hamidizadeh and Beiranvand, 2011). Undoubtedly, inattention to these capabilities as strategic resources and knowledge capitals will cause organizations to become the victim of radical changes and competition in the contemporary era (Abualoush *et al*., 2018). In this regard, the educational system has a significant role to play in forming and developing institutions and is most influential on the scientific, cultural, social, political, and economic approaches of countries (Shahzeidi, 2015). Education can augment people's production capacity and income, too (Adejumo *et al*., 2021).

A significant part of this education happens in technical-vocational and agricultural schools (Gunasekera *et al*., 2018). These schools play a remarkable role in developing creative, determined, and innovative human resources (Pazoki *et al*., 2022), and countries consider them in their policies for the development of efficient human resources at the pre-academic level (Okpokwasili, 2019).

An essential step to creating an efficient technical-vocational educational system of agriculture is to strengthen the potential of the trainees (Khandagi *et al*., 2013) whose empowerment is one of the most important ways to accomplish development goals (Terkamo-Moisio *et al*., 2022). To achieve this goal, it is necessary to lay the ground for the growth and promotion of scientific insight, free and creative thoughts, problem-solving skill, and scientific encounter with problems (Daggol, 2020). The accomplishment of this goal in agricultural vocational schools requires that trainers adopt methods that teach trainees the capability of how to learn through thinking and regular encounter with issues and problems instead of memorizing (Jameh Bozorg, 2012). Education and empowerment, indeed, create sustainable opportunities consistent with the trainee's talents to acquire knowledge and skills and use them in an optimal workspace to achieve proper performance (Kennedy, 2009). They can be effective in developing critical thinking among the trainees (Piedade *et al*., 2020), strengthening group work (Hammar Chiriac, 2014), enhancing their ability of research assessment, and acquiring experience and skills (Angu, 2019). The modern interactive educational system promotes interaction between trainees and the educational system (Cleary *et al*., 2017). It, also, increases motivation, mental comfort, and problem-solving ability among trainees. In this system, trainers and trainees can cooperate to create a safe educational and learning environment, thereby promoting the trainees' professional performance (Clark *et al.*, 2011).

Different factors play effective roles in empowering trainees in agricultural schools. For instance, Cayaban *et al*. (2022) reported that students' participation in school activities empowered them psychologically. Cho and Beak (2019) enumerated class size, assessment method, and trainer characteristics as the factors that influenced teacher-student communication. According to them, direct teacher-student communication was an important factor in educational quality. Iyunade (2019) suggested that investment in facilities and supplying space, equipment and technology, appropriate environment, and management were effective in students' empowerment. Kennedy (2009) reported that the educational process influenced vocational empowerment. Wrahatnolo and Munoto (2018) mentioned that the skill requirements of the 21st-century education systems includes planning, flexibility, adaptation, innovation, self-management, entrepreneurship, social and cultural interaction, productivity, accountability, leadership, critical thinking, problem-solving, communication, cooperation and

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group work, life-long learning, and digital literacy. Baghaei Daemei and Safari (2018) argued that students' creativity can be stimulated by learning environment and visual images and resources. Alvarez (2018) found that the lack of metacognitive capability was observed in educational systems. This researcher argued that metacognitive capabilities played a key role in understanding and dealing with the complexities of the surrounding environment and there was an evident lack of precise assessment and effective methods of educating these skills. Heikkila *et al*. (2017) showed that empowered education affected cooperation and participation between students and teachers. They emphasized the active role of teachers as learning facilitators. Pazoki *et al*. (2022) revealed that the management system, educational process, educational content, development of technical trainers, and physical space influenced trainees in agricultural schools positively and significantly.

