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Effectiveness of Work and Technology Projects in Acquiring Scientific Skills of First Secondary Students with Emphasis on Fundamental Transformation Document of Education

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ABSTRACT

Objective: This study aimed to examine the effectiveness of work and technology projects in developing the scientific skills of middle school students, according to the Fundamental Transformation Document of Education (Iran). The field has evolved from technical and professional education to modern technology education due to social, economic, and technological changes. The focus is based on the 20-year vision document and the Fundamental Transformation Document of Education.

Methods: The research was carried out using a qualitative method and an inductive coding system. The studied population consisted of managers, students, and teachers of the first secondary level in Hormozgan province, Iran. Sampling was done using the purposeful sampling method, following the principles of saturation and maximum diversity, which reached saturation with 15 people.

Results: The research reveals mixed opinions on the effectiveness of work and technology projects in enhancing students' scientific skills. Five scientific fields are needed to improve students' skills: technology, financial, ethical, motivational, and artistic. The fundamental transformation document of education focuses on work and technology projects. However, teachers often avoid using these projects due to a lack of facilities, inappropriateness, academic weakness, and lack of motivation.

Conclusions: Considering the impact of work and technology projects on the skills training dimension of the education system, it is necessary to analyze the situation of teachers across the province and the country by using the components introduced in this research and, on the other hand, to examine the context of including expressions and concepts that empower work and technology teachers in the content of the educational and training management program.

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Introduction

The core issue with technical and vocational education at the secondary level is that it's undervalued, often attracting only students with less interest in science, resulting in low enrollment. This perception is influenced both by cultural biases favoring theoretical education and the real concern about job prospects for graduates. Therefore, improving the image of this education stream is not enough; the essential challenge is to enhance the employment opportunities for its students. (Khosravi et al ., 2015).

Technical and vocational education is more expensive than general education due to its specialized facilities and equipment. This leads to limited access, especially in remote areas where governments prioritize basic education due to cost and high demand. Consequently, technical and vocational schools are scarce in these regions (Radfar et al.,2008). Today's education system requires an adaptable ideology that prioritizes modern educational methods. The integration of new technologies allows for both in-person and remote communication, leading to a shift from traditional individual learning approaches to more flexible education systems (Bachnak & Maldonado,2014).

To determine the effectiveness of the teaching and learning process, there should be a balance of information so that the ICT[1] sector plays a role in more than 50% of the whole process. Change in global education, including in our country, has led to diverse classroom environments. Teachers seek improved methods due to concerns about education quality related to authoritarianism and a lack of effort. Traditional teaching's shortcomings, such as passive methods and overreliance on the classroom, hinder effective learning.(Garrison & Kanuka,2004). Society today requires innovative educational models that empower students to handle life's challenges and leverage their skills and creativity. Students should focus on developing study skills and critical thinking rather than memorization. By using active teaching methods and addressing real-world issues, students can be engaged and motivated to learn more effectively. (Myers,2005).A study in England found that children struggle to work as a team in the classroom and lack the necessary skills for collaboration. To address this, there's a growing need to prepare students to work together effectively, particularly in activities requiring communication and confidence-building. (Noack et

[1] . Information and Communications Technology

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al., 2013).Instead of offering short-term courses to uneducated youth after school, another strategy might be to provide opportunities to acquire practical skills during school. Coverage of vocational subjects in formal education can be effective in keeping students in school. Especially those who think that studying general subjects will not help them get a job. To ensure high-quality technical and vocational education, the education sector undoubtedly needs expert teachers and its own learning environment. However, if the problem of providing quality education continues, the next best option is to provide students with basic skills for an acceptable life. In response to this problem, policymakers are trying to find alternative ways to provide vocational training through non-specialized, non-specialized institutions such as public high schools. This can be considered the main reason for the increasing interest in secondary education in developing countries. Due to the novelty of the discussion and the fact that the topic of the current research, which is to investigate the effectiveness of work and technology projects in increasing the scientific skills of students based on the transformation document, has been less discussed, it is hoped that the current research will be considered a step towards progress.

