

MULTI-DIMENSIONAL CHANGE PROCESS IN HIGHER EDUCATION: A QUALITATIVE INVESTIGATION OF ORGANIZATIONAL CHANGE IN A PUBLIC UNIVERSITY IN TURKEY

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Abstract – *This paper is a part of larger study that was designed to investigate administrative processes in a large Turkish public university. Semi-structured interviews were used to collect the data. The data were subjected to content analysis and the results suggested that change process is a complex process with several dimensions: forces for change, change domains, means of change, and problems of change process. A hierarchy identified among these dimensions and this hierarchy enabled a model for organizational change process. Using this model the findings interpreted within the framework of both the recent global developments in higher education and peculiar characteristics of the Turkish Higher Education System.*

Introduction

The phenomenon of change has been one of the most commonly investigated subjects in administrative sciences. Many researchers on organizational theory and the practitioners of management believe that the main concern over the concept of change results from the fact that organizations live in flux and they need to adapt to their environments in order to survive. Several different approaches developed in order to explain the relationship between the environment and the organization. Organizational adaptability perspective suggests that organizations adapt themselves to the environment (Burns & Stalker, 1961; Lowrence & Lorsch, 1967; Pfeffer & Salancik, 1978). Contrary to organizational adaptability, population ecology perspective argues that the organizations are not flexible enough to adapt to different environment. Their survival completely depends on the selection (Aldrich, 1979; Hannan & Freeman, 1977; Kimberly & Miles, 1981). These perspectives resulted in a hybrid view of evolutionary theory which posits that change is a continuous, recurrent, cumulative, and probabilistic progression of variation, selection and retention of organizational entities. The obligation to compete for scarce environmental resources and the environment's selection ability lead continuously to small and incremental changes in the organizations

(Van de Ven & Poole, 1995). However, these explanations fell short in describing the organizational change satisfactorily because of their ignorance of sudden breaks in organizational life. This gap was filled by the punctuated equilibrium model which states that small and incremental changes are interrupted by sudden breaks (Abernaty & Utterback, 1978; Tushman & Anderson, 1986). According to punctuated equilibrium organizational life is not a long steady state spent on a straight equilibrium level but consist of short sudden breaks which radically alter it (Gersick, 1991).

Although there are different views about the process of change, many scholars are in agreement on the fact that the environment in which the organizations is functioning puts tremendous pressures on organizations to change themselves. Bolman and Deal (1991) in their analysis summarized five main sources of environmental pressures for organizational change: (1) the turbulent world of modern organizations which underlies persistent changes in an uncertain pace in the environment resulting in a big source of pressure to reconsider the existing mission, policies, and practices in the organization, (2) globalisation which makes the organization compete in a wider market across different nations and cultures, (3) information technology pushing the organization for changes in organization's human resource, political, and symbolic aspects, (4) deregulation which leads to flexibility, competition, and new investment opportunities (5) demographic shifts which bring demands of new services such as training, affirmative social services.

Like other organizational contexts such as industry, trade, and service organizations, the researchers of higher education attempt to understand the process of change. Although there is a general consensus that these organizations are different from trade and industrial organizations, the approaches developed for other organizational contexts provide a framework to analyse the concept of change in higher education organizations.

Previous studies and analyses on organizational change in higher education highlight different aspects but mainly concentrate on three important domains: studies investigated the forces of change (Bailey, 1994; Hartley, 1999; Jick, 1995; Johnson, & Srinivasan, 2000; Keastle, 1990; Kemelgor, Morrison, 1998; Pascale, Millemann & Gioja, 1997; Ramaley, 1996; Simsek, 1999; Tichy, 1983; Webb and Kilgore, 1995), studies investigated organizational change in terms of leadership (Birnbaum, 1989; Coleman, 1997; Fullan & Miles, 1992; Hamlin, Reidy & Stewart, 1997), and approaches on resistance to organizational change (Kanter, Stein & Jick, 1993; Lunenburg & Ornstein, 1996).