Although the fundamental goal of educational systems, especially agricultural schools, is to train skillful and efficient human resources, evidence shows some shortcomings in educational systems, particularly the agricultural education system (Salehi *et al*., 2009), inattention to educational effectiveness (Adely *et al*., 2021), a weak relationship between education and the labor market needs (Dulandas and Brysiewicz, 2018), lack of competent trainers (Khalili *et al*., 2010), shortage of educational space and facilities (Saaid *et al*., 2018; Barrett *et al*., 2019), lack of investment in physical facilities and equipment (Iyunade, 2019; Chao and Beak, 2019), improper teaching and learning methods (Lankarani and Emadzadeh, 2000), severe deficiency of high-quality human resource (Van Dijk *et al*., 2020), lack of efficient experts and managers (Navidi, 2011), trainers' incapability (Movahed Mohammadi *et al*., 2013), weaknesses in trainers' scientific abilities, teaching skills, and dealing methods with students (Van Dijk *et al*., 2020), and drawbacks in the internal efficiency of the educational system and program, e.g., level, educational content, program quality, internship and methods of trainee selection, and how job consulting procedure is implemented (Shariatzade *et al*., 2006). Research indicates that more empowered trainees can be developed by resolving these shortcomings (Ibrahimi Moghaddam and Khoshchehreh, 2017). In this regard, the empowerment of trainees in agricultural schools is an effective measure to realize quality assurance and, subsequently continuous quality improvement in educational systems (Salehi *et al*., 2009).

Since empowerment and its undeniable effects of improving the performance and efficiency of students is an important issue in the educational system and a solution to achieving a dynamic society, it is crucial to design an educational system for agricultural schools that is based on an empowering paradigm. As such, by identifying the relevant factors, society can be guided toward development. Conducting comparative studies in this field will undoubtedly pave the way for adopting new strategies by planners and executives.

This research focuses on empowering trainees in agricultural schools for the development of their professional performance. To achieve this goal, the following hypotheses are put on trial.

H1: The management system of the educational system influences the empowerment of trainees in agricultural schools.

H2: The educational process of the educational system influences the empowerment of trainees in agricultural schools.

H3: The educational content of the educational system influences the empowerment of trainees in agricultural schools.

H4: The development of technical trainers in the educational system influences the empowerment of trainees in agricultural schools.

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H5: The supply of space, equipment, and technology in the educational system influences the empowerment of trainees in agricultural schools.

Figure 1 presents the theoretical model of the research.

MATERIALS AND METHODS

This research was an applied study in orientation and a survey in goal, hypothesis testing, and strategy. The study used the technique of collecting and filling out a self-designed questionnaire. The statistical population was composed of all trainees of agricultural schools in Iran in the 2020-2021 educational year. Due to the COVID-19 pandemic and the closure of schools, the trainees in all regions of Iran could not be accessed. Therefore, the questionnaires were emailed to the trainees in the provinces of Tehran, Khuzestan, Fars, Qazvin, Mazandaran, and Semnan (Table 1). There were a total of 1119 trainees. The sample size was determined to be 180 by Cochran's formula, and they were taken by simple randomization. The studied population was homogenous for the studied subject, i.e., the members of the population were similar and uniform. Finally, 169 questionnaires were qualified for assessment, but 11 questionnaires (6.2% of the total questionnaires) were discarded since the participants had not been careful enough in filling them out. The response rate was 93.8 percent.

Table 1. The sample size of trainees studied.

Province	Number of trainees (Sampled by simple randomization)
Tehran	41
Khuzestan	37
Fars	36
Qazvin	24
Mazandaran	28
Semnan	3
Total	169

To accomplish the research goal, a quantitative questionnaire was developed as the main research instrument, and the research data were collected using the questionnaire and a review of the literature. Based on the conceptual framework of the study, a questionnaire was designed that was composed of eight main sections (scored on a five-point Likert scale from 1= Very low to 2= Low, 3= Moderate, 4= High, and 5= Very high) and a section for demographic information. The main sections included management process (16 items), educational process (10 items), educational content (31

