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Identifying and investigating the relationship between the dimensions of intellectual capital in the educational departments of Iran's defense organizations (Case study: Imam Hussein University)

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Abstract

Large defense and educational companies and organizations in the world have identified and investigated the relationship between the dimensions of intellectual capital, the methods of measuring and managing intangible assets as a comprehensive framework to provide a new way to improve and optimize their performance. Today, with more knowledge and awareness in the field of intangible assets and considering the effects of various sanctions on our country, we have realized this necessity and importance. The main purpose of the research is to identify and investigate the relationship between the dimensions of intellectual capital in the form of designing a model for measuring the intangible assets of the educational and research departments of defense organizations. The data collection tools were library, internet, interview and questionnaire, and the focus group and survey method were used to validate the collected data. To calculate the reliability of the questionnaire, Cronbach's alpha method was used, and to determine the validity of the questionnaire, it was confirmed by the experts of the focal group, and to confirm the validity of the model, the KMO and Bartlett technique and the factor analysis method were used. After designing the measurement model and confirming the validity of the model, the relationship between the human, organizational, social and communication capitals with intellectual capital and its effect on intellectual capital was investigated. The intellectual capital of military educational organizations by human capital, organizational capital, social capital and communication capital are evaluated. The coefficient of effect of all four types of capital is higher than 0.88, and with a slight difference, organizational, human, social and communication capitals have a higher coefficient of effect in this research.

Keywords: intellectual capital, intangible assets, human capital, organizational capital, social capital, communication capital
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1 Introduction

In the present era, the success of organizations is not limited to acquiring limited tangible and financial assets, but rather depends on accessing and utilizing the capacities of intangible and invisible assets, through which sustainable

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leadership or superiority can be achieved [22]. In the knowledge-based era, a new type of capital, termed intellectual capital, has been identified as the primary basis for achieving fundamental and strategic competencies to identify the best performance [21]. Towards achieving sustainable competitive advantage, attention to knowledge, how to collect, explore, create, produce, retrieve, store, distribute, and utilize it, establishing appropriate structures and processes for information use and supply of new knowledge, is considered important and vital [3]. In summary, intellectual capital management is essentially a systematic, planned, purposeful, and structured effort for effective use of knowledge [27].

In line with the implementation of self-sufficiency and resilient economy plan in this field in recent years, significant steps have been taken towards awareness, management, and evaluation of equipment and overall physical assets. Now, with improvement and greater focus on the organization's intangible assets and calculating their value and importance alongside tangible and visible assets, by designing a special measurement model for education-oriented defense organizations, clear horizons are observed in preserving and increasing the organization's capital and improving the scientific and even economic status of the country. Research departments of defense organizations are among the leading and more flexible sections, and to initiate a transformation, one of the best and most suitable sections of the organization for implementing the measurement of intangible assets [1].

2 Theoretical foundations and research background

Intellectual Capital Background: The term intellectual capital was first used by John Kenneth Galbraith [9], but its modern application, covering a broader domain as intangible and human assets, dates back to the 1990s [10]. The evolution of this concept has led to the presentation of multiple definitions of intellectual capital, with each theorist defining and focusing on a particular aspect of the subject from their own perspective. However, it is worth noting that attention to and consideration of intelligence, creativity, and innovation, which are among the functional outcomes of intellectual capital, date back to relatively ancient times [12]. That is, since humans stepped into the realm of life, the management and utilization of the powers of thought regarding how to live and sustain life, including interaction with the environment and providing food, shelter, and ultimately preserving one's existence, reflect the intellect and thought process [14]. However, alongside the increasing complexity and development of the life process, humans have also been striving to find more developed ways to interact with the environment, grow, and survive [18]. Empirical evidence demonstrates that continuous utilization of human mental and intellectual capabilities has been able to enhance and improve one's quality of life in various dimensions [25]. Now, if we accept the continuous development and increasing complexity of human life and consequently organizations as a scientific phenomenon, then we have found the answer to why the focus on the human element has shifted from physical strength and manual labor to human capital. Intellectual action implies a movement from possessing knowledge to using knowledge, or in other words, making knowledge practical. It signifies that intellectual capital and intangible assets should transform knowledge into a product or service that is valuable and value-creating for the organization, company, and society [18]. Concept of Intellectual Capital: In a study published in 2008, Roos and Pike define intellectual capital as comprising a cognitive component like human capital and a non-cognitive component like structural capital [19]. According to Beattie and Smith, intellectual assets are part of organizational capital that transforms other resources and assets of the organization into value-added assets [6]. From Brooking's perspective, intellectual assets are a combination of market assets, human capital, and intellectual property. They have stated that intellectual assets are assets that do not have a physical nature but are the primary source of value creation in organizations [5]. according Based Ibarra research, it can be said that the main difference between physical assets and human capital and intellectual assets is that physical assets decrease and disappear with consumption, while the most important feature of intellectual assets is that their use and utilization lead to their increase, not decrease [11]. In other words, the most important distinguishing feature of physical and human capital is their perishability, whereas in the concept of intellectual capital, the characteristic of regeneration arising from the consumption of this capital is hidden, while physical capital is depleted after consumption [2]. The philosophical outcome of this situation is that managers feel regret, envy, and concern about the depletion of physical resources, while in the case of consuming intellectual capital, this situation changes to pride, value regeneration, organizational development, and improvement.

