

## Designing a Skill-Based Education Model in Schools Based on the Real Needs of Society Using Grounded Theory

Atefeh. Khosravirad<sup>1</sup>, Ahmad. Akbari<sup>2\*</sup>, Mohammad. Karimi<sup>3</sup>, Moslem. Cherabin<sup>4</sup>

<sup>1</sup> Ph.D Student of Educational Management Department, Neyshabur branch, Islamic Azad University, Neyshabur, Iran

<sup>2</sup> Department of Education Science, Mashhad Branch, Islamic Azad University, Mashhad, Iran

<sup>3</sup> Department of Management, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran

<sup>4</sup> Department of Education Management, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran

\* Corresponding author email address: akbari.180@gmail.com

### Article Info

#### Article type:

Original Research

#### How to cite this article:

Khosravirad, A., Akbari, A., Karimi, M., & Cherabin, M. (2024). Designing a Skill-Based Education Model in Schools Based on the Real Needs of Society Using Grounded Theory. *Journal of Adolescent and Youth Psychological Studies*, 5(2), 1-13.

<https://doi.org/10.61838/kman.jayps.5.2.1>



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### ABSTRACT

**Objective:** This study aims to design an appropriate model in the field of skill-based education based on the real needs of society using grounded theory.

**Methods and Materials:** The method of this research is grounded theory with a qualitative approach. Data were analyzed using MaxQDA software. The sampling method was purposive, reaching saturation after conducting 10 interviews with professors and experts in the fields of educational management and skill-based education.

**Findings:** The research results showed that the central phenomenon of skill-based education consists of three components: facilitating personal and social life; value-creating and wealth-generating skills; and human-developing skills. The causal conditions of the research that lead to the phenomenon of the skill-based education model in schools based on the real needs of society were categorized into four groups: pressures of the new age for change; societal needs pressure; poor performance of the non-skill-based educational system compared to the skill-based system; and cultural beliefs of society. Contextual conditions consisted of five main components: policy-making for modern educational systems; enhancing skill-based human resources; providing physical facilities and infrastructure; suitable environment for skill-based education completers; and cultural beliefs of society and families.

**Conclusion:** Appropriate strategies for achieving skill-based education based on the real needs of society were categorized into six groups: correcting government's wrong processes and comprehensive government support; comprehensive culture-building at all levels of society; strengthening and enriching skill-based human resources at the societal level; changing procedures and processes in education; fundamental change in educational policies; and attracting support from effective supplements in the area. The outcomes of implementing these strategies were categorized into four components: economic outcomes and benefits; positive social and cultural outcomes; positive personal outcomes; and educational outcomes.

**Keywords:** Skill-based education, real needs of society, value-creating skill, human-developing skill

### 1. Introduction

# Y

outh are the foundation of societies; on one hand, with their energy, innovation, and personality, they define the development space and security of a nation, and on the other hand, with their creative talents and workforce, they guarantee the economic progress and the achievement of political and social goals of society (Haerudin et al., 2023; Hafina et al., 2022). The increase in youth unemployment is one of the most significant economic problems in today's societies worldwide; similarly, this issue exists for both less developed and developing countries. In the next decade, at least 475 million new jobs need to be created to accommodate 73 million currently unemployed youth and an additional 40 million people entering the job market annually (Eghbal et al., 2020; Spyropoulou et al., 2020). Given that one of the reasons for unemployment in Iran is the lack of job market required skills among job seekers, offering skill-based training plays a significant role in reducing unemployment rates (Moeini et al., 2019).

Development and progress in various dimensions depend on education and the importance attributed to it, but addressing education without considering the outcomes of its effectiveness is undoubtedly futile. Questions arise such as whether any type of education, by any method, at any time, and for anyone is effective? Is the outcome of education worth the investment of valuable organizational resources? Managers and educational stakeholders have always faced the question of whether training courses are genuinely effective? Studies and research have shown that demonstrating the real impacts and outcomes of training courses has become a full-fledged concern for educational units; managers and policymakers in organizations demand practical and tangible reports on the actual effectiveness of training courses (Apriyanto & Hidayati, 2022; Laitinen et al., 2022; Loock & Gravett, 2014).

Educational systems in the modern era, as cultural and educational institutions, are not limited to transferring knowledge to students but also involve normative and value-based aspects. It is an accepted principle that the function of schools is not only to cultivate intelligent individuals who can outperform competitors in today's competitive world but also to expect schools to develop learners in such a way (Parsakia, 2023). In other words, if we consider the school's task to educate the emerging generation and if we accept the comprehensiveness of the term 'education' that goes beyond focusing on the scientific development of children's personalities, the function of the educational institution will surpass knowledge distribution (Eghbal et al., 2020; Steyn et al., 2015). If the skills learned are never transferred to the