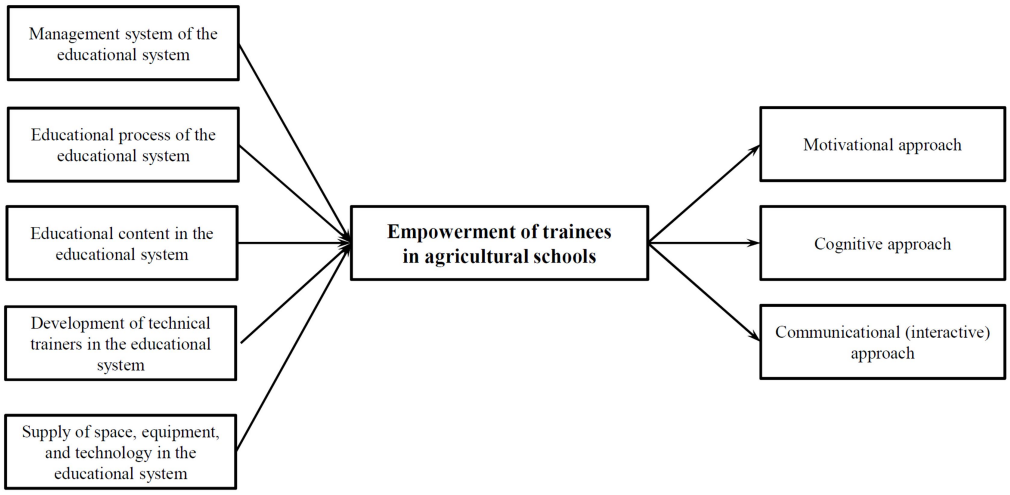

Figure 1. The theoretical model of the study (Source: Researchers).

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items), technical trainer development (34 items), supply of space, equipment, and technology (26 items), communicational approach to empowerment (14 items), motivational approach to empowerment (11 items), and cognitive approach to empowerment (11 items). To determine the validity of the questionnaire, it was provided to a panel of experts of the research committee (supervisors and advisers) and experts in the educational field. After making the revisions, it was ensured that the items could be used for measurement. A pilot study was conducted by distributing 30 questionnaires in Tehran Province. The validity and reliability were verified by content and convergent validity and convergent reliability. Content validity was obtained by an opinion poll from experts, and convergent validity was measured by Average Variance Extracted (AVE) (Table 2). The factor loadings and AVE were greater than 0.5 for all reflexive constructs (Hair *et al*., 2021). The research also used two criteria [Cronbach's Alpha and Composite Reliability (CR)] to determine the questionnaire's reliability. According to Hair *et al*. (2021), the reliability of a construct is good if CR is > 0.7 and is acceptable if it is 0.6-0.7. Table 2 shows that AVE, CR, and Cronbach's Alpha were all within acceptable ranges, reflecting the validity and reliability of the research instrument. Data were analyzed at descriptive and inferential levels by $SPSS_{23}$ and Smart PLS-3.

RESULTS

The results showed that 36.7% of the trainees were grade-11 students, whereas 33.7% were grade-12 and 29.6% were grade-10 students. The trainees were, on average, 16 years old, and 66.3% were boys and 33.7% were girls.

The results show that the component that has the greatest impact on the empowerment of trainees in agricultural schools is educational content with an impact factor of 0.672. The next ranks are for the educational process (0.399), management system (0.311), technical trainer development (0.302), and finally, physical space (0.298) (Figure 2). In addition, the results regarding the research indices reveal that the empowerment of trainees in agricultural schools is most deeply affected by human resource preparation (0.956) among the indices of the management system, knowledge updating (0.891) among the indices of the educational process, teaching methods (0.949) among the indices of the educational content, trainees' characteristics (0.958) among the indices of the technical trainer development, and appraisal (0.917) among the indices of the physical space (Figure 2).

The research checked path coefficients (factor loadings) and performed factor analysis using the structural model with the PLS method to test the research model. The results were obtained in two modes of t-value and standard estimation. To verify the research hypotheses, the bootstrapping technique was used in Smart PLS, which showed the output of the t-values (Figure 3). The t-values were > 1.96, which supports the research hypotheses.