The studies on the forces of change suggest that in the last two decades many factors have forced higher education organizations to change themselves. The financial look of these organizations was found to be the most striking force for change (Bailey, 1994; Hartley, 1999; Ramaley, 1996; Simsek; 1999). For example,

Simsek (1999) argued that the worldwide transformation of higher education systems was mainly triggered by financial factors. He attributes the reasons of financial constraints of higher education systems to shrinking public resources in general. Hence the countries preferred to cut public expenditures on several public services such as education and health and encourage private enterprises to assume these services. As a result of decreased financial resources, higher education institutions have turned towards finding their own resources, and this trend placed additional pressure on them (Jick, 1995; Kemelgor, Johnson & Srinivasan, 2000; Pascale, Millemann & Gioja, 1997). As a result marketplace dynamics (Keastle, 1990), global market and informed consumers (Morrison, 1998) have become the other new forces of change for these organizations. When competition among these organizations combined with another force of change, the increasing demand for higher education (Hartley, 1999), concern over student learning outcomes increased (Ramaley, 1996). Therefore, quality (Bailey, 1994; Hartley, 1999) becomes another force of change in higher education. Higher education organizations are trying to secure their quality through different means but mainly through accrediting themselves (Webb & Kilgore, 1995) through internationally recognized standards. Since these organizations are not free as in the past, there is an increasing demand from policy makers for higher education to provide solutions to social and economic problems in an increasingly urbanized world (Ramaley, 1996). In this sense, accountability and enhanced productivity (Bailey, 1994; Ramaley, 1996) are two other forces of change in higher education. Finally, technology is stressed as another force of change since it leads to changes in many processes in these organizations (Kemelgor, Johnson & Srinivasan, 2000; Keastle, 1990; Morrison, 1998). Because of these forces higher education organizations are acting in a new era and they are administered in a new understanding in which workplace-specific conditions (Kemelgor, Johnson & Srinivasan, 2000), and many organization issues (Hartley, 1999) become internal forces of change.

Not only the forces of change but the relationship between leadership and organizational change process has always been subject to investigation. Leadership is an important concomitant factor for organizational change process. Simsek and Aytemiz (1998) indicated that change periods are associated with new leaders. Leaders may undertake the role of being trigger, facilitator, critical catalysts or the actor of change process within organizations. Birnbaum (1989) highlighted bilateral aspect of leadership effect on organizational change process. According to Birnbaum, complex social organizations cannot function effectively without leaders. However, Birnbaum warns that we have to be careful when we attribute the reasons of change to leaders for several reasons: 'the cognitive processes of human mind make us to attribute the reasons of changes in institutional functioning to the presidents because it is easy to attribute the reason

of changes to human agency rather than to complex interaction of interpersonal forces' (p. 133). Hamlin, Reidy and Stewart (1997) also suggested visionary leadership as one of the critical factors for change. Coleman, (1997) indicated that change is a painful process for every organization but leadership can be a facilitator in this process.

Another common approach to analysing organizational change is to look at it in terms of 'resistance to change.' Unfortunately, the people in the organizations do not always welcome change. Employees may resist and even act against the change because it may interfere with economic incentives, state of power, and status in the organization (Kanter, Stein & Jick, 1993). There are also psychological reasons behind resistance to change because of the fact that it disturbs stability and leads to fear of unknown (Baron, Bryne & Suls, 1989). In addition, employees may resist change because it may result in knowledge and skill obsolescence (Lunenburg & Ornstein, 1996). Finally, there are some material reasons that inhibit change process in organizations because it demands human resources, financial resources, time and the like.

The Turkish Higher Education System (THES)

The history of modern Turkish Higher Education started with the proclamation of the Republic of Turkey in 1923. Since that time, THES has gone through five main reform efforts via legislations of 2253, 4936, 1750, 2547 and 3837 respectively in 1933, 1946, 1973, 1981, and 1992. It is commonly accepted that the reform of 1981 is the most comprehensive one in terms addressing major problems of THES. Although there are quality concerns, the number of the students enrolled, the number of faculty members employed and the number of higher education institutions have had a steady increase after the reform of 1981 (Guruz *et al.*, 1994). However, there are still serious problems in THES. Simsek (1999) indicated the pressure for further expansion, demand for qualified teaching staff, shrinking public resources, organizational and management issues and quality as the major issues waiting for solutions in THES. In addition to these general problems, the universities also have serious problems specific to their own context. Simsek and Aytemiz's (1998, p. 156) study is illustrative of the institution level problems in THES. In their study of anomaly based change (anomaly defined as 'the problem that threatens the core functions of an organization which inevitably leads to poor performance') in higher education identified six sources of anomalies in THES: (1) issues related to the university's general status including economic and budgetary issues, technology and competition issues, (2) issues related to students including expansion of the student population,