In other words, when human resources are consumed, they themselves generate new intellectual capacity and contribute to the formation of an upward spiral. This difference can be found in the terms "Source" and "Resource." The former refers to a physical source that diminishes and depletes with consumption, while the latter refers to human resources that, when used and utilized, have the characteristic of regeneration and are not finite. The concept of creating effective and ineffective cycles through the utilization of physical and human capital in knowledge-based organizations, which are increasingly expanding in scope and number.

Subeepi states that intellectual capital essentially comprises non-material values consisting of three elements:

employee competencies, internal structure, and external relations [24]. According to Bontis and colleagues, intellectual capital is a concept that encompasses all intangible resources and their internal connections [15]. Mortensen and colleagues have stated that intellectual capital refers to resources such as employees, customers, information technology, and similar items [4]. By examining the definitions, it can be said that each theorist has provided their own perspective and viewpoint in presenting the definition. Therefore, it can be stated that:

- There is no uniform and consistent definition of intellectual capital.
- The concept of value creation has been repeatedly associated with intellectual capital, meaning that intellectual capital is beneficial to an organization only if it leads to value addition.
- A distinction between human capital, organizational capital, social capital, and relational capital has been widely accepted.

2.1 Human capital

Indicates the stock of knowledge possessed by individuals within an organization [15]. Chen and Chen also argue that human capital, as the foundation of intellectual capital, refers to factors such as knowledge, skills, abilities, and employees' perception that result in improved performance and profitability for the company [8]. Human capital is a strategic resource for organizations that leads to increased productivity, improved quality of products and services, and profitability for organizations [7]. Human capital enables organizations to rely heavily on the knowledge and skills of employees for revenue generation, growth, as well as enhancing efficiency, effectiveness, and productivity [24]. According to Brooking, human capital includes skills, expertise, problem-solving abilities, and appropriate leadership styles [5]. Skills refer to technical and practical abilities and, in general, performing job tasks accurately and with minimal errors. In summary, human capital encompasses variables such as establishing and maintaining communication, recruitment and hiring suitable individuals based on recruitment plans, forming work teams, establishing succession planning and career development programs within the organization, continuously upgrading employee skills, having intelligent and creative employees, per capita training, suitable professional competencies for employees, employees' appropriate attitudes toward the organization, employee safety and job security, employee welfare, flexible career paths, professional growth opportunities, employee empowerment through continuous training programs, and creating dynamic adaptability.