The main goal of the researchers in this study is to investigate the effectiveness of work and technology projects in acquiring the scientific skills of first-year secondary students based on the fundamental change document.

The partial objectives of the research are:

1. Studying the role of work and technology projects in the acquisition of scientific skills by first-year secondary school students
2. Identifying the necessary facilities and fields to improve the skill level of students in line with the document on fundamental transformation in first secondary schools
3. Studying the degree of compatibility of work and technology projects with the goals of the document on the fundamental transformation of education
4. Examining the reasons for the non-use of the book by labor and technology teachers and not completing some important projects

Therefore, his questions are:

1. To what extent has the role of work and technology projects been effective in acquiring the scientific skills of first-year secondary school students?

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2. What are the necessary facilities and fields to improve the skill level of students in line with the document of fundamental transformation in first secondary schools?

3. What is the degree of compatibility of work and technology projects with the goals of the Fundamental Transformation of Education document?

4. What are the reasons why labor and technology teachers do not use the book completely and do not complete some important projects?

Regarding advanced research, several studies have been conducted, some of which we mention: Rezaei et al. (2022) A study on teaching work and technology subjects to sixth-grade students identified five problem categories: teachers, students, materials, equipment, education and training, and parents. Examples are provided for each category. With technology's growing importance, addressing these issues is crucial for improving the effectiveness of teaching this subject. Turkian Tabar et al. (2021) study examined the effects of work and technology education on the creativity of middle school students in Durood City. A descriptive survey was conducted on a sample of 351 students out of a population of 4139. Teaching these subjects in their cognitive, creative, and motivational dimensions was found to be effective and had a significant relationship with their components. The results showed that work and technology education can positively and meaningfully impact students' creativity .

Mobaser Maleki & Kian (2018), in an article entitled The Effect of the Reverse Method on the Learning of Work and Technology Lessons, concluded that the teaching of work and technology lessons using the reverse method is more effective than the traditional method, and students have obtained higher average grades in reverse education. In an article, I investigated the level of attention paid to the six areas of education in the fundamental transformation of education in the social studies textbooks of the elementary school, and the results of the study show that the social studies textbooks of the third, fourth, fifth, and sixth and the components of the six fields are the fundamental change document in the social studies book of the sixth year. In his article on the pathology of the implementation of education transformation programs based on the management of organizational transformation, he came to the conclusion that the continuity and survival of any society require that its set of beliefs, values, behaviors, attitudes, knowledge, and skills be passed on to new generations. analyzed the vocational and technical education of the first high school

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based on ILO[2] business skills and found that the average of key business skills in grades 7, 8, and 9 is high to low. Learning skills are, respectively, reading, collaboration, technical communication, knowledge, and problem solving. examined the 7th-year Work and Technology Curriculum implementation. They found that elements like teaching strategies, materials, resources, and human factors were effective from the teacher's viewpoint. However, the opinions of directors and teachers regarding the impact of human and material factors on the program's implementation differed. The framework presented a modular curriculum based on competencies, intellectual processes, communication, and constructivism. It included global technology concepts across three dimensions. Knowledge was both process- and context-based. Evaluation is aligned with teaching methods mirroring engineering and technical processes. Iranpour (2022) argues that providing such skills lays the foundation for students' future success and positively impacts their academic performance, motivation, and social abilities. It concludes by advising schools to include scientific and vocational skills as a core part of the education program to better prepare students for their futures. Naderi et al (2020) research identified 11 categories for enhancing professional development in education, including strengthening skills, diversifying learning environments, needs assessment, communication development, and work-life balance. Effective professional training of educational managers through these elements can drive meaningful educational reform.

