

## Identification of the Components of Dynamic Empowerment among Medical Education Managers using Content Analysis: A review study

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### Abstract

*Introduction and Purpose:* Empowerment is the key to the effectiveness of the managers and the organizations, of which “Dynamic Empowerment” assumes a strategic role in the organizations. Evidence shows that managers have a significant role in the dynamics of organizations. Accordingly, managers' empowerment has to be designed considering the dynamic nature of the role of managers, particularly in organizations like medical education, where empowerment in higher education is a significant element in the enhancement and rebuilding educational institutions according to educational strategies. Considering this requirement, the study was performed to identify the components of dynamic empowerment among educational managers of medical universities using content analysis.

*Method:* The population was papers related to the keywords of dynamic capabilities and empowerment in English and Persian, published during 2000-2020. The selected papers being model-oriented and being on empowerment were the most basic conditions for qualitative content analysis. Content analysis in MAXQDA20 software was used to analyze the texts.

*Results:* The results indicated that dynamic empowerment components among managers are summed up in 12 categories and 22 subcategories, which were extracted from 64 main and 226 open codes. Twelve dynamic empowerment categories were skills and capabilities, human resources, managerial capabilities, leadership, structural, executive, procedural, dynamic processes, educational, communicative, operational, and evaluation.

*Conclusion:* According to these results, one can reach a conceptual conclusion on the components of the dynamic empowerment program of managers, by compiling whose model on the managers of Iranian universities of medical sciences; one can design a dynamic empowerment model for university education managers.

**Keywords:** Dynamic empowerment, dynamic capabilities, university managers, qualitative method of content analysis

### 1. Introduction

Educational organizations are of the largest managerial systems in any country that have undergone sudden changes and require adapting to the flow of change in community. Thus, the professional development of educational managers is a key factor in enhancing learning standards with an effective role in realizing educational goals. This is even more important in higher education, so that effective management and leadership in higher education and empowerment of managers in this regard have been a binding strategy in the 21st century (1). In

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higher education, universities of medical sciences, like other educational institutions, have capable, competent, and effective managers and leaders to deal with the threats and challenges of the modern world (2). This is because universities of medical sciences act as educational organizations providing human resources of the health system, which can have an effective role in enhancing the quality of medical education by focus on professional development. Regarding this, developing an empowerment model based on the needs and competencies of medical universities could bring about guidance for present and future professional development programs in the field of training managers in medical education (3). Hence, considering that dynamic empowerment of managers is probably a multidimensional concept affected by various elements and consists of several components, and relying on this definition of empowerment, which is a dynamic process achieved by the interaction of the interaction between individual personality traits, culture, and organizational structure (4), one can state that “dynamic empowerment” will provide a strategy in the field of medical education. This is because considering the changing, dynamic and complex conditions of universities in the present age; it seems that the requirement for the success of university managers is the dynamism and improvement of the quality of the university through planning, development and implementation of projects appropriate to internal and environmental conditions of the universities (5). Accordingly, empowering university managers enables the universities to operate effectively in a competitive environment, so that besides being affected affects the environment as well. Thus, this dynamic interaction is of the main components of dynamic empowerment (6), as managers' capability for rearrangement, operational capabilities, and using new capabilities to deal with a turbulent environment are of the ultimate goals of dynamic empowerment that seeks to achieve adaptability and prevent inflexibility (7). However, it has to be noted that although empowering university managers can help reach the above objectives, is still very dynamic as the environmental, organizational, and futuristic effects and developments in university managers who manage educational and research organizations are greater than non-educational organizations (8). Considering this, the need to adopt a dynamic approach to empower academic managers seems inevitable. This approach analyzes and adapts the university in relation to the environment and its future (9) while taking into account the desired ones (perspectives and values). Accordingly, the present study emphasized the identification of the components of dynamic empowerment of university managers to empower the managers of medical universities with dynamic empowerment approach.

The most significant goal of empowering managers is to teach the necessary skills to managers for making independent decisions. Moreover, empowerment breaks the traditional hierarchy of organizational structures, as the main focus of empowerment is the dynamic process of redistribution of power between management and employees (10). Thus, dynamic management has five parts nowadays: leadership patterns, team management, behavior, communication, and guidance (11). Hence, it is necessary for the managers of medical universities to act the same, since the dynamic empowerment of university managers is considered as a necessity. Thus, dynamic empowerment and equipping managers with the skills of management and leadership of medical education and model design to empower medical education managers can bring about numerous positive outcomes to enhance the quality of medical education. Given this necessity, the study identified the components of dynamic empowerment through content analysis.