2.2 Organizational capital

Yount defines organizational capital as institutionalized knowledge belonging to an organization, accumulated and stored in databases, guidelines, and so forth [17]. From another perspective, organizational capital encompasses all non-human reserves, including databases, organizational charts, processes, strategies, operational and executional plans, and so on [20]. According to Chen and Chen, organizational capital can be more clearly categorized as organizational culture, operational processes, and information systems [8]. Bonetis argues that if an organization has weak systems and workflows, intellectual capital will not reach its full potential [15]. However, organizations with strong organizational capital have a supportive culture (as opposed to a directive culture) that enables individuals to undertake new initiatives, face failures, learn how to learn, and perceive failure as an opportunity for learning. Employees are not only criticized for failures but are consistently encouraged towards risk-taking and risk acceptance [8] The elements and components of organizational capital are essential entities that preserve and sustain the framework, structure, and integrity of the organization. The existence of this capital ensures that data, information, knowledge, insight, work values, work processes, acquired experiences, and everything that occurs in the organization's activities remain stable and sustainable within the organization, retrievable, shareable, and usable when needed. In summary, organizational capital of an organization comprises multiple variables that can be categorized as indicators such as the degree of implementation and deployment of management systems, deployment and management of organizational processes, facilitative organizational procedures and systems for innovation, investment in new technologies, strategic program implementation, investment in information technology, database updates, absence of dictatorship, investment in research and development, accreditations, certificates, exclusive privileges, patents, infrastructure investments, modern equipment, correct corporate mission, proper corporate vision, shared organizational values, and accepted ethical principles [13].

2.3 Social capital

Another crucial aspect that has received attention from theorists and researchers is the focus on social capital as one of the influential components in the formation of intellectual capital within organizations. In fact, this matter originates from the synergistic power of human and social capital. Patrick Wright considers intellectual capital as a factor that includes human capital, social capital, and organizational capital [26], or according to Janine Nahapiet, intellectual capital refers to "the knowledge and ability to identify a social entity such as an organization, intellectual communities, or professional groups" [16].

Social capital relates to values representing the development of social services by organizations to citizens and employees based on trust, loyalty, and ethics. It is evident that the discussion topic contributes to legitimizing and gaining citizens' trust. This capital consists of three main components: social services, social excellence, and social relationships.

2.4 Relational capital

Brooking refers to customers, their loyalty, and distribution channels related to customers in the market capital section [2]. Stewart also states that relational capital is market information used in attracting and retaining customers [23]. In recent definitions, the concept of relational capital has been expanded to relational capital, which includes all relationships that an organization establishes with customers, competitors, trade associations, government, and stakeholders [15]. Therefore, the growth of relational capital depends on supporting human and structural capital [8] Considering the above, some of the most important variables of relational capital include developing and nurturing new ideas and products for each customer, reducing considerable time for solving customer problems, knowledge "from", "to", and "for" the customer, creating a suitable mental image of the company, understanding target markets and customer types, having the highest number of loyal customers compared to competitors in the industry, continuous reduction of customer complaints, ability to build trust in customers, number of customers, top brand name in the industry, having reputable customers, proper marketing, and similar factors. Non-customer relational assets can also include appropriate relationships with financial suppliers, shareholders, suppliers of goods and services, government, local and regional officials, media presence, conferences, social responsibility, and local, regional, and local organization formation.

3 Research methodology

This research is considered fundamental in terms of purpose and descriptive-survey in terms of method, aiming to identify and investigate the relationship between the dimensions of organizational intellectual capital at Imam Hussein Comprehensive University. The study first attempts to identify the framework and constituent elements of intellectual capital in governmental educational organizations of the country, then evaluates the importance of these factors, and finally, through the proposed model, examines the relationship between the four dimensions of human capital, organizational capital, social capital, and relational capital with the intellectual capital of educational and defense universities as the largest and most important governmental educational institutions in the defense sector of the country.

The data collection methods in this research include library review, internet search, and the use of electronic journals, interviews, and finally, a questionnaire. Two general methods have been used for data collection in this research, which are described below.

3.1 Delphi group

This technique was used to refine the initial model and determine the elements and indicators of intellectual capital in governmental educational organizations, and to finalize the elements and indicators of intellectual capital and determine the importance of each of these factors. The indicators obtained through library review and interviews were subjected to the judgment of some experts, and a comprehensive model for measuring the intellectual capital of governmental educational organizations was developed. In this research, in order to increase the reliability of the initial model and refine the proposed indicators, participants were selected from managers who firstly had education in the relevant field, and secondly had executive experience in one of the governmental and educational organizations of the country. The Delphi group in this study consisted of eight members and fulfilled its responsibilities.