Materials and Methods

This study was conducted using a qualitative model. They were studied by principals, students, and teachers at the first secondary level in Hormozgan province. The research sample included teachers, principals, and 15 high school first grade students who were selected with purposive sampling based on the principles of maximum saturation and diversity. The method of data analysis is the descriptive interpretation method. The current study uses the path review method to verify the study. In the path review method, the researcher records the path taken during the study in time and presents the study to the reader. The methods of data collection in this study are in-

[2] . International Labour Organization

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depth interviews, observations, and documents. The methods of data analysis in this study are inductive analysis and conceptual content analysis.

Results

In response to the first question of the research regarding the role of technological projects in acquiring scientific skills, the following table was obtained after three stages of coding. Each of the following columns resulted from one stage of coding.

Table 1. The main categories relate to the role of work and technology projects in acquiring scientific skills.

Key points	main concepts	key categories
Book projects can be effective in students' acquisition of scientific skills. These projects increase students' skills. Technology projects have an impact on the acquisition of scientific skills by first-year secondary school students. Work and technology projects are very effective in acquiring the scientific skills of first-year secondary school students. Work and technology projects have an impact on the acquisition of scientific skills by first-year secondary school students. Many projects can play an effective role in students' skill acquisition. Workbooks and technology can improve our scientific skills if we have all the books at our disposal. Workbooks and technology can increase students' scientific skills. The Work and Technology book is a job selection book that you can use to choose a job that you like. This book can help create employment with its projects.	**Highly Effective**	**Highly Effective**
Some projects can have an impact on the acquisition of students' scientific skills, but not all projects. Projects can help students acquire scientific skills. Some projects, not all.	**Relatively Effective**	**Highly Effective**
I can't see a skill increase with book projects. Effect of book projects on students' skill acquisition They don't have much. It has not yet been fully seen in the general policies of the education system.	**Less Effective**	**Less Effective**

As can be seen in the table 1, there are generally two views of realization and, to some extent, a realization about the effectiveness of the role of work and technology projects in acquiring the scientific skills of learners. In response to the second question of the research regarding the facilities and fields necessary to improve the students' skill level, the following table was obtained after three stages of coding by analyzing the text of the interviews. Each of the following columns results from a coding step:

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Table 2. The main categories relate to facilities and fields necessary to improve students' skill levels.

Key points	main concepts	key categories
Schools should be equipped with modern technologies. Education should teach teachers the necessary software. Providing appropriate educational facilities to schools, equipping schools with computers, and providing workshop facilities. Educational and specialized facilities in this field, such as computers Computer Making computer workshops for schools and projectors, Giving computers, video projectors, and schools Computers, agricultural tools, woodworking tools, and many other tools are needed. Computer Computer, projector, work tools, a toolstable, and work tools with electricity and agriculture Schools should have computers, sewing machines, scissors, tools, and equipment necessary for agriculture and working Schools should have computers, sewing machines, scissors, tools, and equipment necessary for agriculture, working with electricity, and woodworking.	Equipped With New Technologies	The scientific field of technology
Some projects can have an impact on the acquisition of students' scientific skills, but not all projects. Projects can help students acquire scientific skills. Some projects, not all.	Relatively Effective	Highly Effective
Education must organize the necessary plans to empower teachers. Teachers should also try to be updated. Teachers should work towards the goals of the book. Conducting courses for teachers to familiarize themselves with the Fundamental Transformation document. Give teachers the necessary training on how to use the equipment. The ability of the teacher and his up-to-dateness in learning new software in the fields and activities related to new jobs Learning some content from colleagues. Up-to-date and high-level training is needed for labor and technology teachers to intelligently benefit from new technologies. Holding courses in the summer for teachers. Computer training classes and book software should be given to teachers in a completely specialized way in the summer. Establishing training courses and training colleagues Be familiar with the general goals of the education system. Teachers should also align themselves with today's technologies. Labor and technology directors should be people who know all the projects themselves.	Teacher training	The scientific field of technology
Education should provide them with teacher's manuals. Prepare educational kits for schools. training kit. Providing educational kits for work and technology lessons.	New educational content	Scientific field of technology
Replacing projects with other topics		