inefficiency of basic student services (transportation, health and housing), decline in students' academic qualities, and problem of student involvement in administrative processes, (3) issues related to academic staff including quality of academic staff, financial and psychological dissatisfaction, limited research facilities and problems of promotion, (4) issues of administration, including lack of communication among stakeholders within the university, and lack of professional administrative staff, (5) issues of teaching and learning including quality concerns (6) issues of physical infrastructure including computer and laboratory facilities, and classroom space.

This review proves that research on organizational change in higher education concentrates on a single aspect of organizational change process, that is, the driving forces of change. Although literature presents robust explanations for driving forces of change, it provides us with only a partial understanding of change. We need a grand look into change process which reveals all dimensions of change. Therefore, this study was designed to investigate different dimensions of organizational change process in a Turkish public university.

Research questions

This study seeks answers to the following specific questions:

1. What are the forces of change process in the University at the faculty level?
2. Which domains of faculty governance demand change in the faculties?
3. What kinds of problems do the faculties confront with during organizational change process?
4. What kinds of means are used for accomplishing organizational change?
5. What kinds of strategies are necessary for a better functioning of organizational change process?

Method

A qualitative case study design was used in this study. Qualitative studies provide a holistic picture of a case, situation, activity, material, or fact (Fraenkel & Wallen, 1990) and bring the researchers close to the practices and enable them to witness the actors' actions in-depth (Yildirim & Simsek, 2000). There were several reasons for using a qualitative case study design in this study. First, the focus of the study was a single institution. Second, it is believed that qualitative case study is instrumental in finding different dimensions and complicated nature

of organizational change process. Third, qualitative research methods are potent in providing a holistic picture of the organizational change process. Finally, in search of change process, qualitative methods are more preferable to quantitative methods because such phenomenon is not easily translated into numbers.

The researchers used the general interview guide approach as the data collection technique. The pilot interviews were conducted with the administrators at department level (i.e., chairs and assistant-chairs). The pilot interviews also enabled the researcher to do modifications, develop alternative questions and prompts in the interview guide.

Sampling

In this study purposeful sampling approach was used to identify the respondents. The logic of purposeful sampling method is to enable the researcher to select information-rich cases from which one can learn a great deal about the purpose of the study (Patton, 1987). The subjects of the study were the deans and assistant deans of METU (Middle East Technical University). Considering the structural characteristics of THES, deans and assistant deans were selected as the subjects of the interviews in this study. In THES the responsibility of the deans is not limited only to academic affairs but includes other administrative affairs of their faculties. In addition, they join many administrative boards as a member or as the head of the board such as university senate, university administration board, faculty board, and so forth. Moreover, their position within the structure of THES makes them undertake a bridging role between the president's office and the departments. Therefore, they have rich experiences and information about a wide array of administrative processes in a typical Turkish university.

Data collection process

After getting a formal permission from the university administration, the researcher arranged appointments with the respondents. At the beginning of each session, the researcher informed the administrators about the study and the purpose of the interview. The sessions were recorded with the permission of the interviewees and the recordings were transcribed by the researcher.

Data Analysis Process

These interview transcriptions were subjected to content analysis (Miles & Huberman 1984; Patton, 1987) in three steps. First, the data were labelled by descriptive codes. This helped simplify the complexity of the data into

manageable units. Second, the list of initial codes was analysed and the patterns were identified based on the labels. These labels were collected under major categories. Finally, these categories were refined under several themes related to organizational change process.

The case: the Middle East Technical University

This study conducted at the Middle East Technical University, located in the capital of Turkey, Ankara. The university was founded in 1956 with the mission of contributing to social, economic, and technological development of Turkey and other Middle Eastern countries. It was planned to be the internationally recognized centre of pure and applied sciences in the Middle East. That is why METU has always used English as medium of instruction since its foundation year.