## 2. Method

The study was a review with a qualitative approach that was based on conventional content analysis method. The reason behind selecting content analysis to identify the components of empowerment of educational managers of medical universities from among the written resources was that the content analysis is very flexible making it suitable to review the variable and extensive sources of the study (like: papers, books and texts). The significant issue in the study was that the content analysis section or the steps of open, axial and selective coding were done as

a qualitative part of the doctoral dissertation entitled “Explaining the theoretical aspects of dynamic empowerment of medical education managers based on relevant evidence in the texts.”

The population was the related papers, with the full text available, with the keywords of dynamic capabilities and empowerment in English and Persian, published during 2000–2020 as review and original research papers in electronic databases “Pub med”, scholar “Google”, “Sage.org”, “Science Direct”, “Magiran” and “SID.ir”. Moreover, the models published on empowerment were examined. The selected papers being model-oriented and being on empowerment were the most basic conditions for qualitative content analysis. According to the researcher's search, 10 empowerment models, 20 review papers, 33 original papers and 10 definitions of empowerment-related texts were identified. After studying their fit with the two keywords “dynamic empowerment and dynamic capabilities,” 10 models, 10 review papers, 10 research papers, and 10 definitions of the related books underwent content analysis using the conventional approach. Content analysis in MAXQDA20 software was used to analyze the texts. Thus, the content of the papers and the resources of the collected sources were first analyzed by open coding method. Then using axial coding method, the differences and similarities between the open codes were examined semantically and the main codes and subcategories were identified. Finally, the main categories were extracted from the subcategories and a single theme on dynamic empowerment of the managers was attained. Overall, 180 papers were collected and reviewed in the fields related to dynamic capabilities and dynamic empowerment and empowerment models, of which 20 papers with the most relevance to the subject and the variables underwent content analysis.

**Table 1. The Sources Examined in Content Analysis**

Original articles	Review articles	Capability models
Heydari and Seyed Kalali, 2016	Torkzadeh et al., 2017	<b>Norell, 2000</b>
Mohammadi et al., 2016	Talkhabi Alishah, 2017	<b>Vogt and Murrel, 2000</b>
Bandarian, 2016	Lawson, 2001	<b>Boje, 2001</b>
Bandarian and Bandarian, 2013	Wang, Ahmed, 2007	<b>GAO, 2001</b>
Zahra, et al, 2006	Hyunsuk Lee, 2008	<b>Sprietes, 2001</b>
Salunke, S. et al., 2011	Lichtenthaler, 2009	<b>Robinse, 2002</b>
Lopez , et al. 2015	Constance E. Helfat, (2014).	<b>Mc Lagan and Nel, 2003</b>
Heaton , Tecce, 2016	Fallon-Byrne, 2017	<b>Velthous and Thomas, 2003</b>
Miranda, 2017	Katharina, 2018	<b>Wang, 2007</b>
Paul J. H., et al, 2018	Cheong, et al. 2019	<b>Salunke, S., 2011</b>

### 3. Research Findings

According to the results of qualitative analysis of the content of the texts, one can state that the dynamic empowerment theme of educational managers was extracted from 12 categories and 22 subcategories, which were identified from 64 main and 226 open codes. The table below deals with the list of categories for dynamic empowerment in the form of categories, subcategories, main codes, and open codes.