Finally, the overall fit of the models was checked by the Goodness of Fit GOF criterion. Wetzels *et al*. (2009) mentioned the three values of 0.01, 0.25, and 0.36 as the weak, moderate, and strong values of GOF, respectively. The value of 0.654 for GOF in this research shows the strong overall fit of the research model (Table 3).

To decide on supporting or refuting the research hypotheses, if the t-values calculated by the software were in the range from +1.96 to -1.96, the respective hypothesis would be refuted; otherwise, it would be supported. Table 4 shows that all research hypotheses were supported. The standardized path coefficient between the variable of the educational content and agriculture school trainees' empowerment (0.672) shows that the educational content directly accounts for 67.2% of the variance in the empowerment of trainees in agricultural schools. Also, 39.9% of its variance is captured by the educational process, 31.1% by the management process, 30.2% by the technical trainer development, and 29.8% by the supply space, equipment, and technology.

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Table 2. The convergent validity and the reliability of the measurement instrument (Source: Research findings).

Summarized items		Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Management process	Planning and needs (Paying attention to the needs of the labor market in the agricultural environment, etc.)	0.845	0.862	0.698
	Providing and organizing resources and facilities (Provision of agricultural tools and equipment for each discipline, etc.)	0.881	0.918	0.737
	Preparing human resources through relationships (Creating opportunities to improve students' creativity and knowledge and providing in-service courses, etc.)	0.867	0.904	0.653
	Supervision, monitoring, and control (Creating opportunities to improve students' creativity and knowledge and providing in-service training courses, etc.)	0.831	0.849	0.762
Educational process	Dual education (Dual system of employer and university)	0.742	0.886	0.795
	Information updating (smart education)	0.793	0.928	0.862
	Professional training (Communication with agricultural research centers and obtaining new agricultural findings, etc.)	0.846	0.877	0.685
Educational content	Analysis of needs (Analysis of the current status, etc.)	0.811	0.851	0.711
	Analysis of educational goals (Paying attention to teaching agricultural operations to get a job, etc.)	0.848	0.897	0.685
	Curriculum content analysis (Content analysis based on goals set, etc.)	0.834	0.927	0.714
	Analysis of the educational strategy (Compliance with the time and place of education, etc.)	0.964	0.974	0.843
	The role of the evaluation system (Attention and use of electronic tools in evaluation, etc.)	0.845	0.845	0.641
	Teaching methods (Using problem-solving learning and...)	0.968	0.972	0.761
Technical trainer development	Characteristics of trainees (Interest in agriculture and positive attitude towards employment in agriculture, etc.)	0.928	0.939	0.607
	Characteristics of trainees (Having a sense of responsibility in practical learning by students, etc.)	0.910	0.928	0.678
	Educational qualifications (Creating and expanding skills and professional knowledge of trainers, etc.)	0.877	0.916	0.731
	Personal qualifications (Creativity, innovation, mental strength, capability, etc.)	0.851	0.912	0.664
	Professional qualifications (Improving the level of efficiency and ability of trainers through strengthening and increasing the powers of students and...)	0.774	0.825	0.600
	Ethical qualifications (Discipleship, trust, respect, and respecting the rights of trainers, etc.)	0.855	0.914	0.743
Supply of space, equipment, and technology	Physical component (Special geometry design of the space of agricultural colleges, etc.)	0.906	0.934	0.785
	Environmental component (Intake of light and suitable physical space for the class, etc.)	0.814	0.878	0.642
	Social communication component (Creating a sense of security and peace in the educational environment, etc.)	0.854	0.901	0.695
	Furniture and equipment component (Having educational equipment in accordance with current knowledge and standards, etc.)	0.528	0.919	0.706
	Technological advantage (Having practical workshops and using new technologies, etc.)	0.834	0.889	0.667
	Evaluation method (Use of grade in trainees' evaluation, etc.)	0.897	0.7918	0.652

Continued…

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Continued of Table 2. The convergent validity and the reliability of the measurement instrument (Source: Research findings).