workplace or applied in the job and related duties, it has created skills that bring no benefit to society. The education system must move from being theory-centered to skill-centered; if the next generation is to succeed, it will be through skill-centeredness (Rotaru, 2020). One of the main tasks assigned to the Fundamental Transformation Document in education is to shift from memory-based to skill-based education, and this has started in schools, addressing a gap in the educational system where students were taught to memorize, and now education in vocational schools, primary, and middle school has moved towards skill-centeredness. Students' skills are not just in the technical field but also include life and social skills, and all students should enter society as responsible citizens after their education period. Implementing this path is somewhat difficult and has started in schools, continuing until the end of the academic year (Ahmadpour et al., 2022; Khalvandi et al., 2023). Although in the past three decades, commendable efforts have been made by officials and educational stakeholders to improve and reform the country's educational system, which fortunately has had positive and beneficial results, the Ministry of Education still faces serious challenges, and its output does not match the level of the Islamic Republic of Iran nor responds to environmental changes and societal needs. Although factors affecting the realization of the Fundamental Transformation Document in Education have been extensively studied in recent years, these studies have not been successful in achieving such a level of knowledge about the future realization of the Fundamental Transformation Document in Education; in other words, the future realization of the Fundamental Transformation Document in Education and the factors affecting this future in various countries, including Iran, have been neglected in academic research. Identifying the factors affecting the realization of the Fundamental Transformation Document in Education and how these factors interact could significantly assist decision-makers and executives of the Islamic Republic of Iran's governing bodies to adopt appropriate measures to positively manipulate these factors and strengthen factors affecting the realization of the Fundamental Transformation Document in Education in the future (Ahmadpour et al., 2022). Due to the lack of skills among graduates and job seekers, despite macro-level policies towards skill-based education as mandated by the sixth development plan, the government is obliged to increase the share of skill-based education to 30% in higher education and 50% in the Ministry of Education by the end of the plan (Khalvandi et al., 2023). Skill-based

education, while needing to be aligned with the needs of society and its level of development, must also consider modern technologies. One of the constraints of skill-based education is that this type of education is neither homogeneous nor balanced with theoretical education, and even this balance and coordination are not seen within skill-based education among different sectors, including industry, services, and agriculture (Ahmadpour et al., 2022). One of the most fundamental applications of skill-based education is the transfer and enhancement of knowledge, technology, professions, and jobs, creating power and capability in individuals to take up jobs and meet the timely needs of the job market. Generally, researchers consider the biggest problem of traditional social skills education (instruction, modeling, practice, feedback, and reinforcement) to be the lack of generalizability of the learned skill to the natural environment because, in this method, teaching a skill is just a direct instruction about a specific way of acting in a specific situation and lacks the necessary flexibility to adapt to new situations. In fact, skill-based education, due to combining theoretical and practical training, has a great ability to form human capital and train knowledge-based workers ("Conditions for the Development of Psychological and Pedagogical Competence of Teachers of Vocational (Professional and Technical) Education," 2022; Khakunova et al., 2022); however, the process that needs to be followed and the factors involved in this process are unclear. Simply put, the main issue of the current research is that skill-training organizations must present their skills to individuals based on what model to lead to successful outcomes (Averill & Major, 2020; Code, 2020); in other words, so far, no scientific and operational model for the development of skill-based education has been presented. The importance of planning for the future and the efforts of advanced countries in the world for continuous progress have led many researchers to predict through future studies the skills required for living and working in the future (Coiro et al., 2016; Keinänen & Kairisto-Mertanen, 2019).

So far, no formal model for the real needs of the country in the field of skill-based education has been presented. Given the strategic importance of the education sector in the country and the training of future generations, with an eye on strategic management and the defined strategies for the country and the education system, it is necessary to fill this practical gap, and domestic researchers should focus on skill-based education and address the existing deficiencies in the country's education system based on local and real needs so that in the future we witness a skilled and cultured layer

active in line with national goals. This will not be achieved except by presenting a systematic model of this educational system; hence, the mission of the current research is to examine this important matter and answer the question: What is the model of skill-based education based on the real needs of society? This question has various dimensions and components. Within this model, the factors affecting the skill-based education system, the outcomes of the skill-based education system, the causal and intervening conditions of the skill-based education system, and many other components are embedded.

## 2. Methods and Materials

### 2.1. Study Design and Participants

Given that the forthcoming research aims to identify and explain skill-based education in schools based on the real needs of society using grounded theory and to present a model for it, it is fundamentally purposeful and exploratory in outcome, employing a qualitative approach. Due to the novelty of the research topic, limited knowledge and the need for development of this subject in Iran, the absence of a theory in this area, and the lack of existing research in society answering the research questions, grounded theory was chosen as the research method. This inductive method, moving from specific to general, was initially developed by Glaser and Strauss. They defined grounded theory as "the discovery of theory from data systematically obtained from social research". In this approach, the researcher does not start with a theory in mind but begins in the real field, allowing theory to emerge from the qualitative and real data collected. A theory derived this way is closer to reality than one formed by merely assembling a number of concepts based on experiences or mere speculation. The sampling method, considering the research approach, was purposive, chosen because the goal was to collect quality, reliable, and credible information. Samples were selected that could provide a reliable picture of the phenomenon under study. In qualitative research, the sample size is determined by theoretical saturation, meaning that when further interviews do not provide any new information but merely repeat previous data, the researcher concludes data collection.

### 2.2. Measures

#### 2.2.1. Semi-Structured Interview

Data collection method was in-depth interviews. For the purpose of collecting qualitative and real information,

interviews were conducted with 10 experts in the fields of educational management, education, and skill-based education in schools. Repetition in the information received was observed from interview number 8, but to ensure greater reliability, 10 interviews were conducted. Data collection lasted from March to August 2022. Considering that this research had one main question and six sub-questions, interview protocol questions were formulated to answer these questions. During the interviews, in addition to note-taking and audio recording, exploratory questions were also asked based on the interview conditions and respondents' answers.