**Table 2. Dynamic Empowerment Components for Medical University Managers**

Theme	category	Subcategory	Main code	Open code
Dynamic	Skills	Effective skills	Human skills	Communication, interpersonal skills, trust, goal setting, challenges

			Technical skills	Educational evaluation, educational guidance, teaching techniques, administrative and financial techniques of higher education
			Perceptual skills of the organization	Understanding the educational environment, recognizing educational priorities, understanding the mutual relations of the organization, understanding and evaluating the role of external factors in decision making, planning and organizing
		Ordinary capabilities	Adaptive capabilities	Exploration strategies, exploitation, continuous change in services, resources, capabilities and patterns
			Absorbent capabilities	Identifying, acquiring, reconstructing and retraining forces, and evaluating
			Innovative capabilities	Innovative orientation, knowledge production and commercialization, key pragmatism, risk-taking, the ability to make key decisions
	<b>Human resources</b>	Abilities of managers	Personal will	Skills, experiences and motivations of key managers, attitudes, needs and wants, values and job behaviors
			Creativity of the manager	Innovative ideas, creating new knowledge, finding new solutions
			Open and dynamic connectivity	Power in the dimensions of the impact, selection, competence and significance of forces
			The ability of managers to make changes	Managers' readiness to assume change, the ability to improve the efficiency and effectiveness of the organization, the influence power
		The ability of the staff and the faculty	Responsibility in decisions	The ability to make independent decisions, be appropriate and well-placed
				Assuming responsibility for decision making among the employees
				Assuming responsibility for the consequences of decisions by employees
				Assuming responsibility for improving one's activities
				Employees' access to decision-making and implementation tools
			Participate in the implementation	Employee involvement in changes in work rules and regulations
Employee involvement in workplace change				
Employee involvement in the work and planning process				
Employee engagement in fundamental change and redesign				
Taking benefit of the employees in the implementation of the organization mission				
Student capabilities	Student population expectations	Expectations about the quality of education, student needs, counseling, research and providing specialized services to students		
	Paradigm shifts in teaching and	Changes in educational technology and its effect on learning and teaching		

			learning	
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**Continuation of Table 2. Dynamic empowerment components for medical university managers**

Theme	Category	Subcategory	Main code	Open code		
Dynamic Empowerment Components	Management components	Committed management	Strategic Management	Strategic change, strategic understanding, strategic planning, strategic agility		
			The capacity to modify the capabilities	Correction and redesigning, targeted reform of knowledge resources, reforming the empowerment process of managers		
			Independence and autonomy	Having the right to choose and exercise freedom, to make independent decisions, the independence of forces in determining the necessary activities,		
			Commitment to organizational change	Organizational readiness to operate change, dynamism versus change, committed to the need for a managerial change		
		Trust-building management	Program-based management	Planned decisions, having a management policy, a program based on change, management of organizational processes		
			Building trust	Trust in employees' decision-making abilities and power, trust in interest, competence, openness, and confidence in colleagues, trust in dynamic capabilities		
			Participatory management model	Participatory programs, credit through participatory experiences, reduced centralized decision making, reward system for participation		
			Coordination ability	Competence and influence, the ability to organize, the ability to coordinate and use maps, resources and activities in new operational capabilities, operational capabilities to adapt to the environment		
			Leadership components	Types of dynamic leadership	Transformational leadership	Planning leaders and policymakers, leadership tendencies
					Entrepreneurial leadership	Entrepreneurial leadership tendencies, entrepreneurial awareness, strategic decisions against challenges, rapid decisions
	Democratic Leadership (Interactive)	Complete trust in subordinates, participatory leadership, organizational experience, and group leadership in organizations				
	The role of dynamic leadership	Guidance and support		Facilitator and guide manager, organizational support, educational leadership		
		Facilitating self-centered leadership		Facilitating the ability of self-management, job independence, self-determination and customer responsibility		
	Structural components	Structural adaptation	Matching the structure of the organization with pure management	Participatory and flexible structure, attention to members and leadership style		
			Matching organizational systems with dynamic empowerment	Planning, rewards, promotion, training, hiring		

			Matching the structure of the organization by creating employee independence	Adaptation to change through the diversity of forces
			Matching the organization's structure to reduce bureaucracy	An uplifting structure of independence and flexibility, a structure leading to autonomy, the right to choose and freedom of action
		Structural flexibility	Flexible organizational structure	More team building, less segregation and minimal formality
			Organizational culture	Integrating empowerment into the culture of the organization, creating a culture of empowering management
			Self-centered management	Local management, development of the educational environment, replacement of self-governing teams instead of hierarchical structure
			Fluid structure versus hierarchical structure	Appropriate and systematic organizational structure, problem-solving from the bottom up, implementation of the demands of society and the law