3.2 Survey Method

Another part of this research, essentially its second phase, is conducted through surveying. The survey process consists of five stages, including determining the population and estimating an appropriate sample size, designing and validating survey instruments, conducting the survey, processing and analyzing the data, and summarizing and drawing conclusions. In other words, after determining the model and its indicators through the Delphi group, a survey method was utilized to distribute a questionnaire among the statistical sample to examine the importance of the extracted indicators of intellectual capital in Imam Hussein Comprehensive University.

The initial questionnaire was prepared and adjusted by the researcher through exploratory studies and considering the research model and the Delphi group process. Subsequently, the survey questionnaire was first extracted through exploratory study and then validated by some experts, and some sub-branches of intellectual capitals and intangible assets, which had received low scores in the expert survey, were removed from the questionnaire. For this research, a total of 123 questionnaires were distributed, of which 102 completed questionnaires were successfully obtained.

In this research, Cronbach's alpha method was used to calculate the reliability of the questionnaire. In this method, reliability (credibility) is calculated based on the assessment of internal consistency of the questionnaire. To determine the validity of the questionnaire, the confirmation of the supervisor and the experts participating in the Delphi group (formal validity) was used, and to confirm the validity of the model, the KMO and Bartlett's test technique and factor analysis method were used. SMART PLS and SPSS software were used for data analysis. This means that in the Delphi group stage, SPSS software was used to extract the results related to the experts' opinions, and in the survey phase, SMART PLS software was used for factor analysis, and in the hypothesis section, SPSS software was used. The statistical techniques used in the analysis included descriptive statistics, Friedman test, hypothesis testing, and confirmatory factor analysis. The methodology section should describe how the research was conducted in terms of research method, population, sampling method and sample size, measurement tool, validity and reliability, and data analysis method and tool. Avoid using subheadings for the preceding items.

4 Research findings

First and foremost, it is necessary to present a conceptual model related to the measurement of intellectual capital and intangible assets of defense education organizations, which has been extracted from the literature and interviews with experts in this field. This model should be examined and either confirmed or rejected. According to the presented diagram, the intellectual capital of defense education organizations is dependent on four main factors: human capital, organizational capital, social capital, and relational capital. Diagram 1 illustrates the proposed conceptual model of the research.

Structural Equation Modeling (SEM) is one of the statistical modeling techniques that has emerged in the field of management and organization in recent years. This method encompasses other statistical modeling techniques such as multivariate regression, factor analysis, and path analysis, with its main focus on latent variables defined by measurable indicators and observable variables. Due to the limited number of respondents, confirmatory factor analysis and other structural tests were conducted using the most robust software, namely SMART PLS 2. Finally, the model related to the intellectual capital of military educational organizations, which is a function of four main factors: human capital, social capital, organizational capital, and relational capital, was examined. After reviewing and analyzing and obtaining the final opinion of experts, the final elimination questions amounted to 9 out of a total of 90 questions, which is acceptable as it constitutes one-tenth of the total questions. Now, we proceed to examine the standard coefficient and significance level in each of the four main sections of intellectual capital and intangible assets in the revised model. Table 1, presents the standard coefficients and significance level of the indicators in the initial measurement model in the human capital section.

According to Table 1, the overall status of the conditions is relatively acceptable and accepted, with no specific problems observed in these two tests except in two cases. The numbers highlighted in blue indicate the unacceptable status. The standard coefficient in the indicators of belonging and commitment, and creativity, has shown a significant improvement compared to the initial model, which is acceptable and confirmed. The two weak indicators of flexibility and personal development from the initial model have been completely removed here. Table 2 presents the standard coefficients and significance level of the indicators in the revised measurement model in the organizational capital section.