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Some projects should be freed so that they can be replaced according to regional capacities. Substitution of projects They can make maximum use of minimal equipment due to the lack of facilities.	Replacement	Scientific Field Of Technology
Reducing classroom congestion Reducing the number of students in the classroom Reducing the number of students in the classroom Education should reduce the number of students in the class.	proportionality	Scientific Field of Technology
Teachers should have the ability to control a busy class. Have the ability to manage a practical classroom. Learners take a class from the teacher.	Do you have class?	The scientific field of technology
Creating a suitable environment for recruitment in the field of work and technology through Farhangian University • Using the capacity of Farhangian University to hire a specialized teacher • Do not use non-specialist teachers. • Hiring teachers who have the ability to perform these skills • An expert in the department with the necessary expertise and knowledge should be appointed and have a related field of study. • Teachers must be experts in this field. • Appointing people who are qualified to teach this course • Become a technology secretary who knows how to do it. • To be selected for work and technology among computer engineers and technical engineers	Hiring an efficient workforce	The scientific field of technology
Attention to the capacities of each region in the compilation of textbooks The book should be written according to the native and local conditions of the region	Regional indigenization	The scientific field of technology
Increase class hours. Increase teaching hours.	Training Time	The scientific field of technology
Attention to new life changes Try to update your information. Rewrite the education and training books.	Update	The scientific field of technology
The necessary workshops and financial facilities to carry out the projects should be provided to the schools. financial facilities Making it possible to cooperate with organizations that can create workshop facilities.	Financial Ability	Financial Context Financial context

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Cooperation and participation of families and organizations to provide the necessary conditions.	Using the facilities of other organizations	
The necessary workshop and financial facilities to carry out the projects should be provided to the schools. Education must equip schools with the necessary facilities. workshop facilities, Providing workshop facilities according to the existing conditions in the region and local and climatic conditions, Provision of equipment and facilities related to the teaching of book projects at the school level, Workshop facilities, Necessary facilities for projects, The school is equipped with a suitable workshop. Establishment of a mechanic and construction workshop, Education should create workshops for schools, Allocate a separate class for work and technology tasks. Education should provide students with the necessary facilities to perform artistic and scientific work.	Creating infrastructure	Financial context
Funding for the creation of small student businesses during the academic year, Giving per capita to equip schools, To be given to special per capita schools to equip workshops.	Providing Educational Expenses	Financial Context
Ministers of work and technology should be selected from committed people.	Undertaking	
Teachers should be very patient. Labor and technology teachers should be technical and motivated people. The Secretary of Labor and Technology must be a person who has a lot of patience.	patience	Moral Context
Respect the learners, Tolerate them, Value their opinions.	Social Ethics	Moral Context
Labor and technology teachers should be selected from people interested in modern technologies.	Interest	Moral Context
The motivation of the teacher himself Encouraging creative and innovative students and applying their ideas	Individual motivation	Motivational context
Teachers of work and technology should be artists and familiar with computers Beside them works of art be an artist	Art field	Art field

The data related to the above table shows that in terms of the fields necessary to improve the skill level of students, five scientific, technological, financial, moral, motivational, and artistic fields are needed, and the education system and its implementers should provide the groundwork for the realization of these fields. To increase the skill level of learners.

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In response to the third question of the research regarding the degree of suitability of work and technology projects with the goals of the transformation document, the following table was obtained by analyzing the text of the interviews after three stages of coding. Each of the following columns results from a coding step:

Table 3. The main categories relate to the degree of suitability of work and technology projects with the goals of the transformation document