Summarized items		Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Communicational (interactive) approach to empowerment	Management solutions (Necessity of managing change in goals, planning and implementing educational programs in the conservatory, etc.)	0.834	0.864	0.669
	Use of information and communication technology	0.884	0.928	0.886
	Development of partnership (Formation of joint groups of trainers and trainees in program design, etc.)	0.912	0.942	0.864
	Clarification (Clarifying the duties and roles of managers, apprentices and students, etc.)	0.944	0.957	0.815
Motivational approach to empowerment	Human relations (Having the ability to strengthen self-confidence in trainers and trainees, etc.)	0.948	0.935	0.798
	Commitment (Having a work conscience and creating a positive attitude towards work, etc.)	0.879	0.943	0.892
	Motivation (Providing a management model, recognizing and introducing managers and successful and entrepreneurial trainers in the school)	0.845	0.928	0.814
	Modeling (Providing an appropriate evaluation and feedback system for the performance of managers and trainers and applying the style of collaborative managers in agricultural colleges)	0.878	0.925	0.754
Cognitive approach to empowerment	Cognitive dimension (Creating a sense of empowerment, capability, competence in managers, etc.)	0.916	0.947	0.857
	The self-efficacy dimension (Taking into consideration performance-based rewards for managers and trainers, etc.)	0.946	0.961	0.860
	Metacognitive dimension (Using self-control spirit, controlling interactive behavior in managers and trainers and having self-judgment and self-observation in managers and trainers)	0.845	0.866	0.928
	Appreciation dimension (Applying recognition and appreciation of the performance of managers and trainers and increasing responsibility in managers and trainers)	0.940	0.961	0.951

Table 3. The GOF value from the perspective of trainees in agricultural schools (Source: Research findings).

$GOF = \sqrt{\overline{communalities} \times \overline{R^2}}$	0.654

Table 4. The linear effects of the research variables to test the research hypotheses (Source: Research findings).

Research hypotheses	Path coefficient (P)	t-Value	df	P-Value	Result
Educational content → Empowerment of trainees	0.672	5.354	0.011	0.000	Supported
Educational process → Empowerment of trainees	0.399	2.724	0.014	0.000	Supported
Management process → Empowerment of trainees	0.311	2.366	0.030	0.000	Supported
Technical trainer development → Empowerment of trainees	0.302	2.913	0.005	0.000	Supported
Supply of space and equipment → Empowerment of trainees	0.298	2.210	0.066	0.000	Supported

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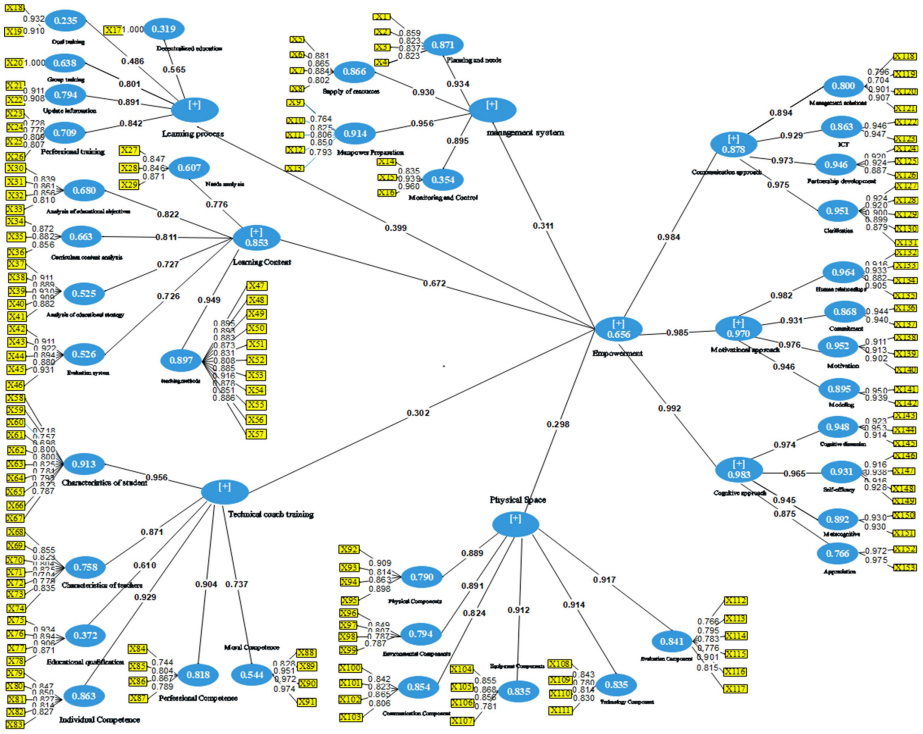