According to Table 2, the overall condition indicates an acceptable and accepted status, with no specific problems observed in these two tests. The numbers highlighted in blue indicate the unacceptable status. The standard coefficient in the indicators of organizational philosophy in the cultural section and technical infrastructure in the technical capital

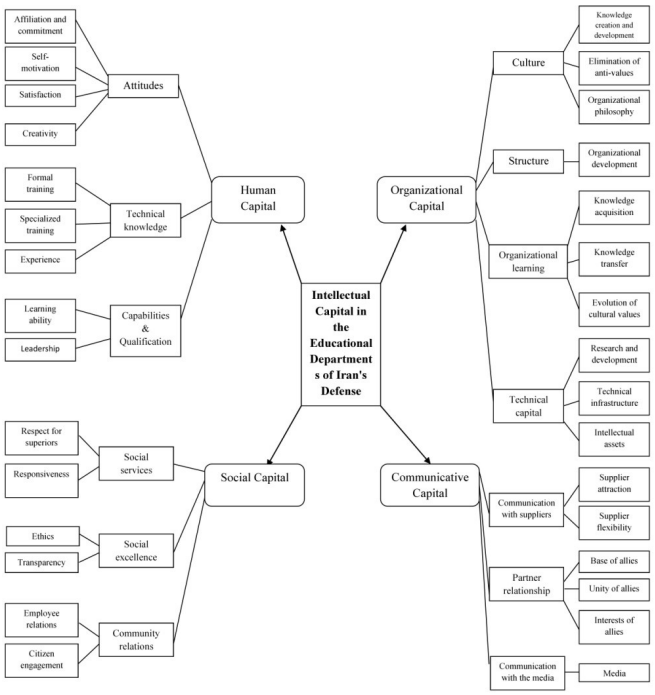

Figure 1: the proposed conceptual model of the research

Table 1: the standard coefficients and significance level of the indicators in the initial measurement model in the human capital section

section	standard coefficient in the section	significance level	indicator	standard coefficient in the sub-indicator	significance level of the indicator	result
Attitudes	0.909	86.644	Affiliation and commitment	0.591	9.652	✓
			self-motivation	0.816	9.947	✓
			satisfaction	0.821	133.287	✓
			creativity	0.671	17.830	✓
Technical knowledge	0.857	35.735	Formal training	0.826	17.245	✓
			Specialized training	0.736	134.938	✓
			Experience	0.774	14.020	✓
Capabilities & Qualifications	0.832	86.970	Learning ability	0.770	16.769	✓
			Leadership	0.749	53.124	✓

section has shown a significant improvement compared to the initial model, both capable of rounding to 0.7, which is acceptable and confirmed. Table 3 presents the standard coefficients and significance level of the indicators in the revised measurement model in the social capital section.

According to Table 3, the overall status indicates complete acceptability and acceptance, with no particular issue observed in any indicator or sub-indicator in these two tests. Table 4 presents the standard coefficients and significance level of the indicators in the revised measurement model of communicative capital. Output of the SMART PLS software showing the standard coefficients and significance level of the indicators in the revised measurement model of communicative capital. According to Table 4, the overall status indicates acceptability and acceptance, with no particular issue observed in these two tests except for one sub-indicator. The numbers highlighted in blue indicate the unaccepted status. The standard coefficient in the allied interests indicator has significantly improved, reaching 0.694, which is acceptable.

4.1 Hypothesis testing and path coefficient examination

Now, the main and ancillary hypotheses of the research are tested and confirmed or rejected. The primary hypothesis of the research is tested through path analysis:

Table 2: the standard coefficients and significance level of the indicators in the revised measurement model in the organizational capital section

section	standard coefficient in the section	significance level	indicator	standard coefficient in the sub-indicator	significance level of the indicator	result
Culture	0.877	62.681	Knowledge creation and development	0.871	62.681	✓
			Elimination of anti-values	0.817	41.599	✓
			Organizational philosophy	0.662	22.266	✓
Structure	0.647	11.041	Organizational development	1	10000	✓
Organizational learning	0.877	23.966	Knowledge acquisition	0.882	40.296	
			Knowledge transfer	0.780	27.934	✓
			Evolution of cultural values	0.882	18.670	✓
Technical capital	0.858	55.990	Research and development	0.729	10.587	✓
			Technical infrastructure	0.679	5.106	✓
			Intellectual assets	0.731	6.927	✓

