ASSESSMENT OF FACTORS NEGATIVELY AFFECTING THE COMMUNICATION PROCESS IN TURKISH STATE UNIVERSITIES

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ABSTRACT

ASSESSMENT OF FACTORS NEGATIVELY AFFECTING THE COMMUNICATION PROCESS IN TURKISH STATE UNIVERSITIES

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The purpose of this study is twofold: to assess the relationships among factors negatively affecting communication process in Turkish state universities and to test a hypothetical model drawn from a qualitative case study done by Gizir (1999).

The sample of the study consisted of 480 faculty members employed in seven public universities representing seven regions of Turkey. As an instrument, "Inventory of Communication Analysis in Academic Context", which was developed by the researcher by using the qualitative data obtained from a study done by Gizir (1999), was used in the present study.

Structural equation modelling was used to analyze the data. The results of the present study revealed that there were direct and indirect relationships between each of the nine factors and poor communication, and among nine factors. The results also showed that there were some similarities and differences between the hypothetical model and the modified model.

Keywords: University, academic context, communication, culture.

ÖZ

TÜRK DEVLET ÜNİVERSİTELERİNDE İLETİŞİM SÜRECİNİ OLUMSUZ ETKİLEYEN FAKTÖRLERİN İNCELENMESİ

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Bu çalışma, Türk devlet üniversitelerinde iletişim sürecini olumsuz etkileyen faktörlerin değerlendirilmesi ve Gizir (1999) tarafından yapılan nitel çalışma sonucunda elde edilen hipotetik modelin test edilmesini amaçlamıştır.

Araştırmanın örneklemi, Türkiye'nin yedi bölgesini en iyi temsil ettiği düşünülen yedi devlet üniversitesinde görev yapmakta olan 480 öğretim üyesinden oluşmaktadır. Bu çalışmada, araştırmacı tarafından Gizir (1999)'in çalışmasında elde edilen nitel verilerden yararlanılarak geliştirilen "Akademik Ortam İletişim Analizi Envanteri" ölçme aracı olarak kullanılmıştır.

Bu çalışmada toplanan veriler açıklayıcı faktör analizi ve yapısal eşitlik modeli teknikleri kullanılarak analiz edilmiştir. Araştırma bulguları analiz sonucunda belirlenen dokuz faktörün herbirinin kendi aralarında ve yetersiz iletişim ile doğrudan ve dolaylı olarak ilişkili olduklarını ortaya koymuştur. Ayrıca, hipotetik model ile bu çalışma sonucunda elde edilen model arasında benzerlik ve farlılıkların varlığı gözlenmiştir.

Anahtar Kelimeler: Üniversite, akademik ortam, iletişim, kültür.

To my family, but especially to my daughter, Eylül.

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INTRODUCTION

In the 1980s, with the growing awareness in both industrialized and developing worlds of the vital role it has played, higher education acquired a key role in any development program and in the general organization of modern society (Aypay, 2003; Cabal, 1993). Barnett (1993) states that higher education has become a pivotal institution in modern society, because knowledge is an essential feature of modern society that is not understandable apart from its interest in knowledge, and it has irredeemable associations with knowledge with respect to its uncovering and transmission.

With the awareness of the importance of higher education in the organization of modern society, universities as institutions of higher education became a topic of central concern to those who study organizations. Among others, organization and governance are two main topics of higher education as a field of study. Some of these studies focused on the nature of the university as an organization and function of the university, while some focused on the invisible organization structure of the university (organizational culture, saga, and climate), and still some others focused on leadership (Brown II, 2000).

1.1 Background of the Study

1.1.1 Universities as Systems

Researchers studying on universities believed that seeing universities as organizations, as systems, and as inventions help to understand how universities work (Birnbaum, 1988; Bess, 1988; Blau, 1973; Millett, 1968). When universities are seen as organizations, groups of people having some roles and working together to achieve common objectives within a formal social structure become the main focus of a study (Birnbaum, 1988). When they are viewed as systems, the dynamics through which the whole and its parts interact seem more important than particular roles and structures. Taking system approach to the analysis of a university can be seen as the best way because of some unique characteristics of a university as an enterprise.

A system can be defined as a whole that has interrelated elements (or subsystems) that functions as a unit for a specific purpose, and has boundary separating it from its environment (Lunenburg & Ornstain, 1996; Birnbaum, 1988). Birnbaum (1988) describes two different systems to clarify the system concept, and compares their characteristics in terms of interacting components, boundaries, and inputs and outputs. Those systems are the Pool System and The School System. Both systems have boundaries and are parts of a larger supersystem. The Pool System has clearly definable boundaries, and has relatively simple environmental inputs. Both systems are made up of components that interact. In the Pool System, the components are simple and clearly identifiable objects. However, in the School System, the components are not simple. Also, it has not clearly identifiable boundaries and clearly identifiable objects and has more complex inputs and outputs. The School System has mainly two complex subsystems: the administrative and technical subsystems (Birnbaum, 1988). It can be said that a university is an example of the School System. For example, in a university, the administrative subsystem involves the dean, department chairs, regulations, budgets, and such elements that help to coordinate the organization. The technical subsystem is made up of elements that turn inputs into outputs.

Similarly, Millett (1968) examines university as a system describing three major elements in any system analysis: input factors, the technology or process of operation, and the output. In a university, the inputs are knowledge as represented by faculty, research, ideas, prestige, books, social expectations, and capital (including land, plant, and equipment). The technology process is composed of an instructional process and research process. The output is made up graduated students, other instructed students, service, status, and advancements in knowledge. What strikes one immediately and forcefully about such an analysis of higher education is the indefinite quality of the entire system. Among the input factors, only capital in the form of land, buildings, and equipment can be defined with some precision, but capital in the form of knowledge and/or in the form of faculty aptitude is certainly an elusive factor. Research ideas and projects are again uncertain elements. Additionally, students are presumably motivated to acquire and use knowledge, but their ability and interest are not simple to ascertain.

Moreover, when turned to the technology of higher education, both the instructional process and the research process have highly uncertain features. The research process produces new knowledge, whereas the result or the importance of the results is by no means assured (Millett, 1968). The outputs of the university are graduated students, other instructed students, and new knowledge to specific problems. However, the quality or usefulness of those student products of instructional process, and the actual extent to which new knowledge has actually been provided or the actual utility of any of this new knowledge cannot be certain. The complex nature of technology of higher education institutions is one factor behind its highly decentralized, loosely coordinated structural arrangements (Bolman & Deal, 1991).

In addition, universities are seen open systems that have relatively permeable boundaries, and many kinds of interaction occur between the environment and many of the system elements (Michael, 2004; Valimaa, 1998). Open systems are dynamic and they are non-linear, that is, parts of the systems are themselves systems and they continuously change while they interact with themselves and with the environment. Also, the subsystems or elements of a university are coupled or

connected loosely. In loosely coupled systems, the subsystems are responsive to each other, but that each system also preserves its own identities and its physical or logical separateness (Weick, 1976).

Moreover, it is suggested that organizations that permit considerable flexibility in the behavior of their subsystems are better able to adapt and survive. In his study, Lutz (1982) also claims that loose coupling have been applied particularly to educational organizations, especially universities. Furthermore, in applying loose coupling to educational organizations, notably universities, it has been contended that the quality of flexibility is analogous to academic freedom and, therefore, is essential to the very nature of the university. So, loose coupling are generally proposed as normative models of universities (Lutz, 1982).

In extending the idea of the university as a loosely coupled system, Clark (1983b; as cited in Patterson, 2001) mentions a model in which the overall structure of the academic system having three main segments: the understructure, the middlestructure, and the superstructure. The *understructure* is made up of the operating units and departments, the *middlestructure* is the institution itself, and *superstructure* is the wider system and its inter-institutional link. The understructure segment consists of a disunited aggregation of disciplines and professional fields, a loosely coupled system (Patterson, 2001).

1.1.2 Distinguishing Characteristics of Universities as Organizations

Although all organizations have goals, levels of authority, communication systems, coordination mechanisms, and distinctive procedures, structural profiles vary widely across different types of organizations (Bolman & Deal, 1991). Like other organizations, universities have goals, hierarchical systems and structures, employees who carry out specified duties, decision making process that set institutional policy and bureaucratic administration in order to handle routine business. But they also exhibit some critical distinguishing characteristics that affect all organizational processes.

Goal ambiguity or multiplicity and complexity of goals and mission are the ones that are notably unique features of universities. Universities have various constituencies and interests groups –faculty members, students, administrators, councils, government, the Ministry, the public, funding bodies, professional groups- holding divergent, even opposing views on university goals and goal priorities, both within and between the groups (Patterson, 2001). For example, administrators seek an efficient use of resources while most academics pursue both teaching and research, but have different strengths of commitment to each. Clark (1983a; 1983b; cited in Patterson, 2001) points out that although academics may commonly share the fact that they work with and upon knowledge, they do not share common knowledge; infact, they are rewarded primarily for going off in opposite directions. Disciplinary fields continue to become ever more specialised, and tend to function as separate cell groups. As a result, there is a high degree of professional autonomy and authoritativeness at the operating level of the university. Moreover, he states that the university is both discipline based and discipline diversified, because the curical links for the specialist groups are from identification with others working in the same specialised fields, either within or outside the academic system; with loyalty to the employing university institution frequently is in the second order. He also views university as a loose confederation of knowledge-bearing groups, continually cell splitting and mutating, disunited by their disparate loyalties, interests, ideas and approaches to knowledge, each with a high degree of self-control. Attempts to impose uniformity through specific goal-directed activity will always lie uneasily alongside this structure of segmented professionalism, and be inconsistent with the essential character and purpose of the institution –the challenging, reworking, maintaining, disseminating, expanding, defending, and evolving of knowledge generated by the commitment to research (Patterson, 2001).