### 2.3. Data analysis

Data were analyzed using the Strauss and Corbin method. The researcher, through constant comparison of data and word-by-word writing of interview texts, field notes, recorded items, and processes of conceptualization, interpretation, and theorizing, obtained the essence of the acquired information. Each interview was coded and analyzed before the next interview. For this purpose, open, axial, and selective coding stages were conducted. The researcher looked for the main variable and process in the data. Repeated review of data, codes, emerged categories, memos, and diagrams written during data analysis helped in writing the main narrative, enabling the researcher to identify the study's main variable.

Validity processes include a systematic method for categorizing data and identifying different concepts and categories, also eliminating overlapping areas. This is a popular method among qualitative researchers to validate collected evidence from observations, interviews, and documents and to extract main and sub-concepts. Four types of triangulation were determined: among data sources (i.e., participants); methods (i.e., interviews, observations, documents, and records); theories; and among different researchers. In this study, triangulation or analytical method, which means using more than one researcher or analyst to

review and revise findings, was used. This method eliminates the potential bias that may occur in a single researcher's study. Kappa coefficient was used to confirm reliability. Based on calculations, the Kappa coefficient in this research was 0.742. In addition to calculating the Kappa coefficient for reliability confirmation, raw data were referred to compare and evaluate the theory construction with raw data. Additionally, research audit technique was used, referring to mechanisms applied at various stages of research to ensure gradual reliability and validity. These mechanisms are used throughout the research process to create reliable findings.

### 3. Findings and Results

After conducting and transcribing the interviews, the interview texts were entered into the qualitative data analysis software MaxQDA for analysis and coding. Open coding is an analytical process where concepts are identified, and their properties and dimensions are discovered in the data. In this stage, the text of each interview was studied multiple times, and main sentences were extracted and recorded as textual codes related to the participant's statements or interpretative codes (researcher's interpretation of statements). Then, codes that were conceptually similar were grouped into categories. A total of 198 open codes were obtained. The next step was axial coding, which involves relating categories to subcategories since coding on an axis occurs within a category, linking categories at the level of properties and dimensions. In this stage, initial codes and categories created during open coding that were related to each other were organized around a common axis. Continuous comparison of codes is essential in this stage. Then, by focusing on conditions leading to the phenomenon under study, the contexts in which the phenomenon occurred, and the strategies used to manage the phenomenon, selective coding and the main variable were identified. A summary of open, axial, and selective coding of the research data is presented in the [Table 1](#).

**Table 1**

*The Results of Qualitative Analysis*

Main Themes	Components	Open Codes
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Key Actors (8 Codes)	---	The educational system; government and government policies; major society policymakers; teachers (knowledge, readiness, and skill); families; students (vocational students); school principals; school administrative staff.
Causal Conditions (21 Codes)	Pressures of the new age for change (4 codes)	The emergence of a new generation (especially Generation Z in the world and Iran); the speed and growth of technology in society and its changes; the emergence of new businesses and the decline of traditional businesses; changing policies in Iran (especially educational plans and strategies).
	Societal needs pressures (6 codes)	Lack of government absorption capacity; society's needs (economic) and the need for a different workforce in society; society's need for home-based and rural businesses; the issue of unemployment and future labor force reduction; economic needs of society's individuals and the problem of poverty and job saturation in society and the emergence of new jobs.
	Poor performance of the non-skill-based educational system compared to the skill-based system (8 codes)	Excellent and appropriate performance of previous outputs of the skill-based system; inability to find suitable individuals for jobs in the non-skill-based educational system; lack of sufficient skills in employees in the non-skill-based system; lack of confidence in individuals in jobs due to lack of skills; disillusionment of students in the non-skill-based system of the previous generation in society due to lack of success; lack of skills in previous students (incompetence of graduates of the non-skill-based educational system) and knowledge without practice and science without use in the non-skill-based educational system.
	Cultural beliefs of society (3 codes)	Change in the level of insight and perspective of families regarding education and change in people's attitude in society; inability of some students to continue education at university and early marriages of students, especially in deprived and rural areas.
Central Phenomenon (16 Codes)	Facilitators of individual and social life (3 codes)	Life-centered skills (skills that impact life); skills to meet individual needs; skills for confronting and solving problems.
	Wealth-creating and value-creating skills (6 codes)	Hard (technical) skills; practical and useful skills for society; market-oriented skills; employment-generating skills (leading to jobs and work in society); job-related skills needed by society (skills that impact the job); skills leading to income.
	Human-building skills (7 codes)	Ethical and behavioral skills; interest-based skills; empowering skills; skills based on talent discovery; promotion of personal and intellectual independence; soft skills (creativity-based; critical thinking; problem-solving; decision-making; cooperation); a combination of skills.
Contextual Conditions (16 Codes)	Policy-making for modern educational systems (2 Codes)	Educational policies (supportive); designing a new educational system.
	Promotion of skill-based human resources (3 codes)	A suitable atmosphere in skill-based schools (technical and vocational and vocational training); necessary human resources (managers, teachers, and vocational trainers, especially experienced teachers and vocational trainers); social and individual motivations of students.
	Provision of physical facilities and infrastructure (3 codes)	Appropriate budget for schools; required equipment and infrastructure, especially for schools based on needs (like workshops, etc.); suitable and reviewed curriculum content.
	A suitable environment for skill-based education completers (5 codes)	Having a suitable view in employment agencies; a dynamic economy in need of skill-based education; supportive industry; supportive universities; active student research centers.
Intervening Factors (59 Codes)	Cultural beliefs of society and families (3 codes)	Supportive societal psychological atmosphere; supportive family psychological atmosphere; prioritizing skills over theory in society.
	Intellectual and cultural currents in society (5 codes)	Negative view towards vocational and technical education; inappropriate view and wrong thinking in society regarding skill-based education; sloganism in society and lack of motivation in the skill-based sector; lack of interest in new fields in society; society's inclination towards specific fields and the development of these fields in society.
	Misconceptions of families (4 codes)	Family pressure and psychological atmosphere (family constraints); parents' view of theoretical courses (family attitude); families' lack of awareness of the educational system and grade orientation; decisions of fathers and mothers (family decisions for children and neglecting students' interests and talents).
	Lack of understanding of skill-based education in the country's policy system (3 codes)	Misunderstanding of skill-based education by country's officials even the Ministry; inappropriate view of school counselors; misunderstanding of managers about skill-based education.
	Management weakness in education (3 codes)	Employment of weak and incompetent managers in the country's education system; lack of future vision in education managers; lack of attention by government officials and education officials to skill-based education.
	Major policymakers (4 codes)	Decisions based on partisan interests instead of national interests; disorganized and chaotic macro-planning; incorrect societal policy-making; sloganism by officials.
	Problems in the area of educational policymakers (5 codes)	Politicization of the education system and the political system's dominance over the country's educational system; person-centered education policies; top-down and directive educational system design; neglect of technical and vocational education by officials and exclusive focus on theoretical courses; lack of support for skill-based education by the Ministry of Education.
	Administrative problems in education (3 codes)	Traditional administrative system in education and the lack of a systematic educational system in the country; lack of a motivational system for teachers (in education); absence of a suitable performance evaluation system in education.
Lack of resources for skill-based growth (6 codes)	Lack of appropriate budget allocation and financial pressure on schools; lack of facilities and equipment for schools, especially for new specialized fields; the high cost of providing infrastructure, especially for mother fields; lack of equipment and facilities; absence of suitable educational spaces; lack of student research centers.	