Table 3: the standard coefficients and significance level of the indicators in the revised measurement model in the social capital section

section	standard coefficient in the section	significance level	indicator	standard coefficient in the sub-indicator	significance level of the indicator	result
Social services	0.786	33.128	Respect for superiors	0.806	9.114	✓
			Responsiveness	0.743	8.081	✓
Social excellence	0.812	50.019	Ethics	0.790	22.626	✓
			Transparency	0.888	44.475	✓
Community relations	0.865	22.673	Employee relations	0.823	259.283	✓
			Citizen engagement	0.897	42.445	✓

Table 4: the standard coefficients and significance level of the indicators in the revised measurement model of communicative capital

section	standard coefficient in the section	significance level	indicator	standard coefficient in the sub-indicator	significance level of the indicator	result
Communication with suppliers	0.903	37.203	Supplier attraction	0.881	132.136	✓
			Supplier flexibility	0.842	150.331	✓
Partner relationship	0.757	21.173	Base of allies	0.754	83.307	✓
			Unity of allies	0.799	27.435	✓
			Interests of allies	0.694	11.120	✓
Communication with the media	0.657	15.896	Media	1	1000	✓

✓ The intellectual capital of military educational organizations is evaluated by the human capital variable. The corresponding statistical hypothesis can be stated as follows:

$$\begin{cases} H_0: & \beta_i = 0 \\ H_1: & \beta_i \neq 0 \end{cases}$$

Null hypothesis (H_0): The intellectual capital of military educational organizations is not evaluated by the human capital variable.

Alternative hypothesis (H_1): The intellectual capital of military educational organizations is evaluated by the human capital variable.

The coefficients are considered significant when their significance test value (t-value) is greater than 1.96 or less than -1.96. According to the results of Table 5 from the confirmatory hierarchical factor analysis with a confidence level of 99%, it is evident in the structural model that H_0 is rejected. This means the research hypothesis is confirmed, and the intellectual capital of military educational organizations is evaluated by the human capital dimension

Table 5: Results of the primary hypothesis testing

dimension	standard coefficient	t-value	result
human capital	0.912	3.429	H_0 is rejected

4.2 Hypothesis testing for the second main hypothesis of the research

✓ The intellectual capital of military educational organizations is evaluated by the organizational capital variable. The corresponding statistical hypothesis can be stated as follows:

$$\begin{cases} H_0: & \beta_i = 0 \\ H_1: & \beta_i \neq 0 \end{cases}$$

Null hypothesis (H_0) The intellectual capital of military educational organizations is not evaluated by the organizational capital variable.

Alternative hypothesis (H_1) The intellectual capital of military educational organizations is evaluated by the organizational capital variable.

The coefficients are considered significant when their significance test value (t-value) is greater than 1.96 or less than -1.96. According to the results of Table 6 from the confirmatory hierarchical factor analysis with a confidence level of 99%, it is evident in the structural model that H0 is rejected. This means the research hypothesis is confirmed, and the intellectual capital of military educational organizations is evaluated by the organizational capital dimension.

Table 6: Results of the Second Main Hypothesis Testing

dimension	standard coefficient	t-value	result
organizational capital	0.948	3.928	H_0 is rejected

4.3 Testing the third main hypothesis of the research

✓ The intellectual capital of military educational organizations is evaluated by the social capital variable. The corresponding statistical hypothesis can be stated as follows:

$$\begin{cases} H_0: & \beta_i = 0 \\ H_1: & \beta_i \neq 0 \end{cases}$$

Null hypothesis (H_0) The intellectual capital of military educational organizations is not evaluated by the social capital variable.

Alternative hypothesis (H_1) The intellectual capital of military educational organizations is evaluated by the social capital variable.

The coefficients are considered significant when their significance test value (t-value) is greater than 1.96 or less than -1.96. According to the results of Table 7 from the confirmatory hierarchical factor analysis with a confidence level of 99%, it is evident in the structural model that H0 is rejected. This means the research hypothesis is confirmed, and the intellectual capital of military educational organizations is evaluated by the social capital dimension.