Birnbaum (1988) claims that as colleges and universities become more diverse, fragmented and specialized, their missions do not become clearer, rather they multiply and become sources of conflict rather than integration. He also states that the problem is not that institutions cannot identify their goals; the actual problem is that they simultaneously embrace a large number of conflicting goals. In a similar

way, Baldridge et al. (2000) state that “colleges and universities have vague, ambiguous goals and they must build decision processes to grapple with a higher degree of uncertainty and conflict” (p. 128). Patterson (2001) claims that with individual, group and institutional goals disparate and even conflicting, it is extremely difficult to formulate a statement of meaningful goals for the university which will elicit any real commitment from its constituent members. Further, the concept of a university mission statement and its application can be seen as some what fragile in this organizational context of complex and multiple goal and personal interests, and fragmentation. Similarly, Cohen and March (2000) state that “efforts to generate normative statements of the goals of a university tend to produce goals that are meaningless or dubious” (p. 16).

Administrative structure is another distinctive feature of universities compared to other business organizations. This distinctiveness is caused from mainly two factors named as confusion of organizational levels and the dualism of controls.

Birnbaum (1988) mentions about the three levels of responsibility and control in organizations –technical, managerial, and institutional. In colleges or universities, the research, teaching, and service responsibilities are carried out primarily by the faculty consist of the technical level. In higher education, the responsibility of organization’s institutional level is represented by boards of trustees and presidents. This responsibility is to ensure that the organization is able to respond appropriately to the uncertainty of external forces. The managerial level represented by the administration is charged with mediating between these two levels and buffering the faculty and researchers who make up technical core against distruption caused by problems in the acquisition of funding, fluctuations in student enrollments or governmental interference.

It is presumed that the specialization of these levels in functioning is the necessity of the effectiveness of organizations. But in higher education, distinctions among the three levels can be difficult, even impossible to maintain, particularly in certain types of colleges and universities (Ackroyd & Ackroyd, 1999; Birnbaum, 1988). For example, in some institutions, faculty (technical level) is also members of the

board of trustees (institutional level). Also, at many institutions, faculty is expected by tradition as well as law to exercise managerial responsibilities, such as responsibilities for personnel and for program.

In addition, it is possible to consider the confused relationships between boards, administration and faculty when a university is compared to a business firm, because of the administration of university representing “a unique dualism in organizational structure” (Birnbaum, 1988, p. 9). Universities include two structures existing in parallel: the administrative hierarchy and the structure through which faculty made decisions regarding those aspects of institution over which they had jurisdiction. These two control systems not only are structurally separate but are based on different systems of authority as well.

Administrative authority is related with the control and coordination of activities by superiors while professional authority is related with autonomy and individual knowledge. These two authority sources are different and in mutual disagreement. In business organizations, administrators direct the primary goal activities of the institution, and professional staff provides secondary support activities and knowledge. In such organization, conflict caused by the incompatibility of administrative and professional authority is resolved by recognizing the supremacy of administrative authority (Birnbaum, 1988). However, in professional organizations like universities, it is very problematic. Such organizations have staff composed predominantly of professionals who produce, apply, preserve, or communicate knowledge. In professional organizations, administrators are responsible for secondary activities, “they administer means to the major activity carried out by professionals” (Etzioni, 2000; Birnbaum, 1988, p. 10). So, it can be said that professionals hold the major authority while administrators hold the secondary staff authority.

Academic Profession is another distinctive characteristic of university organizations when compared with business organizations. Mintzberg (1979) describes five organizational types, of which the “professional bureaucracy” most closely resembles a university. In this type of organizations, highly skilled

professional people in the operating core perform the complex day-to-day work, that is, the operators must have control and hence tend to work largely independent of one another but closely with clients served (McAleer & McHugh, 1994). The structural type of professional bureaucracy is flat and decentralized, and control is provided mainly by the professional indoctrination of their members (Etzioni, 2000; Bolman & Deal, 1991).

Clark (1987) defines the word of profession as “an occupation that regulates itself through systematic, regulated training and collegial discipline; has a base in technical, specialized knowledge; that has a service rather than profit orientation enshrined in its code of ethics” (p. 15). Expertness is based on “knowledge”. Knowledge serves as the principle source of authority, and it is a basis for pathways of training, certification, and career. Such a base allows occupations both to seek the rewards of higher status and more power, and to make collegial and moral gains. Clark (1987) also claims that “professionalism is also a kind of solidarity, a source of meaning in work, and a system of regulating belief in modern societies” (p. 16).

In addition, Clark (2000) defines ‘profession’ as “a specialized competence with a high degree of intellectual content, a speciality heavily based on or involved with knowledge” (p. 122). Clark (1987) also states that the academic occupation fits commonplace conceptions of profession. “Its specialized knowledge is front and center; collegial and moral components can be readily observed” (p. xxiv).

Rowland (2002) mentions about academicians as professional people conducting academic work at institutions of higher education with various roles, including researchers, learning technologists, academic developers, multimedia specialists and learning managers. Similarly, Clark (2000) believed that academic person is a special kind of professional person characterized by a particular high need for autonomy. To be innovative and to be critical of established ways are the commitments of the academy and the impulses of scientific and scholarly roles that press for unusual autonomy.

Clark (1983a) claims that academic profession is fundamentally different from that of every other profession. He states that despite other professions' internal specialties, which continue to proliferate, they can be loosely or tightly unified by a body of values, norms and attitudes developed over time within the profession itself and considered an intrinsic part of it, and then an organization loaded with members of a profession, like a hospital is by doctors, can be integrated in part by professional norms as well as by bureaucratic rules. However, in academic organizations, this pattern does not hold, because under the general label of professor, there are architects on the architecture faculty, medical doctors on the medical faculty, and other quite distinct clusters within professional units. He also states that the major disciplines are extensively subdivided and these major subfields contain more specialties. So, it can be said that the distinct quality of academic institutions and systems is high degree of fragmented professionalism, that is academic systems are loose connections of many professional types.

The academic profession is radically subdivided by workplace and subject, and this division entails a qualitative leap in complexity (Clark, 1987). Specifically, academics are divided by disciplines, field of study, even as they are located in institutions. The growth of specialization in the last century leads the disciplines to become everywhere an imposing force in the working lives of the vast majority of academics. They have their own histories and trajectories, their own habits and practices.

The growing specialization and professionalism of faculty create faculty orientations to their institutions and to their disciplines (Birnbaum, 1988; Clark, 1987). Birnbaum (1988) states that the disciplines can be considered across a continuum, and "cosmopolitans" and "locals" are the two polar types. "Cosmopolitans are faculty whose peers are colleagues across the country –or the world- who share their specialized scholarly interest" (p. 20). Cosmopolitans have a tendency to do research and publish, to find their rewards and satisfaction in their disciplinary activities. They use their institutions as bases for their external activities. They tend to think themselves primarily as independent professionals and secondarily as faculty members at a particular university. On the other hand,

the major commitments of locals are their campuses. They tend to focus their attention on teaching and to participate in institutional activities (Birnbaum, 1988). Unlike cosmopolitans, locals see themselves primarily as faculty members at a particular university and secondarily as independent professionals. The proportions of cosmopolitans and locals within a university can have a major effect on campus governance, patterns of influence, and patterns of relationships among faculty.

1.1.3 University Departments

In university-type organizations, "there are many cells of specialization side by side and loosely connected at the operational level, together with only small number of higher levels of coordination" (Clark, 1983a, p. 17). The university as an enterprise realizes first of all specialization of faculty effort in instruction and research by particular fields of knowledge. These specializations are divided into two major categories; the discipline and the professional fields (Millett, 1968). Disciplines are the lifeblood of higher education institutions as their main organizing bases and their main social framework (Becher, 1994). Each discipline that is defined as organized social grouping has its own set of concepts, methods and fundamental aims (Becher, 1994; Gaff & Wilson, 1988). Clearly divided disciplines enact across and within departments. Becher and Trowler (2001) state that disciplines are identified by the existence of relevant departments, but every department does not represent a single discipline. Similarly, Hearn and Anderson (2002) define department as the intersection of an academic discipline and an institution.

Becher and Trowler (2001) propose a kind of anthropological framework from which disciplines are viewed as academic tribes inhabiting different academic territories, and the location of the academic territory forms the basis for the social life of the field: the aims, typical modes of action and interaction, publication patterns, core values and beliefs of the tribe. According to them, the academic territory differs in two cognitive dimensions: hard-soft and pure-applied. In hard pure territory knowledge is cumulative and atomistic, aiming at discovering universals and explaining phenomena, while the hard applied area is pragmatic in nature and its goal is the mastery of physical environment by new products and

techniques. Soft pure knowledge is concerned with particularities and it aims at understanding and interpreting the phenomena, while the soft applied field deals with functional knowledge with the aim of enhancing and improving professional practices with protocols and procedures. They also emphasize that there may be significant differences among the disciplines located in the same territory, and the different branches of the single discipline may belong to different territories.

By following their anthropological framework, Becher and Trowler (2001) claims that the academic tribes have their own traditions with heroes, tabus and rituals, as well as their own ways to control, punish, and reward their members.

Furthermore, Clark (1983a) divides the specialization of faculty effort into four groupings of disciplines: the humanities, the social sciences, the biological sciences, and the physical sciences and mathematics; and onto various professions: art, architecture, management, teacher education, music, law, social work, agricultural science, etc. It is also divided into separate departments in the disciplines, such as history, economics, and physics.