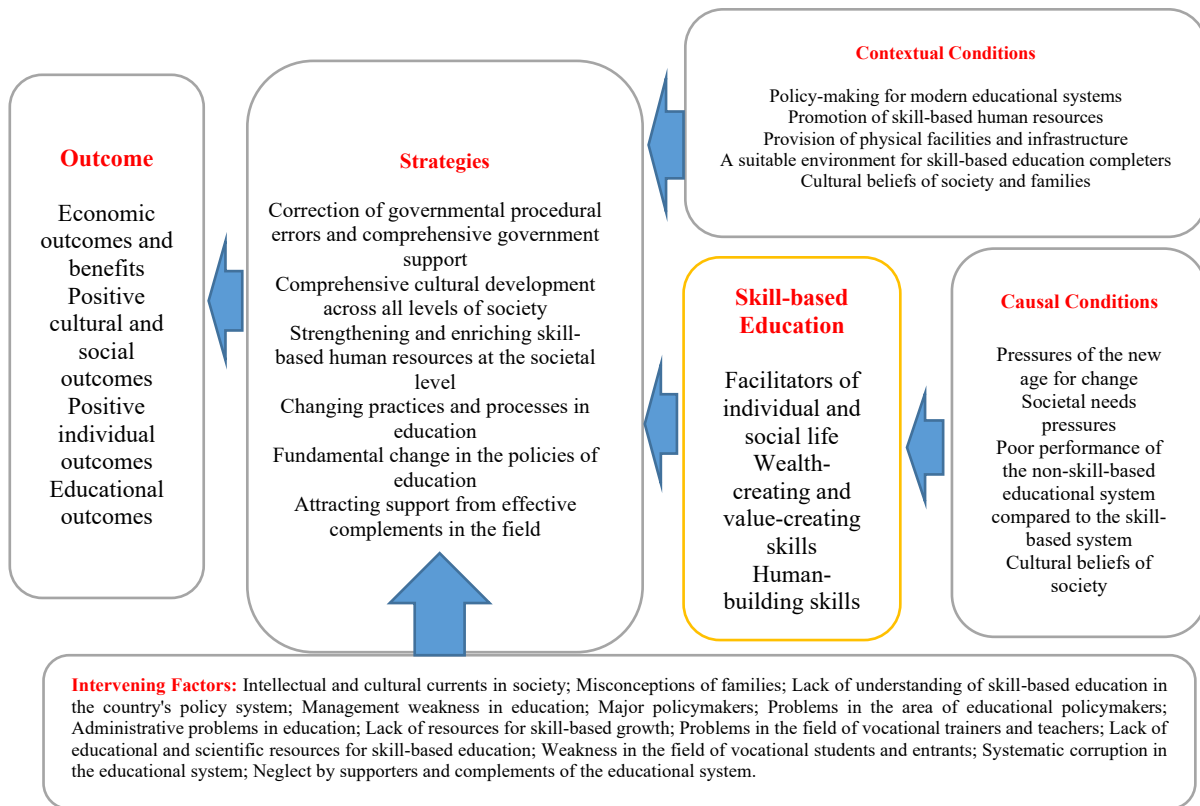
	Problems in the field of vocational trainers and teachers (6 codes)	Absence of dynamic and efficient in-service training courses; lack of preparedness of teachers and shortage of experienced teachers; low motivation of teachers; teachers' perspective; poor performance of teachers in skill-based courses; loss of teachers' status in society.
	Lack of educational and scientific resources for skill-based education (5 codes)	Over-specialization in skill-based education; unilateral importance of theoretical courses; outdated curriculum content; impractical and unchanged syllabi and lack of syllabi flexibility; non-updating of syllabi in line with the labor market and the high cost of changes; lack of educational and teaching resources.
	Weakness in the field of vocational students and entrants (4 codes)	Weak entry of institutions (students' level) in technical and vocational and vocational training; shortage of vocational trainers and non-specialized vocational trainers; incorrect talent identification in vocational trainers' entry; students' lack of connection with the work environment and lack of understanding of the work environment.
	Systematic corruption in the educational system (3 codes)	Corruption in education; corrupt educational system in the private sector; stakeholders of the status quo (examination mafia).
	Neglect by supporters and complements of the educational system (7 codes)	Consumerist and import-oriented society; the issue of credentialism in employment and work; government credentialism in hiring; outsourcing of the educational system by the government; lack of private sector willingness to work with the government; industries' distrust of the country's educational system; lack of coordination between the educational system and industry and the private sector, and communication weakness; lack of support from government and private organs for education (especially lack of industry support).
Strategies (51 Codes)	Correction of governmental procedural errors and comprehensive government support (8 codes)	Separating educational programs from the country's politics (depoliticizing education); designing a long-term educational vision for education; avoiding short-term goals and planning; changing government employment policies towards skill necessity; increasing practical exams in employment; government support and widespread advertising by policymakers; advertising from the national media and education; reducing credentialism.
	Comprehensive cultural development across all levels of society (7 codes)	Cultural development (family, counselors, and education); changing the view of education counselors; changing the view of high-ranking education managers; changing beliefs and perspectives in society (family and students); attracting family and society support for vocational schools; diminishing the issue of grades; changing the view of employment agencies.
	Strengthening and enriching skill-based human resources at the societal level (9 codes)	Providing employment for teachers in society; reviving the status of teachers in society; sharing educational (experience and knowledge) among vocational trainers; economic support for teachers; training and employing specialized personnel in education; using more experienced counselors; strengthening the skill output (enhancing the skill of vocational students); increasing in-service training (both in quality and quantity); strong in-service training (improving the quality of courses and making content practical).