METU was initially designed to enrol 12,000 students. But the university has continued to grow in terms of the number of the students, faculty, personnel, and facilities. According to the data in the year 2000, METU serves nearly 20,000 students and employs around 2000 academic personnel. It has high quality academic, research, social, sport, and cultural facilities. The university involves 36 research centres, a library with rich catalogues of books, subscribed periodicals, and electronic resources. METU is one of the richest higher education institutions in Turkey in terms of computer technology and Internet facilities. It offers 29 sports branches, accommodation and recreational facilities, and dormitories for students and houses for academic staff.

METU has five faculties. The first one, Faculty of Architecture is the oldest faculty at METU, which was founded in 1956 and has three departments. The second faculty, Faculty of Engineering, is the largest faculty at METU in terms of students enrolled and academic staff employed with 11 departments. The third faculty, Faculty of Arts and Sciences, is the second largest faculty with nine departments. The fourth one, Faculty of Economics and Administrative Sciences, which was founded in 1957, has four departments. Finally, Faculty of Education founded in 1982 has six departments. These faculties offer undergraduate and graduate programs. In addition to teaching, research activities occupy a significant role in these faculties.

METU had enjoyed a leading role among Turkish universities until 1982 reforms in the THES. Although the 1982 reform led to positive developments in overall THES, it brought negative implications for METU because it lost its autonomy and became completely dependent on Higher Education Council (HEC) in administrative and financial affairs. In addition, the establishment of private universities also shook METU's leading role because these universities attracted

many of public universities' academic staff and high quality students. Finally, the dramatic increase in the student population is one of the main reasons for the quality decline in teaching. In order to preserve its top position in Turkey, METU has initiated several actions. First of all, METU tried to save the current academic staff and attract new faculty members. In addition, the university has entered in a competition process with other private and public universities to attract high quality students through the Student Selection Examination—a nation-wide examination taken by all high school graduates who would like to be enrolled in higher education in Turkey. Moreover, establishing close relations with the industry is accepted as one of the main strategies to generate new resources. METU has continuously tried to enhance its infrastructure, academic and non-academic services provided to the students, faculty members and academic staff. Finally, since 1990 the presidents have tried to apply new administrative approaches to the university. The presidents have focused on enhancement of the communication, promotion of participative decision-making, use of technology in administrative processes and adoption of new management techniques for the administration of the university. The strategic planning is a good example for restructuring efforts at METU. The last two presidents have tried to develop the strategic plan for the 2000-2005 through involvement of the faculty members.

Results

Content analysis of the data suggested five dimensions regarding the organizational change process: forces for change, change domains, means of change, problems of change process, and suggestions of the administrators for facilitating change process within the faculties. Table 1 summarizes these findings.

Forces of change at METU

The findings suggest that the faculties are under a number of external and internal pressures that call for change. The first internal force mentioned is the leadership at the department level, faculty level, and university level. Respectively the chairpersons, the deans, or the president develop suggestions, or set demands and desires which drive the faculty into a change process. Second, young staff of the faculties, most of whom received their Ph.D. degrees abroad, is also mentioned as another internal force of change. Third, historical background and mission of the university in general has been accepted as a force of change. Fourth,

TABLE 1: Five dimensions of organizational change

Forces of change	Internal	<ol style="list-style-type: none"> 1. Leadership 2. Enlargement of the university 3. Young staff of the faculties 4. Historical background and mission of the university 5. The evaluation processes 6. The students
	External	<ol style="list-style-type: none"> 1. Society's needs 2. Technological advancements 3. Changes in the job market 4. Competition 5. Legal regulations
Change domains		<ol style="list-style-type: none"> 1.Characteristics of the student population of the university 2. Academic restructuring 3. Characteristics of the academic personnel
Problems of change		<ol style="list-style-type: none"> 1. Structure of THES 2. Attitudes of the staff 3. Constraints over the resources 4. Political traditions of the country
Means of change		<ol style="list-style-type: none"> 1. Benchmarking 2. Accreditation (national and international) 3. Strategic planning
Suggestions of the administrators		<ol style="list-style-type: none"> 1. Open and informal communication 2. Participative decision-making processes 3. Increasing the interest of academic staff 4. Demand for more power in order to initiate change 5. Finding alternative resources 6. Leadership

the evaluation processes of the faculties are mentioned as sources of change. The faculties either develop certain self-evaluation processes or invite international accreditation institutions and try to evaluate themselves. Finally, the administrators mentioned the students' demands and expectations regarding the registration process, elective courses, quality of instructional materials, quality of the academic staff, and physical conditions as forces for change.