Table 7: Results of the Third Main Hypothesis Testing

dimension	standard coefficient	t-value	result
social capital	0.906	5.046	H_0 is rejected

4.4 Testing the fourth main hypothesis of the research

✓ The intellectual capital of military educational organizations is evaluated by the relational capital variable. The corresponding statistical hypothesis can be stated as follows:

$$\begin{cases} H_0: & \beta_i = 0 \\ H_1: & \beta_i \neq 0 \end{cases}$$

Null hypothesis (H_0) The intellectual capital of military educational organizations is not evaluated by the relational capital variable.

Alternative hypothesis (H_1) The intellectual capital of military educational organizations is evaluated by the relational capital variable.

The coefficients are considered significant when their significance test value (t-value) is greater than 1.96 or less than -1.96. According to the results of Table 8 from the confirmatory hierarchical factor analysis with a confidence level of 99%, it is evident in the structural model that H0 is rejected. This means the research hypothesis is confirmed, and the intellectual capital of military educational organizations is evaluated by the relational capital dimension.

Table 8: Results of the Fourth Main Hypothesis Testing

dimension	standard coefficient	t-value	result
relational capital	0.885	2.965	H_0 is rejected

4.5 Prioritizing the dimensions and components of human capital in military educational organizations

The importance of the dimensions and components of human capital in military educational organizations, as well as each of its four sections, is further examined and analyzed below:

- Formal training ranks first with 0.826.
- Satisfaction ranks second with 0.821.
- Self-motivation ranks third with 0.816.
- Experience ranks fourth with 0.774.
- Learning ability ranks fifth with 0.770.
- Leadership ranks sixth with 0.749.
- Specialized training ranks seventh with 0.736.
- Creativity ranks eighth with 0.671.
- Affiliation and commitment rank ninth with 0.591.

In the human capital section, formal training is at the forefront, while affiliation and commitment are at the end. Satisfaction and self-motivation indicators have allocated high coefficients to themselves and shown their importance. Creativity has also received a relatively high coefficient compared to other characteristics. Ultimately, all coefficients except for affiliation and commitment are prioritized.

4.6 Prioritizing the dimensions and components of organizational capital in military educational organizations

The importance of the dimensions and components of organizational capital in military educational organizations, as well as each of its four sections, is further examined and analyzed below:

- Organizational development ranks first with 1.
- Knowledge acquisition ranks second with 0.882.

- Evolution of cultural values ranks third with 0.871.
- Knowledge creation and development rank fourth with 0.822.
- Elimination of anti-values ranks fifth with 0.817.
- Knowledge transfer ranks sixth with 0.780.
- Intellectual assets rank seventh with 0.731.
- Research and development rank eighth with 0.729.
- Technical infrastructure ranks ninth with 0.679.
- Organizational philosophy ranks tenth with 0.662.

In the organizational capital section, formal development alongside knowledge acquisition and the evolution of cultural values are at the forefront, while organizational philosophy and technical infrastructure are at the end. The indicators of eliminating anti-values, knowledge transfer, intellectual assets, and research and development also have good coefficients. Ultimately, all coefficients except for technical infrastructure and organizational philosophy are prioritized.

4.7 Prioritizing the dimensions and components of social capital in military educational organizations

The importance of the dimensions and components of social capital in military educational organizations, as well as each of its four sections, is further examined and analyzed below:

- Citizen engagement ranks first with 0.897.
- Transparency ranks second with 0.888.
- Employee relations rank third with 0.823.
- Respect for superiors ranks fourth with 0.806.
- Ethics ranks fifth with 0.790.
- Responsiveness ranks sixth with 0.743.

In the social capital section, citizen engagement and transparency are at the forefront with coefficients close to 0.9, and the three indicators of employee relations, respect for superiors, and ethics also have very high coefficients. The responsiveness indicator is at the end with a good coefficient of 0.743. All dimensions of this capital section are considered very important and undeniable.

4.8 Prioritizing the dimensions and components of relational capital in military educational organizations

The importance of the dimensions and components of relational capital in military educational organizations, as well as each of its four sections, is further examined and analyzed below:

- Media ranks first with 1.
- Supplier attraction ranks second with 0.881.
- Supplier flexibility ranks third with 0.842.
- Unity of allies ranks fourth with 0.799.
- Base of allies ranks fifth with 0.754.
- Interests of allies rank sixth with 0.694.