	Changing practices and processes in education (9 codes)	Using modern teaching methods; bringing vocational schools closer to the labor market; educational guidance programs (correct talent identification); increasing skill training hours and reducing unnecessary courses; greater variety in skills; changing curriculum content; making all courses skill-oriented; moving towards practical, real, and applicable skills; making university courses more specialized for those continuing skill-based education.
	Fundamental change in the policies of education (12 codes)	Providing necessary facilities and equipping schools; allocating an appropriate budget (suitable educational per capita); developing a modular education system; education from the ground up and starting educational policy-making from the base; future-oriented planning; utilizing local – regional capacities; regional policy-making in education; promoting teachers based on skill training; changing the stewards of the educational system (granting policy-making and decision-making rights to technical and vocational officials); changing administrative procedures in education; comprehensive educational planning; reducing corruption and patronage in the educational system.
	Attracting support from effective complements in the field (6 codes)	Increasing intellectual support from various organizations; industry and university support for their needed skills; strengthening companies' social responsibility to participate in the educational sector; gaining the trust of industries; coordinating educational laws between different responsible organs; coordination between different influential sectors (private and government).
Outcomes (28 Codes)	Economic outcomes and benefits (6 codes)	Economic dynamism and entrepreneurship; creating employment, especially interest-based employment; developing businesses in society; reducing unemployment; increasing the economy's resilience against sanctions; increasing productivity in jobs.
	Positive cultural and social outcomes (9 codes)	Social and cultural growth of society; reducing social violence; reducing crime and violence; reducing depression; reducing the desire for government employment (reducing desk jobs and administrative jobs); proper and merit-based employment in society (meritocracy); excellence and progress of society; a more dynamic society; public acceptance in society.
	Positive individual outcomes (9 codes)	Logical growth and progress of individuals in society; higher self-confidence (personal); higher hope for life (personal); earning income and independence; increasing students' motivation; job satisfaction; less fatigue from the job; job satisfaction in society; working with motivation and interest by individuals in society.
	Educational outcomes (4 codes)	Proper education of future generations; improving the level of education in society; increasing the budget for skill-based education; training a value-creating workforce for society.