In this division, departments are the central building blocks or operating units of universities housing a community of scholars which are responsible for teaching and research within a specialised field of knowledge (Aypay, 2003; Dial-Driver, 1993; Lockwood & Davies, 1985). Curricula, degree programs, grading practices, research initiatives, and faculty careers are shaped in the departments and it is there that the notion of shared academic governance is most developed (Hearn & Anderson, 2002). The nature of the academic work requires such a division, since academic work is rooted in the evaluation of disciplines and professions, and each of them has its own bodies of ideas, styles of inquiry, and traditions that set directions of effect. In other words, “an academic system works with materials that are increasingly specialized and numerous, knowledge-intensive and knowledge extensive, with a momentum of autonomy” (Clark, 1983a, p.16). The tasks and workers are grouped according to bundles of knowledge in such systems. Teaching and research, the basic tasks of university, are divided and connected by speciality; professors are divided in the same way (Rowland, 2002; Altbach, 1995; Clark,

1983a). In other words, tasks and workers concentrate around the many groupings of knowledge, and the knowledge specialists are the bases of this construction. Also, subjects, broad or narrow, are the most important basis of organization.

1.1.4 Universities as Cultures

In the 1980s, there was a ground swell of interest in cultural phenomena in organizations. Scholars from a variety of disciplines including anthropology, management, sociology, psychology, communication, and folklore have produced a range of theoretical and empirical studies, but this has caused to emerge a literature that seems theoretically unintegrated partly because of the epistemological, methodological, and political orientations that distinguish these disciplines (Alvesson, 1993; Martin, 1992).

Although "organizational culture is as old as purposive human systems themselves" (Lundberg, 1996), the conceptualization and study of this phenomena is relatively recent. At present, there is an enormous variation in the definitions of the term and in its use, but the variation in its use is especially noticable in organizational culture studies, perhaps because these studies varies substantially in terms of depth and purpose (Alvesson & Billing, 1997). Also, this may be because the research orientations of organizational culture researchers have been ranged from the positivistic to the interpretive and post-modernist (Alvesson, 1993, p.1). In sum, the concept of culture has very different definitions which may be made objects of study, such as the pattern of shared cognition, beliefs, values, ideologies, norms, values, meanings, symbols, emotions, structures, behavior patterns, practices, etc.

Although current discussions of organizational culture reflect a context of conceptual chaos and considerable disagreement, the following definitions provide a sampling of these varied definitions:

> The phenomenon of joint reality construction that allows people to see and comprehend particular events, actions, objects, utterances,

> and whole situation – including one's behavior- in an acceptable way that is sensible and meaningful (Lundberg, 1996, p.12).
>
> A pattern of basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration- that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems (Schein, 1996, p. 9).
>
> The shared pattern of meanings that holds a group together (Peterson & Spencer, 1993, p. 346).
>
> A set of processes that binds together members of an organization based upon the shared and relatively enduring pattern of basing values, beliefs, and assumptions in an organization (Lawson & Ventriss, 1992, p. 206).
>
> Sets of commonly held cognitions that are held with some emotional investment and integrated into a logical system or cognitive map that contains about descriptions, prescriptions, and causes. They are habitually used and influence perception, thinking, feeling and action (Sackman, 1991, p.34).
>
> It's the way we do things around here (Deal & Kennedy, 1983, p.13).

Each of these definitions differ in their emphasis on various elements, such as shared meanings and common frame of reference, patterns of behaviors, basic assumptions, internal integration (Lund, 2003; Lundberg, 1996; Schein, 1996; Zamanou & Glaser, 1994; Peterson & Spencer, 1993; Smircich, 1983). However, it is generally agreed that culture represents an "amorphous glue" that bonds together diverse organizational elements into a holistic, distinctive, embedded, and enduring institutional identity or meaning for its members (Kuh & Witt, 2000; Peterson & Spencer, 1993, p. 345; Tierney, 1992).

In a simple and short way, culture is defined as social or normative glue based on shared values and beliefs that hold organizations together (Smircich, 1983; Kuh & Witt, 2000). Kuh and Witt (2000) claim that culture serves four general purposes: "*(1) it gives a sense of identity, (2) it helps to become as entity, such as the college.*

or peer group, other than self, (3) it enhances a group's social system, and (4) it is a sense making device that guides and shapes behavior" (p. 161).

Although the conceptual confusion and lack of a well-developed framework for understanding organizational culture and the major interest and research activity related to organizational culture has occurred outside of higher education institutions, interest within is also expending (Valimaa, 1998; Peterson & Spencer, 1993; Tierney, 1988). However, the distinctive nature and unique characteristics of higher education institutions and also complex and elusive nature of the concept of organizational culture limit to study them comprehensively and comparatively.

In spite of these limitations, Turner et al. (2002) state that the use of concepts related with organizational culture and perspectives has become increasingly popular as a means of describing various issues and concerns in higher education.

Kuh and Witt (2000) define culture in higher education as;

> "The collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meanings of events and actions on and off campus" (p. 162).

From the cultural perspective, the university does not form one-voiced homogeneous whole but a heterogonous entity with many different small parts. Kuh and Witt (2000) claim that universities are not monolithic entities. Subgroups within them have their own artifacts and values, which differ from the host's institutional culture.

In a similar way, Trowler and Knight (2000) propose that researchers into years of compulsory schooling have increasingly moved away from the idea that the school is a homogeneous organization and they are now looking at activity systems (notably departments) and at different cultures, structures and practices that are identified with differential effectiveness. The diversity and dynamism of a university's cultural configuration drives from smaller units referring activity

systems within it. These smaller units are the “cultural powerhouses” of university life, places where culture is both enacted and constructed and where personal identity coalesces, is shaped and reshaped (Trowler & Knight, 2000, pp. 30)

Similarly, Alvesson (1993) claims that universities consist of multiple configurations which are dynamic in character and the lived reality in one department quite different from that in another. Research on the internal life of the university has shown that disciplines in a university differ from each other both cognitively and socially. Ylijoki (2000) states that “disciplines have their own traditions and categories of thought which provide the members of the field with shared concepts of theories, methods, techniques and problems” (pp. 339). Besides the common cognitive basis, disciplines have their own social and cultural characteristics: norms, values, modes of interaction, life-style, pedagogical and ethical codes, etc. (Hearn & Anderson, 2002; Trowler & Knight, 2000; Ylijoki, 2000; Becher, 1994; Huber, 1992; Moses, 1990; Clark, 1983a; Biglan, 1973).

Birnbaum (1988) states that academic disciplines have varying cultures having the potential to differentiate campuses. The reasons of cultural differences among academic disciplines are differences in their research techniques and methodologies, common vocabularies, membership in learned societies, membership requirements, codes of ethics, and similar substantive and symbolic perspectives.

In a similar way, Toma (1997) states that scholars work within several cultures, including those defined by the discipline, institution, profession and society. He claims that with rise of new paradigms, scholars working in the same university departments increasingly find themselves grounded within different intellectual traditions and distinct academic cultures. He also states that disciplines producing and embodying a culture determine the substantive knowledge with which how scholars work, how they organize that knowledge, how they may draw on other disciplines and the language and symbols they use.

Bergquist (1992) claims that collegiate institutions are in the business of conveying and providing meaning both to their students, faculty and administration and society as whole. He claims that faculty do not exist within a uniform culture, even within the single campus professors differ in the cultural millieux to which they attach themselves, and any one professor may shift among these milieux through the course of an institutional culture. He divides intricate faculty worlds into four distinct cultures, each with its own history, perspectives and values. He identifies them as collegial, managerial, developmental, and negotiating. The collegial culture emphasizes discipline-based scholarship and research, professorial autonomy, charismatic peer leadership, and consensual-political faculty governance, while managerial culture focuses on educational goals and outcomes, organizational efficiency, accountability, and administrative leadership. On the other hand, the developmental culture have a managerial attempt to improve teaching and learning, enhance personal and organizational dynamics, and strengthen institutional mission, though “from a perspective compatible with faculty in the collegial culture” (p.15). The last is negotiating culture concerning with equity and egalitarianism in faculty life. Bergquist (1992) believes that most colleges and universities, most faculty and administration exemplify one of these four cultures, but the other three cultures are always present and interact with the dominant culture, and these four cultures may arise in response to each other. For example, the weaknesses of the collegial culture may give raise to the corrective efforts to the managerial culture.

Moreover, the existence of a cause and effect relationship between culture and communication has been questioned with the main question of "Does culture create communication or does communication build culture?" (Kowalski, 2000, p. 2). In literature, especially among communication scholars, there is an agreement on the existence of a reciprocal relationship between culture and communication. In this respect, Gudykunst (1997) stated that individuals are socialized in a culture influencing the way that communicates, and the way that individuals communicate can change the culture they share over time. In addition, Kowalski (2000) claims that cultures are communicative creations, and he adds cultures affect

communication, but communication is central to building, maintaining and changing culture.

Also, cultures emerge and are sustained by the communication processes among the all employees, not just the conscious persuasive strategies of upper management as frequently stated in the culture literature. It can be said that cultures do not exist separately from the people communicating each other. In addition, whether strong or weak, culture has a powerful influence throughout an organization. It affects practically everything from who gets promoted and what decisions are made to how employees dress and what sports they play. Because of this impact, culture is also has a major effect on the success of the organization. Although the existence of variations in the definition of this term, there is an obvious reference to communication. Communication can be defined as a process through which organizational members express their collective inclination to coordinate beliefs, behaviors, and attitudes in organizations, and it also gives meaning to work and forges perceptions of reality (Kowalski, 2000). So, communication process is unique to each organization, because each organization has distinctive cultures. Thus, it may be proposed that universities as organizations have unique communication processes that distinguish them from other organizations.