In the relational capital section, media and supplier attraction are at the forefront with coefficients close to 1, while supplier flexibility, unity of allies, and base of allies follow with high coefficients. The interests of allies indicator is at the end with a good coefficient of 0.694. Consequently, all dimensions of this capital section are considered very important and significant.

5 Discussion and conclusion

Measuring and monitoring the current status of human capital at Imam Hussein University: Initially, the average scores for each indicator from 1 to 9 were separately obtained in Excel based on the questionnaires, and then these averages were re-averaged to determine the score of each human capital indicator out of 9. Due to the unequal sum of the coefficients of intellectual capital, it is necessary to standardize the scores in the formula. Then the desired percentage of each capital and the total capital from 100, which is the ideal state, is calculated.

Human capital at Imam Hussein University = (0.826 * Formal Education + 0.821 * Satisfaction + 0.816 * Self-motivation + 0.774 * Experience + 0.770 * Learning Ability + 0.749 * Leadership + 0.736 * Specialized Training + 0.671 * Creativity + 0.591 * Affiliation and Commitment) * 100 / 9 = 66.595

Human capital at Imam Hussein University scores 66.595 out of 100, meaning the current status is approximately 3.2 out of the ideal state.

This result is acceptable by the canonical group.

Measuring and monitoring the current status of organizational capital at Imam Hussein University:

Organizational capital at Imam Hussein University = (1 * Organizational Development + 0.882 * Knowledge Acquisition + 0.822 * Creation and Development + 0.871 * Evolution of Values + 0.817 * Elimination of Anti-values + 0.780 * Knowledge Transfer + 0.731 * Intellectual Assets + 0.729 * Research and Development + 0.679 * Technical Infrastructure + 0.662 * Organizational Philosophy) * 100 / 9 = 65.677

Organizational capital at Imam Hussein University scores 65.677 out of 100, indicating a slightly lower status than 3.2 out of the ideal state and slightly lower than human capital. This result is acceptable by the canonical group.

Measuring and monitoring the current status of social capital at Imam Hussein University:

Social capital at Imam Hussein University = (0.897 * Citizen Engagement + 0.888 * Transparency + 0.823 * Employee Relations + 0.806 * Respect for Superiors + 0.790 * Ethics + 0.743 * Responsiveness) * 100 / 9 = 66.694

Social capital at Imam Hussein University scores 66.694 out of 100, meaning the current status is approximately 3.2 out of the ideal state. This result is acceptable by the canonical group.

Measuring and monitoring the current status of relational capital at Imam Hussein University:

Relational capital at Imam Hussein University = (1 * Media + 0.881 * Supplier Attraction + 0.842 * Supplier Flexibility + 0.799 * Unity of Allies + 0.754 * Base of Allies + 0.694 * Interests of Allies) * 100 / 9 = 62.599.

Relational capital at Imam Hussein University scores 62.599 out of 100, indicating a lower status compared to the other three capitals and indicating that the current status is at the lowest level of the ideal state. Although this result is acceptable by the canonical group, it requires more serious attention.

- The model developed in this study for evaluating the intellectual capital of military educational organizations, especially Imam Hussein University, has been developed, employed, and upgraded to evaluate the intellectual capital and invisible assets of other educational or military organizations, enriching the literature on intellectual capital of governmental organizations.
- For greater efficiency of the model in the executive section, more emphasis should be placed on the dynamics of invisible assets so that the implemented model can cover different times, places, environments, and conditions and can be updated and synchronized with any changes in the status.
- Interdisciplinary research in the field of management accounting regarding the invisible assets of military educational organizations can be useful in monetarily valuing these indicators and calculating the value of governmental organizations.
- The effort of this research in developing the comprehensive model of intellectual capital in governmental and educational military organizations of the country is commendable in terms of the breadth of research, but it may lack depth in some cases.
- The limited statistical population of the survey and the failure to use other military educational organizations have reduced the external validity of the research and its ability to generalize the results, although efforts have been made to make the developed model usable in all military educational organizations of the country by using the opinions of experts in the canonical group.

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