**Continuation of Table 2: Dynamic empowerment components for medical university managers**

Theme	Category	Subcategory	Main code	Open code
Dynamic Empowerment Components	Executive components	Executive activities	Collective activities	Community work, workplace dynamics, work dynamics, unit level dynamics,
			Providing facilities	Taking advantage of these facilities, providing the necessary resources and tools, formal professional development activities
			Stable and acquired activity	Acquired and fixed pattern of collective activity, creation and modification of daily operational activities, synchronization of activities
		Executive creativity	Creating a creative environment	Creating a suitable and reasonable environment, the ability to change in complex, transient and uncertain environmental changes
			Creating open internal environments for work	Creativity in transfer of resource, using capabilities quickly, cleverly and randomly, discovering creative ways
			Procedural dimensions	Infrastructure processes
	Procedural components		Strategic thinking	Strategic decisions, strategic integration, strategic change management, modern strategic management
			Dynamic	Empowerment has an organizational function,

			efficiency and effectiveness	efficiency and productivity improvement processes in the organization, the existence of an effective and appropriate system for resource development
		Process dynamics	Taking advantage of opportunities	Using study opportunities, be sensitive to opportunities, understand and measure opportunities
			Influencing and being influenced	The effect of educational management and leadership on learning for learners, the process of effective empowerment, the effect of managers on internal and external structures
			Sharing information	Involving managers to information / reward / knowledge and power, involving forces in information
	Dynamic processes	Perceptual processes of opportunities	Receiving and absorbing resources	Identifying and recruiting forces, the ability to recruit, train and employ talented and competent people
		Renovation and rearrangement	Organizational learning processes	Promoting political and social insight, inclusive quality management of educational group managers,
		Synchronization	Integration	Knowledge and resources, structuring, re-combining capabilities and current operations

Continuation of Table 2. Dynamic empowerment components for medical university managers

Theme	Category	Subcategory	Main code	Open code
Dynamic Empowerment Components	Educational components	Educational capabilities	Staff training	Training-based policy and decision-making, staff training to improve knowledge, skills and abilities
			Applied training of managers	Education based on organizational resources and opportunities, advancing and achieving educational goals
			Training managers for dynamic roles	Training for empowerment, training for independence
			Learning	Organizational learning as public, specific and management enhancement
	Communicative components	Communicative capabilities	Clear communication	Transparency in interactions, information, communication,
			Participating in resources	Participating in decision-making activities, participating in activities, interaction with employees, supervisors, friends and subordinates
			Public participation in information exchange	Strengthening, public participation culture, participation of all groups, mental and practical efforts of all managers, participation of work units
			The existence of a clear question mark	Having a clear picture of your plans, plans and tasks and managers
			Open and dynamic communication with others	Capability in the dimensions of effect, selection, competence and significance of forces

	Functional components	Functional capability	Performance feedback controller	Affecting and controlling job results, having information about the organization's performance
			Rewarding everyone for good performance	Implementing a reward system for participation, reward based on the performance of the organization, justice in the reward system
Evaluation components	Evaluation capabilities	Evaluate and diagnose problems	Effective diagnosis of problems, re-reading of problems, analysis of problems of the educational system in relation to the conditions and characteristics of society	
		Monitor, interpret and evaluate opportunities	Policy development, monitoring, evaluation, evaluation of the organization's initiative	
		Sustainable evaluation follow-up	Evaluating the empowerment process, improve the empowerment process of managers, evaluate the organization's initiative	

According to the results of qualitative analysis, one can state that the components of dynamic empowerment for managers could be classified as 12 categories, 22 subcategories, 64 main codes and 226 open codes. Here, the categories are explained and interpreted.

#### 4. Discussing the Results

The study was conducted to explore the components of dynamic empowerment for managers of medical universities. The study was conducted as a review with a qualitative approach to reach this goal. The conventional quality content analysis technique was selected to realize this goal. In the present study, the most basic condition for selecting papers and texts collected on empowerment for qualitative content analysis was the model-based nature of papers and texts.