1.2 Purpose of the Study

With this background, this study has two main purposes. The first is to assess the relationships among factors that negatively affecting communication process in Turkish state universities. Second is to test a hypothetical model drawn from a qualitative case study done by Gizir (1999).

The proposed model in the present study was labeled as Hypothetical Model of the Poor Communication among Faculty Members. This model was developed based on a qualitative study done by Gizir (1999) that is explained in detail in the following chapter. As displayed in Figure 2.1 in Chapter 2, in Hypothetical Model of the Poor Communication among Faculty Members, a set of direct and indirect

relationships among factors negatively affecting communication process in higher education institutions were estimated such as: *the lack of motivation*, *individualism*[1], *inadequate exchange of scientific knowledge*, *introvert characteristic of the department*, *administrative issues*, *departmental atmosphere*, *lack of common goals*, *alliances*, *and scientific discourse*[2], and *poor communication*.

So, the major purpose of the present study is to predict a structural model best explaining the relationships between poor communication and some factors affecting it in an academic context. Specifically, the present study aims to answers the following two research questions:

1. What is the general structural model explaining the relationships between a set of latent variables and poor communication among faculty members in Turkish state universities?

2. How well does the model explain the poor communication among faculty members with respect to the relationships with nine factors?

1.3 Significance of the Study

Financial cutbacks, decreasing public spending, new accountability measures, enrollment uncertainties, calls for broader range of services to society, economic recession, and confusion about academic goals, which are among the challenges facing higher education institutions, have combined to encourage the reorganization of these institutions in the world (Jacob & Hellström, 2003; Altbach, 1995). The restructuring of higher education has generated various critical debates on almost all aspects of universities, such as collegial tradition, departmental structure, academic culture, knowledge, ethics and roles of academics, etc. (Jacob & Hellström, 2003; Marginson, 2000; Edwards, 1999; Adams, 1998; Tapper & Palfreyman, 1998; Altbach, 1995; Kerr, 1994; Barnett, 1993).

[1] Instead of "high individualism" which was used as the name of one of the factors in Gizir's study (1999), "individualism" was used in the present study because it was seen more suitable to explain the phenomena.
[2] Instead of "criticism" which was used as the name of one of the factors in Gizir's study (1999), "scientific discourse" was used in the present study because with the above reason.

The effect and acceleration of change in the higher education varied in nature, provenance and intensity, but all impact on academic staff and their perception about their worklife and workplace in which communication takes place. Thus, assessing factors influencing communication process in higher education institutions may give valuable information to administrators who intent to develop university reform agenda in Turkey and abroad.

In addition, because of the central position of communication in organizational action, control, coordination and survival of organizations, communication fits well into the overall scheme of the organization and it is seen as the lifeblood of every organization. Communication also has an important role by increasing agreement and similarity in ideas, norms, values, behaviors, and goals. Actually, this study may reveal important aspects of academic culture and values in universities. Communication seems to mirror deeper aspects of the university organizations' culture dimensions.

Quality in research, teaching and service which are the basic tasks of a university, mainly related with the quality in administrative processes, academic staff and related aspects of their worklife and workplace, technical infrastructure, etc. Assessing problems and the causes of these problems regarding administrative processes, academic staff and related aspects of their worklife and workplace, technical infrastructure, and any attempt to solve these problems and to improve them contribute to increse in quality of basic tasks of a university. So, assessing factors negatively influencing communication in academic process may provide additional evidence regarding how communication process in academic context are made more effective and how quality is increased in universities related with the communication process. It may be said that such attempts gain more importance in Turkey especially when taken the increase in number of public and private universities in various cities of the country into consideration.

In addition, assessing factors negatively affecting communication process and their relationships among them in the academic context may make a contribution to

propose solutions to the communication problems experienced in an academic context.

Moreover, the literature review suggests that there is a limited number of studies on communication process in academic context in Turkey and abroad. In this respect, despite its limitations, this study intends to make a contribution to understand the complex nature of communication process in universities as complex organizations and also to the related literature. This final point makes the study significantly contribute to the theory and literature in higher education in the sense that it may lead to full-fledged theory on communication in higher education context. By doing this, the study will also be an examplary one in terms of combining both qualitative and quantitative designs in sequence by utilizing their theoretical and conceptual strengths.

1.4 Definitions of the Terms

The terms that are commonly used in this study can be defined as follows:

University (or higher educational institution) refers to an enterprise realizing first of all specialization of faculty effort in instruction and research by particular fields of knowledge (Clark, 1983a).

Department refers to the the central building blocks or operating units of universities housing a community of scholars which are responsible for teaching, research, and service within a specialised field of knowledge (Dial-Driver, 1993).

Communication refers to a transactional, symbolic process which allows people to relate to and manage their environments by (1) establishing human contact, (2) exchanging information, (3) reinforcing the attitudes and behaviors of others, and (4) changing the attitudes and behaviors of others (Book et al., 1980).

Poor Communication refers to inadequate message sending and receiving behaviors of superiors, subordinates, and peers with regard to task, personal, and innovating topics (Rogers, 1987).

Culture (in higher education) was identified as "the collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meanings of events and actions on and off campus" (Kuh & Witt, 2000, p. 162).

Lack of motivation refers to lack of an internal need that impels individuals towards action (Meyer & Evans, 2003).

Individualism is defined as a situation in which people try to promoto their self-interest, personal autonomy, privacy, self-realization, individual initiative, independence, individual decision making, an understanding personal identity as sum of attributes of the individual, and less concern about the needs and interests of others (Darwish & Huber, 2003).

Inadequate exchange of scientific knowledge refers to faculty members not sharing adequately scientific knowledge and not having any information about scientific activities and scientific contribution of their colleagues (Gizir, 1999).

Introvert characteristic of the department refers to a characteristic of an academic department in which faculty members have a poor or inadequate communication with other faculty members from other departments in the university with regard to scientific, formal, and informal message exchange (Gizir, 1999).

Administrative issues refer to the issues, which affect negatively communication process, caused by administrative and organizational structure, administrative processes, and the administrators (Gizir, 1999).

Departmental atmosphere (or climate) can be defined as "the current common patterns of important dimensions of organizational life or its members' perceptions of and attitudes toward those dimensions" (Peterson & Spencer, 2000, p. 173). The dimensions of organizational life include members' loyalty and commitment, their morale and satisfaction, their quality of effort or involvement, and their sense of belonging (Peterson & Spencer, 2000).

Lack of common goals refers to not sharing or having the same institutional goals for which organizations established or created to achieve (Gizir, 1999).

Alliance refers to a kind of grouping formed by people holding the same or similar attitudes, interests, beliefs, or having the same or similar age, gender, tenure, and title (Gizir, 1999).

Scientific Discourse refers to a mean or a medium giving opportunity for faculty members to exchange scientific knowledge and experiences in order to improve their scientific works and other scientific activities (Gizir, 1999).

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, the research literature deemed by the author to the most relevant to the purposes of this study will be summarized. Firstly, description of communication, its importance on the survival of organizations, and perspectives on organizational communication, namely Mechanistic, Psychological, Interpretive-Symbolic, and System-Interaction Perspective will be presented. Next, the nature of communication process in universities as organizations will be explained. After this explanation, higher education system in Turkey and research studies on communication process in Turkish higher education institutions will be presented. Then, a model related with communication in academic context and its constructs will be stated.

2.1 Communication

An organization can be defined as some number of individuals who desire to achieve some set of goals, recognize that goal achievement is best attained by cooperation rather than independent action, gather whatever materials and information, and return the modified materials and information to the environment with the intent of obtaining sufficient rewards (Book et all., 1980). This definition of organization emphasizes that communication process seems as the focal point of organizational action and central to the control, coordination, and survival of organizations (Felts, 1992).

As an organizational activity, organizational communication is so vital, but so complex process. Communication theorists have considered this process

structurally, functionally, and in terms of intent and they have defined communication with reference to source, channel, receiver, code, and effect (Gizir, 1999). Every communicative function probably has been made the focus of some definition at some time.

Lewis (1975, p. 5) defines communication as "the sharing of messages, ideas, or attitudes resulting in a degree of understanding between a sender and receiver". He also explains that sharing is a two-way process, a taking and a giving between a sender and a receiver, so that interpersonal relations of individuals, their attitudes and feelings, enhance understanding.

Also, Book et al. (1980) define communication as a transactional, symbolic process which allows people to relate to and manage their environments by (1) establishing human contact, (2) exchanging information, (3) reinforcing the attitudes and behaviors of others, and (4) changing the attitudes and behaviors of others.

Moreover, Johnson (1981) argues that organizing of organizations can be examined as communication, and defines communication at a simple level as "the process of organizing". He also defines it as "the process of constructing meanings and expectations through the exchange of message" (p. 4). Furthermore, Gibson and Hodgetts (1986, p. 4) describe communication as "the transfer of meaning between sender and receiver". Other definitions of communication in the related literature are analogous to Gibson and Hodgett's definition. It was described as the exchange of information between sender and receiver, the perception of meaning between the individuals involved. Analysis of this exchange reveals that communication is a two way process consisting of consequently linked elements (Kreitner & Kinicki, 1995; Moorhead & Griffin, 1995). As can be seen from the definitions, "process" is common almost in all definitions. The communication process includes a message moving from the creation stage to the feedback stage. Specifically, the key components of the communication process are sender (source), encoding, the message, transmission (channel or selecting a medium), decoding, receiver, feedback, noise (Moorhead & Griffin, 1995).