On the other hand, regarding the external forces for change, the respondents stated that the society's needs and expectations are the primary force for change. First of all, the social, political and economic developments, and expectations of the society were stated as important factors in shaping the policies of the university and, as a result, the policies of the faculties. Second, the respondents pointed the rapid technological advancements that force the university to make changes both in academic and administrative process such as registration, grading, and performance evaluation of academic staff. Third, the changes in the job market make the faculties consider changes in the curriculum such as developing new courses, removing courses or changing the content of the courses. Fourth, especially after the foundation of private universities in Turkey, METU has developed new strategies or policies in order to be

competitive at national level and save its international reputation in the world. Finally, legal regulations were stated to be an external factor for change in the faculties.

The change domains at METU

The first domain of change that was pointed out by the administrators is the student population. The student population has reached 22,000 but the infrastructure has not increased accordingly. Apparently, the excessive growth of student population threatens the quality at METU. In order to restore the quality and preserve its reputation, the university has accepted a general strategy of decreasing the number of students at undergraduate level and increasing the number of students at graduate level. In addition, interdisciplinary programs is mentioned as another domain of change. Moreover, the interviewees indicated that the characteristics of the academic personnel have been changing. The faculties are not able to recruit quality academic staff because of various reasons such as low salary, intense competition by the private universities, decline in resources of the university, and the cost of advanced education overseas. Finally, it is mentioned that the university has been in an expansion process in terms of physical conditions, number of staff, and varieties of academic and non-academic activities.

The problems in change process

Almost all of the administrators indicated the centralized structure of THES as a problem for change. It is indicated that the centralized structure of THES impedes innovation at the faculty level. In addition, the administrators complained that faculty members do not support the change initiatives. They attributed this reluctance to lack of motivation, work overload and nature of academic enterprise. Moreover, all of the administrators expressed that there are constraints over the resources necessary for initiating change. Finally, political traditions of the country were expressed as another cause of problem for the change process. Unsuccessful efforts in other domains of public administration and specifically change in the education system lead to development of negative attitudes toward change process.

The means for successful change

The administrators mentioned about three different means used for achieving change in their faculties. Faculty administrators indicated benchmarking as a primary means of change. They indicated that they follow the best-practicing faculties in other international universities and they try to implement the same

strategies for their faculties. Moreover, the interviewees mentioned about accreditation at national and international levels as a means for change. Finally, the administrators mentioned that they accept strategic planning as another means for change in their faculties.

The suggestions for a successful change process

Faculty administrators developed several suggestions for a successful change process. First of all, the administrators believe that communication and decision-making processes are important in the change process. In all of the faculties, the administrators suggested open and informal communication in order to accomplish change efforts. The administrators suggested implementing participative decision-making process for initiating an effective change process in the faculties. Communicating major policies to important stakeholders in the university and getting their feedback are necessary steps for successful change process. Moreover, all of the faculty administrators suggested strategies for increasing the interest of academic staff in the change process. They believe that the faculty members need motivational strategies in order to get their full contribution in the change process. Furthermore, the administrators demand more power in order to initiate change. They believe that the current structure of higher education system needs to be improved toward a more decentralized structure enabling the faculty administrators to gain more authority. Finally, the administrators suggested that it is necessary to find alternative resources necessary for change process in the faculties.

Discussion

Recently many scholars have highlighted the need for a different perspective in the study of organizational change (Beer & Nohria, 2000; Van de Ven & Poole, 1995; Weick & Quinn, 1999). These scholars mainly indicated that change process is a complex process with several different dimensions embedded in each other; therefore, a proper understanding of change process is possible only through revealing different dimensions of change and explicating the relationships among these dimensions. This study is an attempt to respond to this call through investigating different dimensions of change and going a further step by revealing the interaction among these dimensions in higher education context. The results suggest that organizational change process involves multiple dimensions such as forces of change, change domains, problems of change, means of change, and suggestions for successful change process. The literature is dominated by studies