Key points	main concepts	key categories
Economic Economic Economic field Economic Socioeconomic Economic Economic Economic Economic	**Economic**	**Professional economic field**
Professional field Professional Professional Professional Professional professional	**professional**	**Professional economic field**
Independence debate	**independence**	**Professional economic field**
Attention to creativity	Creativity	Professional economic field
Entrepreneur **Market** **Skill and Entrepreneurship**	Entrepreneur	Professional Economic Field
Agricultural Field	Agriculture	Professional Economic Field
Academic **Academic** **Academic**	Academic	Scientific Field
Science and Technology **Technology** **Technology** **Technology** **Technology** **Technology**	Technology	Scientific field
Aesthetic **Aesthetic** **Aesthetic** **Aesthetic** **The beauties of the world** **Aesthetic** **Aesthetic**	Aesthetic	Aesthetic Field
Art Field **Artistic**	Artistic	Aesthetic Field

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Handicrafts Many Arts		
Biophysical	Biophysical	Physical Health
Sanitary	Sanitary	Physical Health
the environment the environment		Physical health

The data in the above table shows that the four economic, professional, scientific, aesthetic, and bio-physical areas in the fundamental transformation document are related to work and technology projects, which indicates the importance of this topic in this upstream document. In response to the fourth question of the research regarding the reasons for the non-use of the book by labor and technology teachers, the following table was obtained after three stages of coding by analyzing the text of the interviews. Each of the following columns results from a coding step:

Table 4. The main categories relate to the reasons for not using the book completely by labor and technology teachers.

Key points	main concepts	key categories
Limited workshop facilities Lack of facilities Lack of facilities Lack of facilities Lack of facilities Lack of facilities Lack of necessary facilities to carry out book projects Lack of facilities Lack of facilities Lack of facilities	Lack of equipment	The category of lack of facilities
Not providing the necessary grounds for work Non-availability of necessary facilities and fields for work	Lack of necessary fields of activity	The category of lack of facilities
Independence debate	independence	Professional economic field
Financial weakness of students and inability to provide the necessary equipment. • Inadequate economic conditions of families • The cost of some projects • Projects that require a lot of money cannot be done, such as building an aquarium • The equipment is too expensive and I cannot afford it	Financial weakness of learners	The category of lack of facilities

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It is very difficult to access the equipment needed for projects. It is not possible to get it in the region.	Lack of access to equipment	The category of lack of facilities
A large number of students in the class, When computers are broken and we have to work with computers, the class becomes crowded. We cannot use all the tools that exist. In two hours, we don't have enough tools and equipment to work with; it doesn't reach everyone.	The number of learners	The category of inappropriateness
Low completion time for projects, The hours of study are very short. Not allocating enough time in the weekly schedule with regard to practical work.	The number of projects over time	The category of inappropriateness
Incompatibility of some projects with the spirit of the students and the goals of the book	Inadequacy of the content with the characteristics of the learners	The category of inappropriateness
Incompatibility of some projects with the goals of the book	Inadequacy of content with learning objectives	The category of inappropriateness
Book projects cannot be sold to businesses. Some of the projects are not intended to be used in life. Some work and technology projects are not useful for students.	Inadequacy of content with the needs of society and learners	The category of inappropriateness
The projects do not match the facilities in the area.	Inadequacy of content with regional possibilities	The category of inappropriateness
Confusion about choosing the right project, Most book projects are not interesting and cost a lot. The explanations given about the projects in the book are very vague and incomplete.	The weakness and ambiguity of the book's content	The category of scientific weakness
Inadequate preparation of teachers; disability of some teachers who have unrelated fields Inadequacy of the teaching field for teachers	Lack of specialization	The category of scientific weakness
Lack of proper training to acquire the necessary skills to teach this book	Not holding training workshops	The category of scientific weakness
The category of scientific weakness	Scientific technical weakness	Lack of sufficient knowledge and mastery to carry out some projects by the respective teachers,

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		The study of colleagues about the document of transformation and the goals of the book is very little.
The category of lack of motivation	Lack of motivation of learners	Lack of motivation among students, Students' sense of lack of motivation
The category of lack of motivation	Apathy of learners	Students' lack of interest in doing some projects, Girls are not interested in some projects,
Unpreparedness of some students for group participation	Unwillingness to work in a group	The category of lack of motivation

The data listed in the above table shows that the four categories of lack of facilities, inappropriateness, academic weakness, and lack of motivation have caused labor and technology teachers not to use the book in question.