The Figure 1 displays the axial coding paradigm of the qualitative process model of the current research, and the

components of the qualitative research model will be explained subsequently.

**Figure 1**

*Paradigm Model*



**Causal Conditions:** In grounded theory, causal conditions relate to the circumstances that affect the core category. Causal conditions are events that create and somewhat explain the situations, issues, and problems related to the phenomenon, elucidating why and how individuals and groups engage with this phenomenon. Essentially, causal conditions refer to events and happenings that influence the phenomenon and lead to its occurrence, as shown in the research model. The causal conditions of the research that lead to the phenomenon of the skill-based education model in schools based on the real needs of society were categorized into four groups: pressures of the new age for change; societal needs pressure; poor performance of the non-skill-based educational system compared to the skill-based system; and cultural beliefs of society. These four components consisted of 20 codes.

**Central Phenomenon:** In grounded theory, the central phenomenon or core category represents a conceptualization of the phenomenon that is the basis of the process. In this research, the central phenomenon, which is skill-based education based on the real needs of society, consisted of

three components: facilitating personal and social life; value-creating and wealth-generating skills; and human-developing skills. These categories had 16 open codes.

**Contextual Conditions:** Context refers to specific conditions that affect strategies. In this research, the contextual conditions consisted of five main components: policy-making for modern educational systems; enhancing skill-based human resources; providing physical facilities and infrastructure; a suitable environment for completers of skill-based education; and cultural beliefs of society and families. These components themselves consisted of 16 codes.

**Intervening Conditions:** Intervening conditions are broader and general conditions such as culture, environment, etc., that act as facilitators or constraints on strategies. These conditions facilitate and expedite the implementation of strategies and, as a barrier, cause delays. Given the critical situation of the country in terms of skill-based education, 13 components were identified as barriers to skill-based education in the country, including societal cultural and intellectual currents; families' misconceptions; lack of

understanding of skill-centeredness in the country's policy-making system; educational management weaknesses; macro policy-makers; challenges in the educational policy area; administrative problems in education; lack of resources for skill-based development; challenges for vocational trainers and teachers; lack of skill-based educational and scientific resources; weaknesses in the student and entry domain; systematic corruption in the educational system; neglect by supporters and complements of the educational system. These 13 components had 59 open codes.

**Strategies:** Specific actions or interactions that result from the central phenomenon. Strategies and actions are plans and actions that help design the model. In this research, appropriate strategies for achieving skill-based education based on the real needs of society were categorized into six groups: correcting the government's erroneous processes and comprehensive government support; comprehensive culture-building at all levels of society; strengthening and enriching skill-based human resources at the societal level; changes in education practices and processes; fundamental change in educational policies; and attracting support from effective complements in the area. These strategies consisted of 51 open codes.

**Outcomes:** Outcomes include both tangible and intangible influential outputs that result from the design of the skill-based education model based on the real needs of society and are the outputs of the strategies. The outcomes of implementing these strategies were categorized into four components: economic outcomes and benefits; positive social and cultural outcomes; positive personal outcomes; and educational outcomes. These four outcomes consisted of 28 open codes.

#### 4. Discussion and Conclusion

Given the numerous challenges facing the country's education system, there is a need for the system to move towards more practical and beneficial education, such as skill-based education. Accordingly, it is necessary to take a fundamental step in this direction by designing an appropriate model for skill-based education based on the real needs of the country. Therefore, the aim of the present research was to design a model for skill-based education in schools based on the real needs of society using grounded theory. Accordingly, using interviews with experts and the grounded theory method, this model was designed. As explained above, the causal conditions leading to the movement towards skill-based education based on the real

needs of society included four components: pressures of the new age for change (4 codes); societal needs pressure (6 codes); poor performance of the non-skill-based educational system compared to the skill-based system (8 codes); and cultural beliefs of society (3 codes) in Iran which is in line with several past studies in the field (Ahmadpour et al., 2022; Apriyanto & Hidayati, 2022; Averill & Major, 2020; Code, 2020; Coiro et al., 2016; "Conditions for the Development of Psychological and Pedagogical Competence of Teachers of Vocational (Professional and Technical) Education," 2022; Eghbal et al., 2020; Haerudin et al., 2023; Hafina et al., 2022; Keinänen & Kairisto-Mertanen, 2019; Khakunova et al., 2022; Khalvandi et al., 2023; Laitinen et al., 2022; Looock & Gravett, 2014; Moeini et al., 2019; Parsakia, 2023; Rotaru, 2020; Spyropoulou et al., 2020; Steyn et al., 2015).

The first component, pressures of the new age, could be seen as a harbinger of a better future for the country's educational system and Iranian society. The emergence of new generations worldwide, including in the country, who have different desires and needs, and with their spirit of totality, combativeness, and independence, will lead to a transformation in the educational system. Furthermore, the rapid growth of technology in the country, which will lead to the creation of new businesses and the fall of traditional ones, and ultimately changing policies in the country, all contribute to the issue of skill-based education. The second causal factor, societal needs pressure, refers to the needs of Iranian society today. With the growing bureaucracy and skyrocketing costs, we are witnessing a decrease in government absorption capacity in the country. These factors, along with job saturation in various sectors, have necessitated change and transformation; thus, Iranian society needs a different workforce. Additionally, home-based businesses and the revival of rural jobs will necessitate new and different skills (Laitinen et al., 2022; Parsakia, 2023; Rotaru, 2020). Another issue is the country's unemployment problem and poverty. The fourth cause is the poor performance of the current non-skill-based educational system. In this system, skill-based outputs are not cultivated. Many individuals educated in this system in recent years are not suitable for employment because they lack the necessary skills and confidence, leading to frustration in their job search efforts. It can be said that the non-skill-based education system was a knowledge-based system without practice, a science without use, creating numerous problems for previous generations and necessitating a shift from theoretical and non-skill-based education towards skill-



based education in society (Haerudin et al., 2023; Khalvandi et al., 2023). These factors have led to changes in the cultural beliefs of Iranian society and a transformation in families' perspectives on education. Additionally, phenomena such as early marriages in deprived areas of the country and the inability to continue education in university and theoretical courses may have been significant factors in moving towards a skill-based education system.