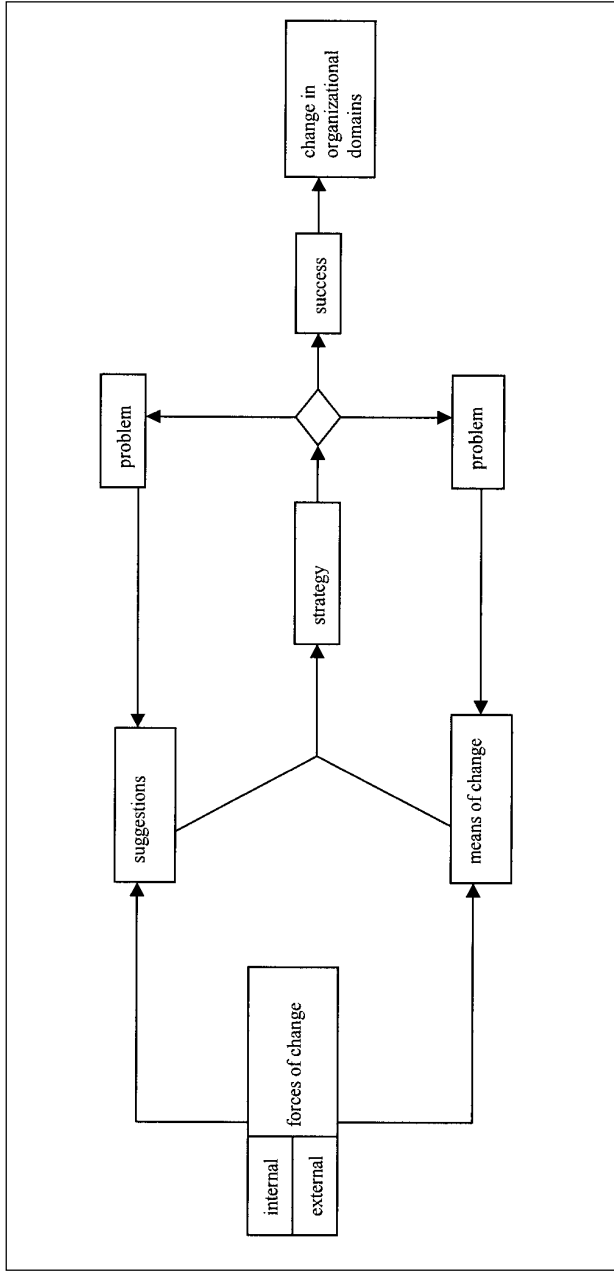
which focus on one of these dimensions but ignore the holistic nature of the change process. From this perspective this study aimed to investigate all dimensions (based on the views of the subjects of the study) of the change process. The strength of this approach is that it enables us to establish relationships between these different dimensions and, as a result, derive a strategy for successful change higher education.

A close look at the dimensions suggested by the result of the study indicates a hierarchy among them, which is illustrated in Figure 1. This figure suggests a model of managing change in the organizations. In this model, either internal or external forces of change always trigger change. The first response of the organization to the forces of change is two-folded. First, members in the organization may develop ideas for encountering these forces. Second, the organization may search and adopt appropriate means of change. There is a difference between the suggestions for change and tools for change in the sense that the former reaction is developed within the organization based on members' perceptions and experiences. In this sense, it is an internal response. However, the latter consists of ready-made tools, such as accreditation and strategic planning. The organization customizes these tools to its own context. Incorporating contextual ideas and ready-made tools, the organization comes up with a general strategy of implementing change. When this strategy becomes successful the organization realizes changes in different domains. However, the organization may also face with problems that require reformulation the strategy through revision of suggestions and adopted tools.

The results of the study verify this model since its components and the relations among them are in line with the findings. The results of this study also make sense according to recent developments in higher education, proving that these developments have a reflection on higher education in Turkey.

When the findings of the study are closely scrutinized a relationship among these findings can be identified. The results of this study, like many studies in the literature, suggest that change process is triggered by certain forces. These forces are parallel to the findings in the literature. Almost all of the previous studies attempted to investigate the driving forces of change more or less address similar forces for change for higher education organizations. Simsek and Aytemiz (1998) name these forces as anomalies and make a distinction between internal and external anomalies. Kemelgor, Johnson and Srinivasan (2000) also name these forces as the driving forces of change. In this study, parallel to the findings of many different studies (Birnbaum, 1989; Coleman, 1997; Hamlin, Reidy & Stewart, 1997), leadership emerged as an important internal force of change, which is an indication of the shift in administrative patterns of higher education organizations from pure collegial understanding to managerial understanding. On

FIGURE 1: The hierarchy of the organizational change dimensions



the other hand, evaluation processes at national and international levels indicate the concern for quality. Quality becomes an important means of developing and securing competitive advantage for higher education organizations.