Figure 2. The initial measurement model in the standard estimation mode (PLS-A) (Source: Research findings).

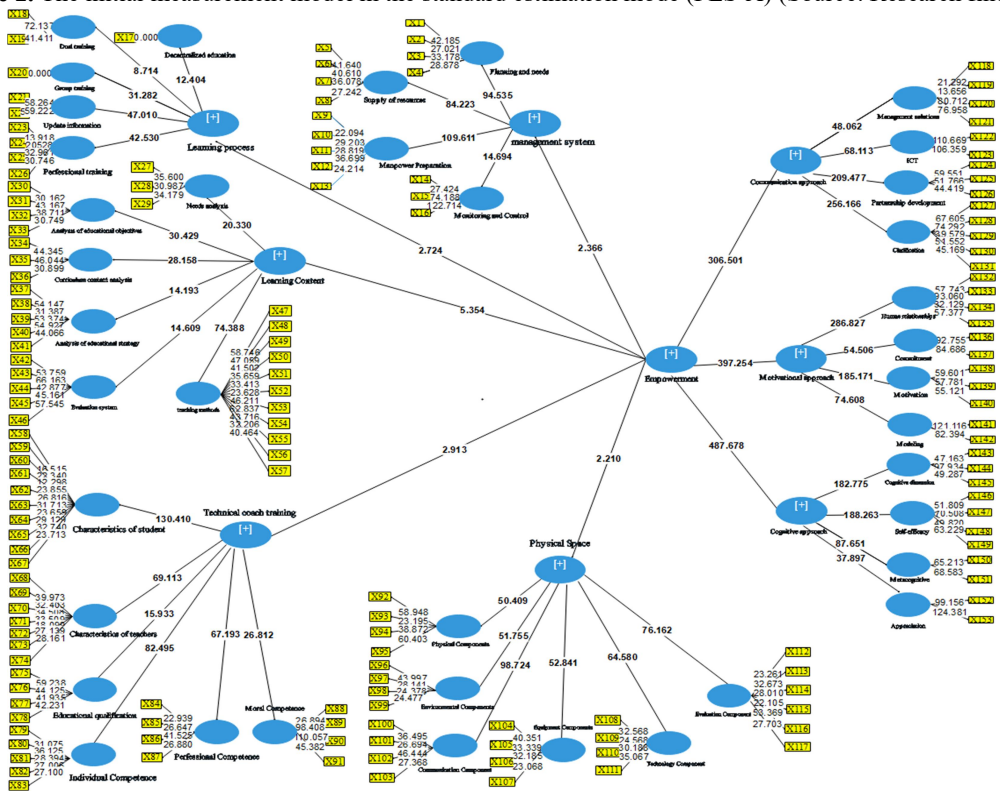

Figure 3. The initial measurement model in the coefficient significance mode (BT) (Source: Research findings).