The central phenomenon of the research was skill-based education. The analysis of interviews revealed that skill-based education consists of three components: skills facilitating personal and social life (3 codes); value-creating and wealth-generating skills (6 codes); and human-developing skills (7 codes). Skill-based education is meant to impact an individual's personal life, addressing personal needs and assisting in solving life's problems, thereby improving individuals' and learners' personal and social lives. Skill-centeredness means acquiring various technical, practical, and market-appropriate skills, enabling individuals to apply these skills in their jobs or create self-employment opportunities, ultimately generating income, signifying value creation and wealth generation. Intervening conditions are barriers to skill-based education in the country. Among these components, the first is societal cultural and intellectual currents (5 codes). Negative attitudes towards vocational and technical education and misconceptions about skill-centeredness have led to insufficient interest in these fields, with Iranian society showing a special inclination towards theoretical fields, indicating a lack of motivation in skill-centeredness and being caught up in sloganism. The second component is families' misconceptions (4 codes). Families have a particular view of theoretical courses, and their lack of awareness regarding skill-based educational systems has led them to focus on grades. Given the dominant role of parents in Iranian families and their decision-making, family pressures and psychological environment act as barriers to students entering skill-based fields, pushing them towards theoretical fields.

Other issues, such as a lack of understanding of skill-centeredness in the country's policy-making system (3 codes), educational management weaknesses (3 codes), challenges in macro policymakers (4 codes), challenges in educational policymakers (5 codes), administrative problems in education (3 codes), lack of resources for skill-based development (6 codes), challenges for vocational trainers and teachers (6 codes), poverty of skill-based educational and scientific resources (5 codes), weaknesses

in the student and entry domain (4 codes), systematic corruption in the educational system (3 codes), and neglect by supporters and complements of the educational system (7 codes), were mentioned as other components that obstruct skill-based education in society. These barriers exist systematically within society and have been integrated with the culture and beliefs of Iranian society for over 100 years. Special attention must be paid to these components for the implementation of a real skill-based education system.

To establish skill-based education in the country, suitable conditions and an appropriate environment must be created. For this purpose, components such as policy-making for modern educational systems (2 codes), referring to supportive education policies and designing a new educational system, were mentioned. Additionally, enhancing skill-based human resources (3 codes) was highlighted as a key player in the skill-based education process, suggesting that having suitable, trained, motivated personnel and creating an appropriate environment in schools can lay the foundation for skill-based education. Given the need for equipment, facilities, and educational budget for skill-based education, the next component was providing physical facilities and infrastructure (3 codes), emphasizing the need for schools to be equipped, curriculum content, and school budgets. It was also mentioned that educational complements in the country, such as industry, economy, universities, research centers, and job placement services, should support the skill-based education system, meaning that a suitable environment for completers of skill-based education (5 codes) must be established, which is a necessary requirement.

Finally, society and families' cultural beliefs (3 codes) need to be changed, indicating a shift in the prevailing atmosphere in society and families, prioritizing skills over theories in society. If skill-based education is correctly implemented in the country, positive outcomes will reach society. Among the identified outcomes are economic outcomes and benefits (6 codes), signifying economic dynamism and the development of businesses in the country, which will lead to job creation and a reduction in unemployment, making society's jobs more productive and the country's economy more resilient against sanctions. Other positive outcomes of skill-based education include positive cultural and social outcomes (9 codes). In a society where skill-centeredness occurs, there will be a decrease in the inclination towards desk jobs, more appropriate employment in society, a reduction in social problems such as depression, crime, and violence, making society more

dynamic, socially developed, and ultimately on the path to progress and development (Ahmadpour et al., 2022; "Conditions for the Development of Psychological and Pedagogical Competence of Teachers of Vocational (Professional and Technical) Education," 2022). Additional positive outcomes of skill-based education include positive individual outcomes (9 codes), generating motivation and interest in society and individuals, more motivation in students, personal independence of individuals in society, increased confidence and hope for life, leading to logical growth of individuals in society and positive employment outcomes such as satisfaction and lack of fatigue. Other outcomes of the skill-based education system in society include improved education level and growth of value-creating workforce for society. This will improve the educational process for future generations, leading to more budgets being allocated for skill-based education and further strengthening the positive cycle of skill-centeredness in society, indicating that proper educational planning for the country will be implemented over several decades, bringing the aforementioned benefits to society. To achieve the positive outcomes of skill-based education based on the real needs of society, it is essential to implement strategies that will lead to better implementation of skill-based education in society. Accordingly, based on the interviews conducted in the research and the extracted codes and components, 6 strategies have been identified as the main strategies, recognized as facilitating strategies and barriers removal for achieving a suitable model.

## 5. Limitations & Suggestions

The first identified strategy in the research was correcting the government's erroneous processes and comprehensive government support (8 codes). Accordingly:

1. Actions must be taken to separate the country's educational programs from politics, designing an education system as an independent entity, free from corruption, political patronage, and political games. This would result in a stable system with an independent character and autonomy, dynamic and devoid of political tensions and conflicts.
2. If the educational system is separated from the political system, it can be said that political interference, political appointments and dismissals, partisan tensions, etc., should be cleansed from the country's educational system, assigning politics to politicians and education to the educational system.

Forming bilateral working groups could align politicians' desires with the country's educational vision and objectives.