Discussion

This research provides a valuable analysis in relation to the key principles outlined in the foundational transformation document. One of the central objectives discussed in the document is preparing students with 21st-century skills. By evaluating learning outcomes from technology and work projects, this study provides useful insights for more effective implementation of competency-based, applied learning models. The document emphasizes innovative, project-based approaches that mirror real-world problem solving. Examining technology and work projects directly supports this guiding philosophy. The findings offer practical recommendations for better aligning with the transformative vision of the document to achieve improved student outcomes. For example, adopting suggested best practices around work and tech projects could help educators maximize student achievement while fully realizing the student-centered, skills-focused system envisioned in the transformation plan. Overall, this research aligns well with and provides supportive evidence regarding effective strategies for implementing the forward-thinking objectives outlined in the foundational reform document. Regarding the economic viability of a profession, attention should be paid to the aspect of independence in the discussion of employment and professional and economic growth. Students should be aware that they can earn income not necessarily through government jobs or what is commonly referred to as employment, but rather by relying on themselves and the skills they acquire. On the other hand, emphasis should be placed

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on the element of creativity in achieving professional growth in such a way that learners do not confine themselves to routine jobs and professions but rather embark on the path of entrepreneurship and job creation. It is possible that individuals who have ventured into entrepreneurship and unconventional employment have achieved even greater success, as new businesses lead to new products, innovation, and product diversity. Given the significant potential of agriculture, especially in rural areas and urban outskirts, efforts should be made in the education system to address this issue. Furthermore, attention should be given to teaching life skills, fostering lifelong learning, enhancing the practical skills of learners, developing new learning technologies, and making school education more practical and relevant. In addition, in order to achieve the goals of the fundamental transformation of education, it is necessary to eliminate content-centered, memorization-focused, and knowledge-heavy textbooks and instead focus on the practical and effective aspects of the subjects.

In this study, we're going to take a look at four foundational questions. Regarding the first question, the results demonstrated that, broadly speaking, there are two perspectives on how effective work and technical projects are for teachers gaining scientific skills. In explaining the first point of view, it can be said that these projects are effective, but the supporters of this point of view expressed a condition for this effectiveness in this research, that is, if all book projects are completed with necessary and adequate facilities, these projects will be effective in developing students' skills. The research has revealed that the second vision is closer to reality, as achieving this situation is an ideal situation in the current state of the education system.

The findings of the second question showed that in order to improve the quality of the projects, five scientific, technological, financial, moral, motivational, and artistic fields are needed, and the education system and its administrators should provide the basis for the realization of these fields in order to increase the skill level of the learners. In the meantime, the highest frequency and importance are related to the scientific and technological fields, and the financial, ethical, motivational, and artistic fields are placed in the next ranks. The findings of the third question indicated that the four economic, professional, scientific, aesthetic, and bio-physical areas in the fundamental transformation document are related to work and technology projects, which indicates the importance of this issue in this upstream document. In the meantime, the most attention is paid

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to the professional economic field, in the sense that work and technology courses should provide employment and economic prosperity in society.

The findings of the fourth question showed that the four categories of lack of facilities, lack of appropriateness, academic weakness, and lack of motivation have caused labor and technology teachers not to use the book in question. Among them, the lack of facilities has the highest frequency, and the components of inappropriateness, academic weakness, and lack of motivation are in the next ranks.