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DISCUSSION

Empowerment through education as an organizational program enables the trainees in technical and vocational schools and agricultural schools to enhance their intellectual level, thereby effectively using knowledge and skills for achieving the goals and strategies of the educational system and improving their productivity and effectiveness. The educational system should always consider the future and prioritize attention to human resources. The success of a futurist educational system depends on having an all-inclusive model that includes the effective dimensions and components of human resource empowerment along with the conditions and requirements of the educational system for tailoring it with the local conditions. Most empowerment models have originated from non-educational systems and/or have considered only some dimensions of empowerment. The model presented here has adopted a multi-facet approach that is suitable for Iran's conditions. Therefore, it is comprehensive and capable enough to be applied in the educational system of technical-vocational and agricultural schools of Iran and is oriented toward the future vision. The researchers in this research informatively used paradigms, methods, and techniques of development and matched them with the conditions of the local community in order to link the formal knowledge with local knowledge and conditions in addition to strengthening local educational techniques and patterns. Such a strategy will lead to the empowerment and participation of trainers in the development process and the formation of an endogenous, self-reliant, and sustainable development process, which is a major goal of trainers in agricultural schools. In fact, the localization of knowledge and processes will contribute to understanding the educational system and its issues, leading to more effective solutions.

In the view of the trainees in agricultural schools, the educational content had a positive and significant effect on the empowerment of the educational system and it was the most influential component in the empowerment of trainees in agricultural schools. When providing the educational content to the trainees, trainers should consider that not only should a learning environment guide the individuals on the learning path and motivate their communication with one another, but the trainers should also provide the trainees with consistent educational content and involve them in the teaching-learning process in order to ensure the better and deeper learning through active participation. Therefore, after collecting data and information on the educational system, educational planners can proceed toward formulating a development plan for the transition from the present status to the optimal status. This finding agrees with the reports of Alimohammadi *et al*. (2019), Haji Hashemi and Movahedi (2016), Sobhani Nia (2012), Dulandas and Brysiewicz (2018), Van Dijk *et al*. (2020), and Heikkila *et al*. (2017).

According to the trainees, the educational process influences the empowerment of the trainees of the agricultural schools positively and significantly. In the educational process, trainees mainly need training in the fields of educational technologies and material development. They also need to be educated about communicational skills (independent learning ability), thinking skills (critical thinking, problem-solving, and creativity), and digital skills. Therefore, issues like stress control and management, communicational skills, and problem-solving methods should be prioritized for personal development. This finding is consistent with the reports of Bigdeli *et al*. (2018), Clark *et al.* (2011), and Balkar (2015).

According to the results, the effect of the management process is positive and significant on the empowerment of the trainees in the agricultural schools.

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Principally, the promotion of people's scientific level, the dynamism of organization, and their use of modern knowledge are impossible without reliance on educating and fostering a talented and dynamic workforce. Even the enhancement of the economic, social, political, and cultural capacity and the prosperity of learning organizations depend on the expansion of education and the approaches of the educational management system. Educational management that aims to facilitate learning in different aspects (learning to learn, learning to do, learning to be, and learning to live together) and, finally, develop responsible and professional citizens needs to acquire capabilities and competencies in technology, economic, social, intellectual, managerial, leadership, ethical, religious, global, international, personal, research, and cultural contexts. Therefore, the responsibility of educational activities and management should be handed over to competent, capable, and qualified people. This finding supports the reports of Bush and Glover (2016), Balkar (2015), Barber *et al*. (2010), Birami Erdy *et al*. (2019), Wrahatnolo and Munoto (2018), and Terkamo-Moisio *et al*. (2022).

The trainees of the agricultural schools state that the development of technical trainers influences their empowerment positively and significantly. Today, science and technology development has made it an undeniable need to develop the process of educational activities. Contemporary educational systems should train people who are capable, creative, and innovative in management and leadership and act logically. This result is supported by the findings in agreement with the results of Chao and Beak (2019), Baghaei Daemei and Safari (2018), Heikkila *et al*. (2017), Li (2018), Balkar (2015), Andersen (2016), and Sobhani Nia (2012).