3. Efforts should be made to draw a long-term vision for the country's educational system and avoid short-term goal setting that leads to resource wastage, direction confusion, and fruitless efforts.
4. To support skill-based education as a key player in this area, the government could change employment laws and practices, aligning employment examination content with skill-based education.
5. Additionally, the government could expand its protective umbrella over skill-based education with extensive advertising, mobilizing the country's resources for promotional, media, and financial support of this system.

The second identified strategy was comprehensive culture-building at all societal levels (7 codes). Culture-building will ensure that societal changes become sustainable and existing societal trends move towards improvement.

6. Starting with families, engaging them more in the educational system from early childhood and basic education levels can enhance their understanding of skill-based education.
7. Changing the perspective of school counselors is essential; it would be beneficial if counselors were entrepreneurs and business consultants themselves. Moving away from administrative bureaucracies in schools towards dynamism in hiring these individuals would attract highly knowledgeable and skilled people to this profession.
8. Before any action, the perspective of top-level education managers must be changed. In the short term, this can be achieved by appointing skill-based managers and, in the long term, by providing practical in-service training courses in skill-based education, instilling the belief that we can achieve what we aim for and can implement a skill-based education system in the country.
9. Like many advanced countries, we can move from emphasizing theoretical grades towards practicality, applicability, and skill orientation by changing the country's educational system structure.

The third component is strengthening and enriching skill-based human resources at the societal level (9 codes),

possibly implying that human resources in organizations, especially educational service organizations, play the most crucial role. Dynamic, up-to-date, creative, and motivated human resources will cultivate similarly inspired students. Therefore, investing in vocational trainers and teachers is recommended, suggesting that:

1. Initially, the status of teachers and vocational trainers in society must be revived. Many teachers do not enjoy suitable economic and welfare conditions, implying that a teacher worried about their family's economic situation will be less focused on teaching and the classroom. Addressing teachers' disillusionment can reduce their motivation and, based on Adams' equity theory, lead to reduced effort and negligence, which can be countered by reviving their status, aiming to increase teacher output.
2. To enhance the capability of existing teachers, beneficial and practical in-service training courses should be utilized, along with establishing an accurate and up-to-date performance evaluation system.
3. Platforms for sharing knowledge and experience among teachers should be created, signifying knowledge management in the country's education system.
4. If possible, teachers should be integrated into society and the community. A teacher who has only interacted with students for 30 years and has been distant from the industry, economy, and society remains theoretically and practically stagnant. Providing opportunities for teachers, especially in technical fields, to work outside their teaching schedules (without harming their teaching process) will aid their family's economy, immerse them in skill learning and society, and make societal and labor market needs more tangible to them, which they can implement in the classroom.

The fourth extracted strategy was changing practices and processes in education (9 codes), meaning creating a change in education:

1. The country's educational system should keep abreast of the latest methods and approaches used worldwide, adopting these innovative methods in society.
2. In recent years, educational guidance programs have been well supported; this should continue,

guiding students correctly through well-planned educational guidance programs.

3. Efforts should be made to reduce less applicable and unnecessary courses in the system, allocating more time to essential education.
4. Changes in curriculum content should be made to introduce current knowledge into the educational system and steer courses towards skill-based education.
5. Technical and vocational schools and academies could be made more general, or the educational trajectory in universities could include more specialized fields.
6. Technical and vocational schools and academies should be brought closer to the labor market, industry, and society.

The fifth extracted strategy was a fundamental change in educational policies (12 codes), meaning a thorough overhaul of the education system and its policies, suggesting that:

1. Technical and vocational schools should receive more funding to manage the high costs of skill-based education.
2. The modular education system in the country should be expanded, making skill-based education more attractive and beneficial for those who may have fewer opportunities for university education in the future.
3. Like the Ministry of Science moving towards regional monitoring of university courses, the Ministry of Education should pay attention to regional and local capacities and make regional policy decisions to launch and implement useful and effective fields for each region, enhancing local engagement and application.
4. Skill-based and technical managers should be involved in policy-making and decision-making processes in the education system, either as decision-makers or advisors.
5. Education planning should be future-oriented, updating existing and newly launched fields in line with the country's needs with strategic future planning, designing the education system based on this principle.
6. Efforts should be made to cleanse existing corruption and patronage in the educational system, moving towards improving the skill-based education process.

The sixth strategy for implementing skill-based education is attracting support from effective complements in the area (6 codes), suggesting that:

1. All influential actors in the educational process, especially in skill-based education, should be involved in designing educational programs, educational planning, and policy-making.
2. Efforts should be made to gain the trust of the industry, creating a positive view of the skill-based education system among industrialists and, through negotiation, securing their material and moral support. For example, utilizing the idle capacity of factories for training courses or easier acceptance of trainees in factories for internships and job learning are all benefits of this collaboration.
3. The social responsibility of companies active in the industry should be focused on, fully engaging industrialists and factory managers in cooperation with secondary education centers.
4. Greater coordination should be achieved between different organs affecting the skill-based education process to increase the efficiency of these educations.

This research had limitations such as a limited number of experts in this field, access to experts, and the impossibility of face-to-face interviews with experts due to COVID-19 conditions. Future research is recommended to quantitatively test the research model and conduct more studies on identifying existing barriers to implementing skill-based education in society, overcoming skill-based education barriers, and designing a foresight model for skill-based education in the country.

### Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

### Declaration of Interest

The authors of this article declared no conflict of interest.

### Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

### Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

### Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

### Authors' Contributions

All authors contributed equally.

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