2.1.1 Perspectives on Organizational Communication

The perspectives that researchers use to view human communication directs inevitably the questions organizational communication researchers choose to explore. Krone, Jablin, and Putnam (1989) adopted various perspectives in the form of (1) mechanistic, (2) psychological, (3) interpretive-symbolic, and (4) systems-interaction perspectives. Although the four perspectives draw from different assumptions about communication, emphasizes different concepts and relationships as being critical to the communication process, and potentially made unique contributions to an overall understanding of communication in organizations, they are not mutually exclusive (Gizir, 2002). The great quantity of theoretical and conceptual scholarship in organizational communication reflects combinations of the perspectives, especially the merger of the mechanistic and psychological approaches (Fulk & Boyd, 1991). It is also pointed out that the four perspectives are not arranged in a linear progression, that is, the four perspectives are not built on each other in increasing complexity. The locus of communication differs across the four perspectives and determines which elements of the communication process receive primary emphasis for a given perspective. That is, precise definitions, emphasis, and relationship among components of communication process differ across perspectives.

Although *the mechanistic perspective* emphasizes the channels that connect communicators, *the psychological perspective* deals with how characteristics of individuals affect their communication. Furthermore, from the *interpretive perspective*, organizational communication is composed of patterns of coordinated behaviors that have the capacity to create, maintain, and dissolve organizations. This perspective also emphasizes how cultural factors affect the interpretive process, since the meaning of various symbols is affected by context. Smircich and Calas (1989) define culture from interpretive perspective as “the process through which social action and interaction become constructed and reconstructed into an organizational reality” (p. 234). Moreover, some researchers studying on cultural variability in communication states that individuals are socialized in a culture by the way they communicate, and this way can change the culture they share over

time (Gudykunst, 1997). Hall (1959) also equated culture with communication, and he believes that "culture is communication and communication is culture" (p. 169: as cited in Gudykunst, 1997). The last perspective is *the systems-interaction perspective* concentrating on external behaviors as the fundamental units of analysis, unlike the interpretive-symbolic perspective**.**

2.2 Communication and University

Communication can be defined as a process through which organizational members express their collective inclination to coordinate beliefs, behaviors, and attitudes in organizations, and it also gives meaning to work and forges perceptions of reality (Kowalski, 2000). It is a transactional symbolic process that allows people to relate to and manage their environments by establishing human contact, exchanging information, reinforcing the attitudes and behaviors of others and changing the attitudes and behaviors of others (Book et al., 1980). Also, communication requires a common purpose and it sets its objectives as the realization of a common understanding of that goal which an enterprise exist to achieve. So, it can be said that communication is the process most central to the success or failure an organization. Hunt et al. (2000) state that as with most organization, education establishments engage a wide variety of communication to realize the basic tasks - teaching, research, and service.

A result of the above discussions, when compared with business organizations, university organizations are different with respect to their structure of authority, mission, performance appraisals, and type of specialization regarding work activities, employees, and hierarchy line (Gizir & Simsek, in press; Baldridge et al., 2000; Birnbaum, 1988; Blau, 1973; Besse, 1973). These differences make communication process in an academic context more complex. For instance, the structure of university may facilitate or impede communication. Structure impedes communication when it is not clearly related to the technological process of higher education and to the desired output of higher education. Also, structure hampers communication when it is unclearly defined in terms of function to be performed by the differentiated parts of the enterprise. However, structures can facilitate

communication when it is clearly related to the technology and outputs of higher education, and when it is clearly defined. But communication also requires participation of all elements of the academic community, such as faculty, students, alumni, administrators, staff, and others. It is a shocking matter that there are so many participants or elements in a university as mentioned above. So, it seems that more work to be done in a university to arrive at communication of a shared purpose.

Moreover, universities are labor intensive, that is, the staff of a higher education institution is a significant component having major role to play in achieving the objectives of the institution (Rowley, 1996). Specifically, among the participants or elements of a university, faculty members having special status as part of an academic department, and of faculty cannot be passive recipients of management communication. Faculty members are the vital part of the entire university communication network. Because the academic departments are more than basic operating unit of a university, but they are also major educational resource of university. Universities are more than structures of coordination for the academic departments. They are also agencies of educational planning and development. Moreover, the faculty or faculties of university are more than an instrument of personnel management. They are also the most important part of the technological process of higher education.

Furthermore, a university is a complicated organism. It is not easy to establish its communication network, to operate its information retrieval and processing unit, to stimulate and execute action. However, the major test of any university is the effectiveness of its system of communication. If there is a shared understanding of shared purpose in a particular university, it can be said about university that it is achieving communication as part of a dynamic, continuing operation. But, communication also never ends until an enterprise itself stops to exist, until life itself is terminated.

Millett (1968) expresses the importance of communication for university as follows:

> "Communication is life, endeavor, quest. No university has any reality without it. Communication is a pearl of creation, and an act of artistry, a product of skill. No university can perform its mission without it. Communication is prelude to action, guide post to perfectibility. Without it, no university is a university in its service to civilisation" (p. 161).

Although the awareness of the importance of communication process in higher education institutions, and there is a vast range of literature in the fields of communication and education, there is a dearth of research which specifically investigates communication as related to higher education institutions.

Hunt et al. (2000), for example, tried to identify the strengths and weaknesses of communication practices of education managers at work within a specified time. Results revealed that the organization of meetings, the transmission of information and the use of appropriate channels were problematic between managers and staff. Specifically, the main weakness were that staff wanted to more able to express their opinion, a lack of time, large school size and wrong location, while the major strengths of communication in the workplace was meetings. As a result of study, the researchers mentioned that good communication in the work place results in mutual understanding, harmony and action, but poor communication only waste of time and resources, forestalls goal accomplishments and sours relationships.

In addition, Thornhill et al. (1996) examine the role of employee communication and involvement in achieving employee commitment, in order to promote high quality of provision in British Higher Education. Results indicated that communication was a key element in organizational strategies to promote employee involvement, which is indeed designed to lead to commitment and quality. Also, it was shown that there were significant relationships between employees' perceptions about communication and their attitudes towards the institution. The researchers concluded that communication needed to establish credibility and to be practised consistently if it was to become effective, and credibility developed from the integration between communication strategies and practices and other organizational strategies, as well as from perceptions about

managerial behaviours in general. In addition, it was proposed that commitment to quality will only be obtained if there is a greater realization of what commitment is and how it may be secured, and one of the requirements to obtain commitment may well be related to the attainment of effective systems of employee communication.

By claiming that Computer Mediated Communication (CMC) charaterized by informality, convenience, immunity to temporal and geographic differences, and rapid transmission might be an effective communication medium to supplement or substitute for face-to-face communication among scholars, Cohen (1996) investigated whether faculty who use CMC achieve greater scholarly productivity as measured by publications and a higher incidence in the following prestige factors: receipt of awards; service on a regional or national committee of a professional organization; service on an editorial board of a refereed journal; service as a principal investigator on an externally funded project; or performance of other research on an externally funded project. Results revealed that there was a significant positive correlation between the frequency of use of CMC and improved scholarly productivity; more timely access to information; access to new tools for research; access to new kinds of information; enhanced contact with faculty at other institutions; and better ability to collaborate with faculty at other institutions.

Moreover**,** Straus and McGrath (1994) compared the use of computer-mediated and face-to-face media for three types of task process frequently encountered by groups in organizations: generating ideas, solving problems with corrects answers, and making decisions. Participants were 240 undergraduate students enrolled in introductory courses at the University of Illinois at Urbana-Champaign. Results showed that few differences were found between computer-mediated and face-to-face groups in the quality of the work completed, but large differences were observed in productivity favouring face-to-face groups. Also, results supported that computer-mediated communication were viewed as less suitable for coordination tasks and also computer-mediated groups were substantially less productive and respond much more negatively to the medium and to the task than did face-to-face groups.

Furthermore, Trevino, Lengel and Daft (1987) presented symbolic interactionism as a theoretical approach for understanding media choice processes during managerial communications. Structured open-ended interviews about communication incidents involving face-to-face, telephone, electronic mail, and written media were conducted with 65 managers in 11 organizations. One of the organizations was a large university and one was a medium- sized university and the others were medium- sized and large businesses organizations. Managers were asked why they chose a particular medium. As a result of the content analysis, it was found that three factors influenced managers' media choices: (a) ambiguity of the message content and richness of the communication medium, (b) symbolic cues provided by the medium and (c) situational determinants such as time and distance.

Findings supported the idea that ambiguous communications would be processed through rich media such as face-to-face and unambiguous communications through written or electronic media. Reasons for face-to-face communication included nonroutine messages, the need for auxiliary cues, the ability for discussion, and desire to express emotions. Moreover, reasons such as immediate feedback and the ability to persuade others were important for both face-to-face and telephone communications. Furthermore, the reasons provided for electronic mail were simple routine message, one-way messages that require no feedback, constrains of distance and time pressure, and the reasons for using written media include the opportunity for backup data, the need for the process of large amounts of well-defined data, and the need to send a well-thought-out message. Moreover, both face-to-face and telephone communications symbolized urgency, personal concern, and deference to the receiver who preferred that medium. However, written media were reported to show authority, get attention, make strong impression, be official, and be legitimate.