Unlike the tendency in the literature, which highlights only the external factors, this study suggests more or less similar number of internal and external forces of change. This is closely related to the leading role of the case under study, METU. It is not only shaped by environmental forces, but also has the ability to lead developments in higher education in Turkey.

Based on the universal mission of the universities, shifts in the societies' needs and expectations became one of the major forces of change for universities. The universities adapt their strategies according to the expectations of the society. Therefore, social, political and economic conditions of the society are perceived as triggering factors for initiating change in the university.

The changes in the job market emerged as another external factor for change process. In last two decades, the governments have adopted policies to make higher education organizations more autonomous and at the same time more accountable. The governments prefer to evaluate higher education organizations in terms of their outputs rather than the inputs. The universities' contributions to the society, and specifically to the economies of the nations are important determinants of their effectiveness. In this sense the labour market is a significant external force of change to be considered by the universities.

Parallel to the findings of many studies investigating the forces of organizational change in higher education (Kamelgor, Johnson & Srinivasan, 2000; Keastle, 1990; Kwatler, 1997; Morisson, 1998; Tichy, 1983; Twing & Oblinger, 1996) this study also suggest technology as a force of change for higher education organizations. Technologies have important roles in most crucial processes such as teaching, research, and administration in the academy. Higher education organizations are trying to adapt or employ technologies necessary for teaching, research, administration and distance education and as result make them an opportunity but not a threat.

After the establishment of private universities in the mid 1980s, the concept of 'competition' has entered into the agenda of public universities in Turkey. Private universities have attracted public universities' academic staff, high-ranking students in Student Selection Examination and, even in some cases senior administrative staff. It is a fact that the public universities have to compete not only with private universities but also with each other in Turkey. Findings of other scholars (Jick, 1995; Kemelgor, Johnson & Srinivasan, 2000; Pascale, Millemann & Gioja, 1997) support the fact that competition among higher education organizations is not specific to Turkish higher education organizations but to higher education organizations in other countries.

Finally legal regulations show that THES is highly vulnerable to political interferences. Universities in Turkey should always be ready to unexpected legal regulations that require rearrangements of their existing functioning on teaching, research, monetary expenditures, and personnel administration. Considering the fact that THES has several problems, the universities should be ready for such unpredictable legal changes.

These internal and external forces lead the university to consider change in both its structure and processes. Change strategies are formulated by combining suggestions of the members, and ready-made change tools. First part of the strategies, suggestions of the members, is important in the sense that they are resulted from their experiences. The administrators suggested strategies related to organizational behaviour, organizational structure and financial aspects of the organization. Suggestions related to organizational behaviour are enhancement of informal communication, implementing participative decision-making and other strategies for increasing the interest of the members. These are effective strategies for coping with the problems related to getting members' support and their active involvement. In addition, a desire for more decentralization is not unexpected because the administrators need authority over operations in their faculties. Finally, the administrators highlighted the need for finding alternative resources. Being highly dependent on public resources makes the universities' autonomy highly vulnerable. Generating their own resources will be an important step for the universities to restore the autonomy and as a result be more change oriented.

Another part of the change strategies consists of ready-made tools for change. Higher education organizations do not develop their own management tools but adapt management tools from business administration. Strategic planning, quality management, strength-weaknesses, opportunities-threats (SWOT) analysis are relatively new concepts for the academy. These concepts have leaked into administrative units of higher education organizations after the global restructuring of higher education organizations started at the beginning of 1980s under the title of 'Managerialism'. For example, in continental European countries higher education organizations have forced to develop managerial functioning modes and business like behaviours (Larsen & Gornitzka, 1995). The old modes of administration characterized by collegial and political model of decision-making that formed the basis of the university as an organization until 1970s have been replaced by entrepreneurial management (Neave & Van Vught, 1991).