The results show that the supply of space and equipment influences the empowerment of agricultural trainees positively and significantly. In educational settings, there has always been an emphasis on the remarkable impact of space, equipment, and technology in classrooms and schools on students' learning. Indeed, the aesthetic and artistic aspects of educational spaces are among the factors that greatly affect the students' mentality and emotions about teaching and learning. The educational environment is one of the most decisive factors in curricula. Educational experts argue that a suitable educational and learning environment is one of the most important pillars of quality. This finding is consistent with the reports of Sar and Narayan (2020), Chao and Beak (2019), Li (2018), Baghaei Daemei and Safari (2018), Andersen (2016), and Iyundade (2019).

Drawing on the results, the following recommendations can be put forth:

Given the effectiveness of educational content on the empowerment of trainees, it is recommended to consider materials that are based on the contemporary needs of society and are operational-based. For example, educational content should be directed toward training practical skills, such as honeybee farming, animal farming, greenhouse, and so on. It should be noted that trainees in vocational programs are more inclined toward skill-based practical learning than theoretical learning.

Given the effectiveness of interaction-based educational methods, it is recommended to use methods that can be implemented in the operational setting of education. In other words, a great part of education should be provided in real settings, e.g., greenhouses, animal farms, and so on. It should also be considered that demonstration methods and methods based on modern technology should be used in lieu of lecture-based and book-based educational methods.

Since the process of educational management by trainers has been considered by trainees, it is recommended to trainers to participate in educational workshops and courses on stress management, creativity, and interactive and active training methods.

Training technical trainers who are more fitted with conditions plays an effective role

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in the internship periods in agricultural schools. Therefore, trainers in agricultural schools are recommended to be selected from rural people or those whose parents were engaged in agriculture, or a practical skill period can be implemented under the supervision of an expert farmer to increase the educational quality.

Based on the results, space and equipment at schools are effective in the educational empowerment of trainees, therefore, the environment of agricultural schools is recommended to be similar to the real environment of their future job market, and so, ordinary schools should not be designed. Agricultural machinery and a practical working environment can make these capabilities more effective.

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توانمندسازی کارآموزان مدارس کشاورزی برای توسعه عملکرد حرفه ای

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چکیده

این تحقیق به بررسی توانمندسازی کارآموزان دانشکده های کشاورزی برای توسعه عملکرد حرفه ای آنها پرداخت و یک مطالعه پیمایشی است. جامعه آماری را کلیه کارآموزان شاغل به تحصیل در دانشکده های کشاورزی ایران در سال تحصیلی 91-۹۰ به تعداد ۱۱۱۹ نفر تشکیل می دهند که از این تعداد ۱۶۹ نفر به روش تصادفی ساده انتخاب شدند. با توجه به شیوع بیماری کووید ۱۹ و تعطیلی مدارس، پرسشنامه ها از استان های تهران، خوزستان، فارس، قزوین، مازندران و سمنان از طریق ایمیل ارسال و دریافت شد. داده ها با استفاده از روش معادلات ساختاری با استفاده از Smart PLS3 مورد تجزیه و تحلیل قرار گرفت. بر اساس نتایج، محتوای آموزشی، فرآیند آموزشی، فرآیند مدیریت، توسعه مربی فنی و تامین فضا، تجهیزات و فناوری در مدارس کشاورزی تأثیرات مثبت و معناداری بر توانمندسازی کارآموزان این مدارس دارد. ضرایب مسیر استاندارد نشان داد که محتوای آموزشی مستقیماً ۶۷/۲ درصد از واریانس توانمندسازی کارآموزان را تشکیل می‌دهد. همچنین ۳۹.۹، ۳۱.۱، ۳۰.۲ درصد و ۲۹.۸ درصد از واریانس توانمندسازی کارآموز ایرانی به ترتیب مربوط به فرآیند آموزشی، فرآیند مدیریت، توسعه مربی فنی و تامین فضا، تجهیزات و فناوری بوده است.

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