In addition, Sims and Manz (1984) initiated two specific experiments in order to develop an observational approach to the measurement of leader behavior. Experiment 1 was a pilot experiment designed to explore the feasibility of observational methodology. Twenty-eight male subjects who assumed the role of subordinate were recruited from class at a state university. Experiment 2 followed

with a more extensive leadership situation, and the observational measurement system was extended and improved. In the second experiment, ten full-time Master's in Business Administration students participated performing the role of leader and were subjected to laboratory manipulations of subordinate performance. The result of experiment 1 was the success with the preliminary efforts to measure leader behavior with observational methods. Moreover, results of experiment 2 indicated that performance of subordinate did influence leader verbal behavior. When performance was high, leader's positive reward behavior was also high. However, when subordinate performance was low, leader punitive behavior, quantitative goal behavior, and task information request were high.

Dugan (1989) focused on the relationship between initial attributions regarding poor performance, the nature of relational communication patterns during performance feedback sessions, and post-interaction changes in attributions, performance assessments, and salary decisions. In this study, patterns of performance feedback communication were studied using laboratory simulations with subjects of 52 M.B.A. students enrolled in a graduate level of organizational behavior course. The results indicated that a consistent relational communication pattern was associated with feedback sessions on poor performance. However, managers' initial attributions of effort or ability as the reason for subordinates' poor performance influenced how they defined their role within the pattern and thereby controlled the flow of interaction. The nature of the control patterns dyad members used was related to the degree of change in initial attributions, salary decisions, and performance assessments.

In addition, Tjosvold and McNeilly (1988) hypothesized that organizational members from various departments who believe their goals are cooperative, rather than competitive or independent, communicate their diverse viewpoints more openly and constructively and are more likely to innovate in their organization. Employees of a postsecondary educational institution were interviewed to obtain specific incidents of when they tried to solve problems innovatively. The results indicate that cooperative goals were strongly related to skilled communication in which people expressed their views openly, considered the opinions of others, and

combined ideas. These communication patterns in turn were related to creative, high quality solutions, efficient use of resources, positive feeling, and confidence in future collaboration. However, on the dimensions of communication skills and an orientation to innovation, individuals with cooperative goals may be cohesive but not innovative. Moreover, competitive goals were related to avoid discussing one's views openly. Individuals with competitive goals predominantly could not compromise and integrate their views to find a solution. Finally, independence was negatively associated with expectations, communication, feelings, progress, creativity and confidence.

2.3 Higher Education in Turkey

Higher education has a long history in Turkey, but the history of modern Turkish higher education started with the War of Independence and proclamation of the Republic of Turkey. After the proclamation of the Republic of Turkey, the higher education institutions established in cities in Anatolia other than Istanbul and gained a democratic and modern feature. Unlike western universities evolved from medieval European universities, Turkish higher education institutions did not evolve from the madrasas which can be viewed as higher education institutions of the Ottoman Empire (Küskü, 2003; Kondakçı, 2000). Turkish higher education institutions excluding today's Istanbul University were all established in the Republican period to replace the madrasas, which were all closed down immediately after the proclamation of the Republic.

After the foundation of the Republic, important developments have been made with respect to quality and quantity. Küskü (2003) stated that in order to live up to the fully globalized world, the escalation of higher education in terms of both quality and quantity has been adopted as the primary goal, and the plans and programs have always reflected this perception.

Specifically, until the Law 2252 legislated in the parliament by the government in1933, there were no attempts to reform Higher Education System (HES) of Turkey. With this law, initiations to reform in organizational and administrative

structure, teaching, research, academic programs, and operations of HES were started, and then in 1946 new legislation brought the autonomy in governance to the universities (Gürüz et al., 1994). The law legislated in 1973 enabled the establishment of the Council of Higher Education (CHE) which was sought to coordinate, control and plan higher education system at national level (Korkut, 2001; Şimşek, 1999). But it was perceived a threat to academic freedom, and so CHE was not effective in fulfilling its goals. Because of the existence of various kinds of higher education institutions with different admission criteria, different goals, duration and status, this period was accepted as the period of ambiguity and unregulated growth, and thus HES was unable to fulfill its role of educating people.

In the 1980s, besides the global and financial developments in all over the world, Turkey experienced a unique development. In 12 September 1982, the military forces tookover the governance of the state and rearranged every institutions in Turkey. All higher education institutions were revitalized including CHE. CHE assigned the role of regulating and coordinating the HES, and graduate schools and department-based academic organization was brought by the law. The effects of this new arrangements appeared in one decade: the enrollment rate increased from 5.9% to 9.6%; the number of teaching staff increased 65%; and the decreased in the number of student per teaching staff and increased the graduation rate (Şimşek, 1999).

In addition, in order to keep up with demographic pressure and to meet the manpower needs of a growing market economy, higher education went into a serious revision process in the 1990s, such as the establishments of numerous universities. The number of universities has reached 76, comprising of 53 state in various cities throughout the country and 23 private universities mostly in big cities (CHE, 2004a).

Moreover, in Turkey, both faculty members and administrative employees have civil servant status. Full professors and associate professors have tenure. The number of academic and administrative employees' posts allocated to each state

university is determined by acts of Parliament, and staff appointments at all level are made exclusively by the universities themselves (Küskü, 2003).

Although there seems to be an increase in quality and quantity, there have been some kinds of problems regarding higher education (Aypay, 2003; Şimşek, 1999). Şimşek (1999) categorized the main issues for HES in Turkey as the following:

- The pressure for further expansion and inefficient distribution of enrollment in various kinds of post secondary institutions,
- The demand for qualified teaching staff,
- The shrinking public resources for higher education funding and the need to reform a public funding scheme of higher education,
- Organizational and management issues referring bureaucratic model and academic oligarchy,
- Quality decline in undergraduate and graduate programs, institution, teaching staff, service and educational materials.

With the awareness of expectations of society, government and other stakeholders from the higher education institutions with respect to the social, economical, technological developments in Turkey, and the awareness of the changing nature of environmental factors of higher education institutions all over the world, there is an incerase in the studies on higher education intitutions in Turkey. Hovewer, there is a considerable amount of studies on higher education institutions while there are a few studies specifically focusing on communication process in universities in Turkey.

Moreover, researchers investigating communication process in universities were generally concentrated on communication between faculty member and students in universities, such as, Silkü (2002) and Bayram (1992). One of the studies purely focusing on communication process in an academic context is Gizir's study (1999) as will be explained in detail below.

Another example is Bolat's study (1996) in which Bolat analyzed the degree of communication, as it perceived by the administrators, instructors and administrative staff in Faculty of Education at Hacettepe University. Results of the

study indicated that the degree of communication as it perceived by the administrators is higher than the degree of communication perceived by the instructors and the employees. In addition, it was found that there were some studies investigating communication as a part of the whole study and there were some studies in which communication process is one the findings.

For example, Kondakçı (2000) concentrated on communication in an academic context from the views of faculty administrators as one of the main administrative processes. Results of this study revealed that the main communication problems experienced in the faculties from the views of faculty administrators were caused by unwilling faculty members to participate in formal and informal conferences and meetings; alienation and individualization of academic staff; unskilled administrators, highly centralized structure of the faculties in the university causing only downward communication; the use of technology; physical structure of the faculties referring to the distance between the buildings; lack of interdisciplinary studies among departments; the politics of the university referring to faculty discrimination; and the nature of the faculty referring to having different disciplines. Furthermore, related with the suggestions for communication problems, Kondakçı (2000) stated that enhancement of formal and informal communication among departments, effective use of technology, using the combination of written and verbal communication to improve information richness, and decentralizing the structure to eliminate red tape in communication.

In addition, Şimşek and Aytemiz (1998) analyzed an institutional change in a large, Turkish public university, the Middle East Technical University, by using an anomaly-based change model. One of the most important findings of this study was problematic communication among students, faculty members and administrative personnel. The researchers of this study claimed that communication and coordination problem may be a reflection of CHE's bureaucratic and centralized control over universities. Also, the excessive growth in size was the cause to the transformation of the University's culture form a small, compact, closely-knit university culture into a functional-solidarity type culture creating blocks on communication and coordination in the University affairs and activities.

2.4 Towards a Model Building: "Communication in Academic Context"

While there is a vast range of literature in the fields of communication and education, there is a dearth of research which specifically investigates communication as related to higher education institutions. In addition, it can be seen in the related literature that studies on communication related to higher education institutions mainly focus on leadership and communication styles, communication relationships between leaders or managers and subordinates, media choice process during managerial communication, patterns of feedback communication with the sample of mostly undergraduate or graduate students and manager. Some of these studies were conducted by using laboratory simulations (Hunt et al., 2000; Bolat, 1996; Straus & McGrath, 1994; Trevino, Lengel & Daft 1987; Sims & Manz, 1984; Dugan, 1989; Larson, 1986).

It might be argued that each study reviewed so far focused on some limited dimensions of communication process in an academic context because of the complex nature of communication process and also complex nature of higher education institutions. However, it might be stated that Gizir's study (1999) was one of the most comprehensive studies focusing on communication process in an academic context from the perspectives of faculty members.

Gizir (1999) aimed at investigating the most common communication problems and the ways of solving these problems from the views of faculty members at the Middle East Technical University. The results indicated many factors both positively and negatively influencing communication process in an academic context. Factors enhancing communication process within and between departments were named "enablers". Enablers in an academic context were listed as follows: Interdisciplinary studies, co-teaching, co-advising, seminars, symposiums, minor-double undergraduate programs, minor-major undergraduate programs, collaborative studies, common goals, formal channels, informal atmosphere, physical environment, disciplinary culture, traditions, and social activities.