The results related to the first question of the research are consistent with the results of a single study Vahedi (2015), which came to the conclusion that business is conducted in workbooks and technology, but considering the business model, it is not at an optimal level and needs to be reviewed. Regarding the first question of the research, it is suggested that, while informing the executive officials of the low effectiveness of workbooks and technology in the current situation, the necessary facilities for the implementation of all work and technology projects be provided by providing the necessary facilities and workshop spaces, making the ratio of teachers, students, and necessary facilities suitable, and providing a place of training. The results of the second question show that equipping schools with modern technology such as computers, projectors, tools and workshop facilities, training relevant teachers in scientific fields and familiarizing them with the document of fundamental transformation, participating in courses and interacting with other colleagues, new educational content including training packages and teacher manuals, replacing projects and equipment that are suitable for local needs, establishing a balance between the number of students and facilities as well as classes, empowering managers in the areas of classroom management and loading expert, interested, capable and student teachers in this field, taking advantage of local facilities and providing financial fields and creating physical, scientific and specialized capacities, strengthening ethical dimensions, commitment and leadership and establishing positive social relations, as well as creating a suitable environment for the growth of science, work and technology projects. Regarding the second question, since the projects emphasize the cultivation of artistic people, the aesthetic aspect has been emphasized in the transformation document. The scientific field, in the sense that the people who take this course are proficient in the field of modern science and technology, is of the utmost importance. Also,

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physical safety, with an emphasis on health issues, is one of the focuses of the transformation document in this regard. This part of the findings of the research is in a way similar to the findings of the research of Vafai (2016), which show that the social studies textbooks of the third, fourth, fifth, and sixth grades have paid attention to the components of the six areas of the fundamental transformation document. It is suggested that several workshops be held for the relevant teachers to teach them technical skills and update information according to the local conditions of the region. Also, the teaching time of this lesson should be increased, and in the selection of teachers, the desired criteria should be taken into account, including moral, motivational, artistic, scientific, and skill criteria. Necessary awareness about the importance and attention to the category of work and technology in the transformation document has been made for those involved, and even training courses have been designed for this purpose, and at the end of the courses, the participants have been evaluated.

In relation to the fourth question, the results indicate that the lack of implementation facilities, the financial inability of families due to the high costs of this course, the difficult access to the necessary equipment for this work unit, the inconsistency of the content with the needs of learners and the society, as well as the objectives of the lesson and the large number of learners in relation to the available facilities and spaces, the lack of mastery of the relevant teachers and the ambiguities in the text and activities of the book, as well as the lack of sufficient motivation for learners and teachers in this regard, are among the reasons for the incomplete implementation of this course. This part of the results of his research is in line with the findings of Hedayati & Kharazmi's (2015) research, which concluded that the continuity and survival of any society require that its set of beliefs, values, behaviors, attitudes, knowledge, and skills be transferred to new generations. It is suggested that by preparing the necessary equipment and providing the necessary fields of activity, as well as reducing the teacher-to-student ratio and making necessary adjustments regarding the connection of the projects with the regional conditions, the needs of the learners, and society, as well as providing the necessary funds for this course and informing the relevant teachers and using motivational ways for them to improve the quality of the programs of this course, which is of great importance, especially in the new period,

Considering the impact of work and technology projects on the skills training dimension of the education system, it is necessary to analyze the situation of teachers across the province and the

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country by using the components introduced in this research and, on the other hand, to examine the context of including expressions and concepts that empower work and technology teachers in the content of the educational and training management program. Considering the criticality of the learning skill issue, it is suggested to carry out research on other education centers to clarify the status and role of technical education in those areas.

A survey should be conducted on the level of familiarity of educational and administrative staff with the category of teaching skills and its processes and components.

A survey should be conducted on the various fields of business and technology courses in which the country's education and training community is involved in order to determine the capacity of these fields and make this knowledge the basis of effective terminology and practice.

Due to the qualitative nature of the research, it is not possible to generalize the findings to all educational situations, and the data results can only be transferred to similar educational environments. This research was limited by a lack of up-to-date primary sources within the country and a lack of domestic researchers on the topic. Outdated materials in libraries and outdated online sources meant the researcher lacked first-hand information. Additionally, there was a shortage of local researchers investigating this field, which could have strengthened the reliability of the methodology and findings. The most recent Latin books in this field are from the nineties.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Farhangian University.

Author contributions

MZ and MM contributed to the study conception and design, material preparation, data collection and analysis. The author contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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