The results indicated that dynamic empowerment was summarized in the form of 12 categories and 22 subcategories, extracted from 64 main codes and 226 open codes. Twelve dynamic empowerment categories were skills and capabilities, human resources, managerial capabilities, leadership, structural, executive, procedural, dynamic processes, educational, communicative, operational, and evaluation. The skills and capabilities category consisted of effective skills and normal and dynamic capabilities, extracted from six main and 30 open codes. This results are consistent with the studies of Saeedian et al. (12) and Soleimani and Agha Mohammadi (13) who classified the skills needed by educational managers for dynamic empowerment in the form of human, technical and perceptual skills concluding that the technical skills needed by educational managers, educational evaluation, educational guidance, teaching techniques and methods, and administrative and financial techniques of education, and the educational managers must have sufficient technical skills to perform his special duties. Furthermore, they stated that to be able to become an effective member of the educational environment and to establish cooperation and understanding between the members under his leadership Saeedian et al. (12); Soleimani and Agha Mohammadi (13). In explaining the need for these skills, it has been stated that caregiver managers have to have considerable technical skills as their duties often need them to guide or train their subordinates. On the contrary, top managers of organizations do not need many technical skills, but the tasks of decision-making, planning and organizing need that they be equipped with considerable perceptual skills. Human skills need almost all tasks at all levels of management. Accordingly, skills are referred to as effective life skills, which were identified as a category in the present study as well.

The human resources category consisted of three subcategories of the capabilities of educational managers, the abilities of faculty, and staff and students, extracted from 8 codes and 36 open codes. Regarding this, scholars like Bizzell define empowerment of educational managers as the activities and processes designed to enhance professional knowledge, skills and

behavioral attitudes of managers to empower them in the field of improvement and create better conditions for success and learning of learners. These activities increase the capacity of training managers to lead more effectively and increase the skills of managers in various areas like change leadership, human resource management and improving the training process (14). Accordingly, human resource managers need to consider the two main dimensions of a flexible organizational structure, including organizational decision-making and the organization's work processes, with a key role in facilitating the organization's empowerment (15).

The classification of managerial empowerment components consisted of two sub-categories of committed management and trust-building management, extracted from eight sub-categories and 31 open codes. Consistent with this results, the results of Voljmas et al. (16) entitled "Employee capabilities and participation: the role of informal trust and control" showed that employee participation is positively related to a company's dynamic capabilities. Moreover, the managers can facilitate employee participation through trust and informal control of subordinates. In a study entitled "Empowering nurses from the perspective of middle management: perspectives on empowering nursing managers and assistant nursing managers," Reagan and Rodriguez concluded that managerial ability is critical to leadership tasks and, in turn, empowering second-line employees as understood by middle management. Even if the job is challenging, resources and support must be improved to increase the ability of middle management. The nursing government must understand the significance of capable middle management so that middle management can effectively lead and facilitate poor quality medical care for the patient (17). In justification of these results, Steinert (2012: 484) proclaims that we must try relentlessly to develop continuously and systematically evaluate empowerment programs for managers and faculty members to prepare for environmental change and complexity and to create a culture of empowerment, management and leadership as a tool to improve the quality and quantity of medical education.

The leadership empowerment category had two subcategories: dynamic leadership types and leadership dynamics, extracted from 5 main and 17 open codes. Regarding this, in a paper entitled "Leadership and dynamic leadership capabilities: the role of human resource systems," Lopez Cabrals et al. showed that both business and transformational leadership styles are positively aligned with dynamic, direct, and indirect capabilities through their effects on human resource systems (18). In explaining these results, citing Kim and Baher, the continuous empowerment of the leaders and managers of the organization increases organizational commitment and emotional commitment of the employees as well as increasing the sense of responsibility and reducing absenteeism and increasing their productivity in the context of the dynamic working environment of leaders, the need to empower leadership and management is felt as a new issue (19).

Structural empowerment category has two sub-categories of structural adaptation and structural flexibility, which were extracted from eight main codes and 25 open codes related to dynamic empowerment. This is in line with the structural empowerment model that states structural empowerment included the modification of the workplace structures by managers and facilitating the staff access to the organization facilities. This approach that was proposed by Kunter (2006) has been extracted from organizational theories and is related to power and authority delegation in the organization (20). Structural empowerment overall stated the access of the staff to four elements - opportunity, information, resource, and support - in the organization. Accordingly, human resource managers have to consider these points to succeed. In a flexible organizational structure, two main aspects with a key role in facilitating the organization's empowerment play a significant role: 1) organizational decision-making and 2) the organization work processes (Choi and Kim, 2016: 419).