On the other hand, factors negatively influencing communication process within and between departments were named “inhibitors”. Inhibitors are listed as follows: Disciplinary culture, high individualism, inadequate exchange of scientific knowledge, lack of motivation, competition, alienation, alliances, criticism, departmental atmosphere, lack of common goals, administrative issues, methods of communication, time constraint, size of the department, age profile of faculty, only personal contact, introvert characteristic of the department, inadequate collaboration in scientific work, upper administrative staff and communication, marginalization, formal mediums, general size of the campus. Disciplinary culture, for example, seemed to be both an inhibitor and an enabler at the same time. It was explained in a way that disciplinary culture may be seen as an enabler in communication within department, whereas it may also be seen as an inhibitor in interdepartmental communication in the university context.

2.4.1 Constructs of the Model

In Gizir’s study (1999), it was pointed out that some factors were stressed more frequently than the others by the faculty members interviewed and were appeared to be more negatively influential on communication process in an academic context than the others. These factors were *lack of motivation, administrative issues, departmental atmosphere, high individualism, introvert characteristics of the department, criticism, alliances, lack of common goals, and inadequate exchange of scientific knowledge*. So, these nine factors and the relationships between them were explained in detail below.

1. Lack of Motivation

The issue of lack of motivation mainly refers to the faculty members not having much enthusiasm to conduct scientific research, to improve their intellectual qualities and to teach the students. In Gizir’s study (1999), this issue was raised by all interviewees from all departments as a factor negatively affecting work-related communication among the faculty members. Inadequate exchange of scientific knowledge, departmental atmosphere, age profile of faculty members, inbreeding,

and being together with the same people in the same place for a long time as issues affecting communication among faculty members were related with the issue of lack of motivation.

Although there have been numerous studies exploring motivation in organization behavior, only a few number on motivation research have been applied to the academic environment (Winter & Sarros, 2002; Pinto & Pulido, 1997; Kondakçı; 2000; Rowley, 1996; At-Twaijri & Al-Khursani, 1994).

As an example, Winter and Sarros (2002) focused on the perceived work environment to understand and explain an individual academic's attitudes and motivation at work in Australian universities. In this study, academics were asked to report their personal (i.e. age and gender) and professional characteristics (i.e. qualifications, position, role, discipline area); work environment perceptions (i.e. degree of role stress, nature of job characteristics, immediate supervisor's leadership style, degree of university centralization and formalization); and work attitudes (i.e. job involvement and organizational characteristics). As a result of their study, researchers pointed out that whether the academic work environment a motivating place to work or not depends on the academic's position in the university hierarchy, the nature of role demands, job characteristics and style of immediate supervisors. For example, the academic work environment is motivating when someone holds a professorial position, role demands and responsibilities are clear and manageable, the person is engaged in challenging and rewarding research and/or administrative tasks, and immediate supervisor's style is considerate and supportive. In addition, it is concluded that the academic work environment becomes demotivating when the person are a lecturer, his or her teaching role demands are overloaded and/or not recognized or rewarded, and when the person has little opportunity to influence university decision making.

In addition, review of the related literature on motivation of faculty members indicated that self-achievement, social respect (Pinto & Pulido, 1997; Rowley, 1996; At-Twaijri & Al-Khursani, 1994); length of service year in higher education, their work experience, their other work experiences, their age, their aspirations

with respect to career development and relative priorities which they attach to achievement and social factors, such as personal life and being accepted as a team member (Oshagbemi, 2000; Rowley, 1996) were some factors influencing motivation of faculty members at work. Besides aforementioned factors, internal reward, cooperative work relationships among professionals, freedom in performing work tasks, the opportunity for presenting new ideas and development, the opportunity for promotion and going higher in the organization were cited as factors influencing motivation of faculty members in their workplace (Kondakçı, 2000; At-Twaijri & Al-Khursani, 1994).

Moreover, researchers focusing on investigating motivation in higher education state that motivation of academic staff is mainly related with the job satisfaction and productivity (Johnsrud, 2002; Grbich, 1998; Johnsrud & CHEk, 1998; Lacy & Sheehan, 1997; Pinto & Pulido, 1997; Rowley, 1996; At-Twaijri & Al-Khursani; 1994).

Küskü (2003) explored the differences in satisfaction between academic and administrative employees in higher education institutions in Turkey. The results pointed out tocertain differences in factors such as "satisfaction with colleague relations", "satisfaction with collegial competition", "satisfaction with people doing other works", "professional satisfaction", "work environment satisfaction", and "salary satisfaction" with respect to the satisfaction of academic and administrative employees. Results also showed that "satisfaction with colleague relations" was relatively low for academic staff to that of administrative staff, while the "satisfaction in collegial competition" is rather high for academicians compared to that of administrative staff. In addition, it was stated that although the academic staff's "satisfaction with qualifications of administrative staff" was not very high, the administrative staff are highly pleased with the qualities of the academic personnel. Also, the academic staff's "professional satisfaction level" was higher than that of the administrative staff's.

Lacy and Sheehan (1997) claimed that recognition, achievement and responsibility were 'motivational factors' and significant elements in job satisfaction. They also stated that these motivational factors can cause satisfaction or no satisfaction.

Results of related literature revealed that faculty members have a high degree of satisfaction with their intellectual life, their courses, and their relationships with their colleagues and they love what they do, while lack of confidence on administrators, poor communication between faculty and administration, lack of co-ordination in management, excessive bureaucracy and indifferent, incompetent and inefficient management and the autocratic nature of administration were causes of their dissatisfaction (Tu et al, 2005; Johnsrud, 2002; Oshagbemi, 2001; Johnsrud & CHEk, 1998; Lacy & Sheenan, 1997). Also, the results of this study done by Lacy and Sheenan (1997) revealed that only of the 39% of academic staff believed that top-level administrators are providing competent leadership.

Such factors related to the level of job satisfaction were found in the related literature as: university atmosphere, research, teaching, faculty-administration relationship, governance, staff evaluation and appraisals, salary, total work hours, perceived support of colleagues, the relationship with one's department, the work context, institutional support, clarity of the institutional mission, faculty morale and academics' perception of climate or atmosphere, research success in terms of publications, academic freedom, opportunities to write and publish, collaboration with colleagues, opportunities to attend conferences, research recognition, research challenges, success in research rating, finding out new things in own research area, attending interesting seminars (Tu et al., 2005; Küskü, 2003; Johnsrud, 2002; Oshagbemi, 2001, 2000a, 2000b, 1999, 1997; Johnsrud & CHEk, 1998; Grbich, 1998; Lacy & Sheenan, 1997; Rowley, 1996). In addition to these productivity or intent to leave are other factors influencing job satisfaction, and personal variables, such as research self-competence, are a strong predictor of research productivity. All these are likely to mitigate stress (Johnsrud, 2002). Furthermore, self-judged competence, preferred effort given to the role, and perceived institutional expectation of effort given to the role are presented as strongest predictors of faculty productivity (Johnsrud & CHEk, 1998).

In the related literature on research productivity, the emphasis was on the individual responsibility for performance concentrating on a sense of enthusiasm for research; getting started in publishing; the capacity to work autonomously, motivation to attend continuing education workshops; using sabbaticals to renew ideas; using computer mediated communication (Grbich, 1998; Cohen, 1996). It is also stated that the productivity is enhanced when goals of the individual, the department, and the institution reinforce each other.

Intuitional size, affluence, resources, prestige, student quality, time allocation, praise and rewards were presented as environmental factors affecting research productivity (Grbich, 1998).

2. Administrative Issues

Administrative issues were mentioned as another factor influencing communication process in an academic context in Gizir's study (1999). In this study, it was proposed that lack of sound descriptions regarding the organizational structure and inadequate description of line of authority were the main causes of administrative issues. Specifically, lack of formal channels or problematic nature of flow of formal information, information overload, work load, double standards in promotion, lack of an informal/social-gathering place and only upward communication referring to message filtering by the administrators were stated as administrative issues in this study. Related with the flow of formal messages, Gizir presented the quotation of one faculty member interviewed as such that,

> There are some problems about flow of formal messages; I think that there is space on the administrative line. The department is too crowded and one chairman is not enough to manage this department, each field of study must have a chairman as did in the past (p. 94).

Furthermore, lack of formal channels or mediums between departments and only personal contact for both administrative and scientific exchange with other department within the faculty and the university was also stated as an administrative issue.

In addition, the researcher mentioned that some faculty members complained about the information overload caused by a huge amount of irrelevant information sent by the administrators. Gizir (1999) related this issue with the expectations of faculty members from administrators to select irrelevant information, and then send only the relevant ones to faculty members.

Furthermore, double standard in promotion or in getting academic titles in the department was raised as an issue by the interviewees in the study. Related with this issue, faculty members interviewed mentioned that the rules are differently used for different individuals especially in getting academic titles, and they believed that this was caused by the administrators.

In addition, Gizir mentioned about the complaints of faculty members interviewed about lack of a place for an informal/social-gathering where they can get a chance to communicate with each other about various topics in an informal setting. She claimed that these complaints reflected some expectations of faculty members from the administrators to create such informal communication mediums.

In addition, it is also stated in this study that almost all interviewees complained about their work schedules being too loaded, and they believed that their overloaded teaching programs were caused by the number of students in the department, and they saw work load as a reason of inadequate exchange of scientific knowledge and communication in the department. The researcher stated that “it seems that they charge the administrators for allowing or creating this unequal student/faculty ratio which creates teaching overload” (p.124).