Organizational change process is not a smooth process without any problem. Several problems lead to reformulation of the strategies for change in higher education context. This study has shown that the centralized structure of THES is problematic for change in higher education in Turkey. In fact, this problem has

resulted from the centralized pattern of Turkish Public Administration of which THES is a part. It leads to a problem of authority at the faculty level. The authority concentrates at upper levels either in the hands of the HEC or the rector. On the other hand, it is difficult to incorporate the academicians in the administrative process in Turkey. One of the reasons of their indifference toward change process is closely related to the academic profession itself. Since the academic profession is a highly individualistic profession, the faculty are unwilling to cooperate or work in groups or teams. Another reason is related to unsatisfactory salary of academicians in Turkey. Change process demands more efforts of the members but the faculty members overloaded with teaching tasks are not willing to contribute to change process if not to resist it. This is parallel to what Ramaley (1996) also addressed as such that the importance of getting the support of the staff, it is necessary to take several measures such as creating incentives, recognition, and rewards to get their attention.

Finance is another problem for change process in Turkish higher education. Appropriations from the state budget are not sufficient to finance the total expenditures. Indeed, the budgets of the universities are line-item budgets that hinder effective and efficient use of the monies. In fact, there are other sources of income for the universities in Turkey such as income from the services provided by the university, students' tuition fees, and researches projects. But the amount of monies received from these sources still remains very small. Unlike the state-subsidized Western European universities or universities in the USA that generate their own resources, Turkish higher education organizations have limited financial capacity. They are not effective in generating their own resources through cooperation with the industry because of the non-existence of such an industry in the country. Finally, the direct effect of politics on educational system of the country emerged as a source of problem for change process. Education system in general has always been the primary area of interest for the political parties. Each political party tries to change the education system according to its own agenda. Education system has turned out to be a trial and error context within public administration. Therefore, not only the academicians but also the public have developed negative attitudes toward change attempts of any kind. These four problems are the indications of dissatisfaction with structural, cultural, material resources, human resources, and psychological conditions for change.

The compatibility between administrators' suggestions and the problems in organizational change process also contributes to verification of the model. This is an indication of feedback loop between the strategy and problem parts of the model. The executives, depending on the problems reconsider their suggestions and as a result reformulate their strategies. For example, the administrators

highlighted the need for open and informal communication and participative decision-making style as strategies for enhancement of organizational change process. These strategies are suggested because of the fact that the administrators have difficulty in getting the support of faculty members. Communicating all aspects of change process, making them participate in the process of change are key strategies to get their support. In addition, highly centralized structure of THES made the administrators demand more decentralization because they need authority over operations in their faculties. Finally, the constraints over financial resources lead to the demand for new resources because state appropriations from the budget are not enough for operations in the university. On the other hand, being highly dependent on public resources limits the universities' autonomy. Therefore, it is necessary to generate alternative resources in order to preserve the autonomy.

The final dimension of the study, the change domains are also compatible with the forces of change. First, the policies of decreasing the number of undergraduate students, increasing the number of graduate students, developing interdisciplinary programs, and recruiting quality academicians have resulted from the desire of preserving the quality and maintaining the leading position among Turkish universities. Another reason of these policies is to make METU a centre of graduate studies, supply the academic staff needs of recently established universities and make METU an international research centre as indicated in its historical mission. These changes are related to METU's historical background and mission. Second, academic restructuring is related to several forces such as society's needs and expectations, changes in the job market, competition and legal regulation. The university initiates new programs in order to respond to the needs of the society and supply the economy with qualified manpower. Third, the change in the composition of the faculty is related to both decreasing resources and competition. Private universities offer high salaries and better facilities, which attract faculty in public universities. However, public universities' competitive abilities are not strong enough to keep their members nor they have the resources to develop new faculty through overseas educational opportunities.

This study investigated organizational change process in higher education and the results interpreted within the framework of recent developments in higher education context. In this sense, the study covered two nested complexities. First, the higher education context, and secondly, the organizational change process in this context. Qualitative research methods were appropriate in working on these two complexities. Global changes in the countries' social, political, and economic structures gave way to transformation of the universities. As a result of this transformation a new administrative understanding has developed for these

organizations. Looking from this perspective, it is necessary to investigate not only organizational change process but also other administrative processes such as communication, decision-making, and leadership in order to understand this new administrative understanding. However, it is impossible to ignore recent developments in higher education context even in the study of organization level processes.

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