The executive components of empowerment had two sub-categories of executive activity and executive creativity, extracted from five main and 17 open codes. This result is in consistent with Payne's (2008) opinion, which presents 5 significant principles of empowerment in the implementation phase for health managers, with emphasis on collective action being the most significant. Therefore, the power of collective management activities is considered as a positive factor and it is stated that because of the more powerful collective activities of managers, the

sustainability of capability is guaranteed as well (21). Regarding this, Zollo and Winter (2002) defined dynamic empowerment as an acquired and consistent pattern of collective action by which the organization systematically creates and modifies day-to-day operations to reach greater effectiveness (22). In explaining these results, one can state that collective efforts to solve problems lead to concepts like self-help and otherness, which have a lot of thematic and semantic affinity with empowerment (23).

The procedural components of dynamic empowerment process have two components of process dimensions and process dynamics, extracted from six main and 20 open codes. This is consistent with the organization's work process management model, explaining the process capability in 4 stages of process design, process execution, process monitoring, and process improvement. Thus, in Process Monitoring along with performing the processes, the organization management should continuously measure the performance and results of the work processes and compare them with the predetermined results. Any deviation from the predetermined goals has to be analyzed and the cause identified and its solutions determined. Work process management systems at this stage, instead of text-based process models, have focused on the development of the process model graphically, due to the reduced complexity of the model development (24).

The dynamic process category had three subcategories: perceptual processes of the opportunities, renewal and rearrangement processes, and synchronization processes, extracted from 3 main and 8 open codes. This involves understanding existing work processes and designing new processes. Modeling and documenting work processes helps organization managers to have a better understanding of their business and, if necessary, make changes to the way they work. In explaining these results, one can deduce that the existence of organizational models of work processes and the access of all stakeholders to these models causes the level of uniformity of work processes to increase gradually. This is because at the same time to implementing processes, the organization management must continuously measure the performance and results of work processes and compare them with predetermined results. Any deviation from the predetermined goals has to be analyzed, the cause found and solutions determined. The results of monitoring processes should be used in a redesign process and the errors observed in work processes corrected if they lead to the detection of problems in designing process (24).

The educational empowerment category had a sub-category of educational aspects related to empowerment, with four main and 9 open codes.

This is in line with the results of Mohammadi and Haddadnia study (2016). In their study entitled "Examination of the relationship between inclusive quality management of the managers of educational groups with their effectiveness and empowerment", they showed a significant positive relationship between the aspects of inclusive quality management on effectiveness and empowerment and a significant positive relationship between the dimension of sense of competence, sense of independence, sense of trust in the dimensions of empowerment and quality management (25). Moreover, the results were in line with those of Gao empowerment model, introducing the educational dimensions of empowerment, including learning how the team works, learning to develop business relationships, learning how to encourage communication and learning analytical ability (26).

The class of empowerment communication elements has the communication aspects, identified from 5 main and 18 open codes. The subclasses of this component were transparent communication, participation in resources, public participation in information exchange, the existence of transparent questioning, and open and dynamic communication with others. Consistent with the results of the study, Harnkol states that empowerment is a tool to free the employees in a way that they can do what they think is "the best" with no fear of being vetoed by their heads and to have the necessary freedom of action (27).

Ultimately, the last class of dynamic empowerment showed empowerment evaluation, identified from 3 main and 10 open codes. This is consistent with the Boje empowerment model, indicating that the empowerment process management model identifies six main steps that have to be followed in planning, implementing, and evaluating an organization's initiative in

developing and strengthening empowerment. These stages create a closed-loop process whose result is continuous improvement (28).

Conclusion: These are the result of a review of empowerment models and papers on dynamic capabilities and dynamic empowerment. Thus, according to these results, one can reach a conceptual conclusion on the components of the dynamic empowerment program to the managers, through whose fitness test on the managers of Iranian universities of medical sciences, one can design a dynamic empowerment model for university managers.

According to the results of the study, one can state that the empowerment model can provide guidance for current and future professional development programs in the field of training managers and leaders in medical education of Iran based on need and competence. Hence, empowerment of human resources is a multidimensional concept affected by several elements and components.

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