Moreover, faculty members had complaints about only upward communication, which is related with administrators filtering some messages, and the administrators not interested in works done by faculty members, and administrators not being aware of communication problems within and between the departments, and not interfering before problems emerge. Gizir also proposed that some administrative issues, such as double standards, lack of formal and informal

mediums to improve communication among faculty members can lead to an atmosphere in which faculty members are not happy with.

Furthermore, the results of the study done by Kondakçı (2000) supported this finding. In this study, Kondakçı investigated the functioning, problems, and solution strategies for administrative process from the views of faculty administrators at the Middle East Technical University. In this study, it was stated that administrators complained about problematic nature of upward and downward communication caused by the structure of the faculties. The administrators interviewed in this study claimed that the highly centralized structure damages the communication process. Also, it was stated that administrative skills of administrators were another factor negatively influencing communication process in the faculties. Kondakçı also claimed that faculty administrators do not have educational administration background and some of them do not have basic administrative skills.

3. Departmental Atmosphere

Departmental atmosphere was mentioned as not warm enough to facilitate communication and labelled as "cold, artificial, or boring" by the faculty members interviewed in the Gizir's study (1999). Unsolved problems causing faculty members to be unhappy and disappointed were stated as causes of such an atmosphere and faculty members also mentioned the existence of 'silent unhappiness' in the department. In addition, Gizir (1999) stated that this finding was found to be quite acceptable when taken into consideration the responses regarding alienation, high individualism, technology, competition, some administrative issues, lack of feeling of belongingness, lack of trust among faculty members, the existence of isolated persons and alliances within the department.

Moreover, Gizir mentioned the complaints of faculty members about not doing anything together that has become a habit, not having common values or attitudes and lack of feeling of belongingness that negatively affect communication process within the department. Relating with human needs requiring being satisfied to

improve productivity of an organization, Gizir stated that "they do not feel belonged to the department in the sense of not claiming any identity with the department or not protecting it" (p. 135). The researcher related belongingness with the department's scientific paradigm facilitating communication and the development of shared understanding across different alliances. This consensus improves the ability of members to communicate with each other, and increase communication and shared culture; integrate the members more closely into the department (McCain, O'Reilly & Pfeffer, 1983).

4. High Individualism

High individualism was one of the most frequently mentioned factor influencing communication process within the department by the faculty members interviewed in Gizir's study (1999). The size of the department, lack of motivation, competition, the feelings of domination or possession of knowledge, the nature of the field, promotion system based on publication and other criteria, lack of common goals were stated the main causes of high individualism. Moreover, high individualism was indicated the main cause of inadequate exchange of scientific knowledge in the department.

Moreover, Gizir mentioned that faculty members believed that their field of study requires creativeness which makes them introvert and individualistic. She gave the quotation of faculty member as an example that "there is individualism due to the characteristic of our own field of study, that is, we do not exchange our knowledge and ideas, since we do not want our ideas to be used by others" (p. 110).

In addition, as reported by Gizir, faculty members argued that high individualism was mainly caused by lack of common goals and competition in the department, and explained relationship between high individualism and lack of common goals in such a way that there are no common goals, everyone has their own individual goals, and they try to achieve these goals by themselves.

Moreover, regarding competition, Gizir mentioned that faculty members pointed out that there were few collaborative scientific works since everyone works individually in their offices to get an academic title, even they mentioned that a faculty member stands in her/his office without communicating anyone else in a whole day. Results of the study done by Kondakçı (2000) similarly revealed that alienation and high individualization of academic staff were seen as issues negatively influencing communication process in the faculties by the administrators.

Clark (1983a) relates individualism with the nature of academic work. He mentioned that the favourite doctrines of faculty members, freedom of research, teaching and learning, are heavily individualistic.

5. Introvert Characteristics of the Department

Introvert characteristics of the department was another factor negatively influencing communication process in an academic environment (Gizir, 1999). Gizir argued that this was quite acceptable considering the fact that in a department whose faculty members compete with each other and are individually oriented, an effective communication with other departments could be expected to occur less. In this study, the interviewees stated that they did not have common things requiring communicating with other departments in the university. They also mentioned the existence of some hidden blocks between the departments in the university. They pointed out that they were not willing to communicate with other departments since they believed that other departments were not like them, they did not participate in the activities of other departments, and did not inform them about their own activities.

In addition, Gizir mentioned that the interviewees argued that they did not have a culture enhancing communication process in the faculty and some of the interviewees also questioned whether or not there was a need for inter-departmental communication in a faculty.

Related with the introvert characteristic of the department, Gizir gave the quotation from one faculty member as an example: “each department has their own world, there is not much to share with each other, so each department continue their existence within their own borderlines” (p. 137).

Kondakçı (2000) mentioned about the complaints of administrators about the existence of a broken communication process within the faculty and lack of activities such as interdisciplinary studies and conferences that enhance communication process among members in different departments. Kondakçı (2000) stated that being part of different disciplines made the interaction weak among departments, and also led to decrease in interdisciplinary studies.

Moreover, Gizir and Simsek (in press) claimed that introvert characteristic of the department might be caused by organizational divisionalization based on disciplines. Each discipline has its distinctive culture caused by its intellectual tasks, a knowledge tradition or categories of thought, and related codes of conduct. In other words, each discipline has a culture through faculty members share beliefs about theory, methodology, techniques, and problems (Becher & Trowler, 2001; Clark, 1983a). Gizir and Simsek (in press) also stated that there seems to be many subcultures which are developed by each department in the university. These subcultures make up the overall campus culture which is defined as the collective, mutually shaping patterns of norms, values, experiences, beliefs, and assumptions guiding the behavior of individuals and groups in a university and providing a frame of reference which appear to facilitate similar interpretations, the meaning of events and actions on and off campus (Kuh & Whitt, 2000; Clark, 1983a). Thus, Gizir and Simsek (in press) concluded that these different subcultures may cause difficulties in interdepartmental communication since it requires a certain degree of shared meaning and frame of reference, and as a result, differences in cultures are seen as barriers for interdepartmental communication, and may cause the departments to be introvert.

6. Criticism

Criticism was mentioned as another factor causing communication problems in an academic context in Gizir's study (1999). The researcher stated that this issue was raised as a factor negatively influencing communication by faculty members from only soft science disciplines namely, Architecture, Economics, and Foreign Language Education.

Gizir explained this issue with disciplinary culture or the nature of these departments that cover soft science disciplines having relatively less predictable level of operation or having relatively less structured body of thought. Soft science is also characterized by lack of agreement on what knowledge content is basic and how it ought to be thought (Clark, 1983a). Clark also claims that social scientists have more difficulty agreeing on course and degree requirements, so they have in general a high degree of conflict, both within and among individuals.

Gizir claimed that he overall idea behind criticism was the fact that faculty members are inclined to take scientific criticism personal. The report of one faculty member interviewed in this study was a good example related with this issue: "when you criticise an academician's work, s/he thinks that these academic criticisms target his/her personality. This certainly affects academic communication since they do not ask for your opinion anymore, and even they stop communicating with you" (p. 112). Gizir claimed that criticism made for exchanging scientific knowledge and experiences among faculty members was taken personal, that is, academic and personal issues were not clearly separated. In other words, task-related and non-task-related issues were mixed which, in turn, inhibits communication. Also, the interviewed faculty members mentioned that academics do not know how to make and take scientific criticism, they rather prefer not to criticise each other since they afraid of damaging their relations.

7. Alliances

Alliances was one of the most frequently mentioned factors influencing communication process in an academic context. In the study, it was found that there were different forms of alliances, such as project-based, discipline-based, age-based, title based, political opinion based. Age-based communication, for example, occurred in an alliance that was formed by faculty members in the similar age. In the same way, project-based communication occurred in an alliance that is formed by faculty members coming together to make a project or discipline-based communication occurred in an alliance that was formed by faculty members from the same field of study, and title based communication occurred in an alliance that is formed by faculty members having similar academic titles.

Moreover, it was pointed out by the interviewees in the study that joining a group based on a project was not a problem, even sometimes it was necessary to exchange scientific knowledge with other members of the group, whereas communication occurred more frequent and intense within group while inter-group communication was superficial. Regarding the project group-based communication, Zenger and Lawrence (1989) mentioned that oral communication with individuals inside and outside project groups is the primary medium through which engineers and scientists transfer work-related information. Such communication enhances to synthesise complex ideas rapidly and give one another immediate feedback, so this method of communication provides an efficient medium for the transfer of information and ideas. However, Zenger and Lawrence (1989) stated that a small number of employees inside project groups produce a high density of communication outside their groups because the requisite language and skills for communicating outside a group develop rather slowly. Moreover, members of a homogeneous project group engage in more communication internally than externally.

Furthermore, related with the aged-based communication alliance, academicians interviewed in Gizir's study noted that age was another area that certainly affects their communication processes especially in carrying out scientific studies. Related

with this issue, Gizir submitted a quotation: "there is not an effective scientific communication between old and young academicians because of the age differences, even if there is, it is very hard to come to an agreement on terms and basics in terms of communication". Regarding age-based communication, Zenger and Lawrence (1989) wrote that age influences communication since people in similar age hold similar attitudes, interests, and beliefs, and so they tend to communicate more with one another. These similarities both produce a common language and encourage communication, thus age similarity seems to enhance communication among people in the similar age. In addition, they emphasised that tenure and age have almost the same influences within the organisation. It is stated that employees seek communication with others whose tenure in an organisation is at least as great as their own, and these employees find communication efficient with other employees whose organisational language skills are at least as extensive as their own. Also, Zenger and Lawrence (1989) mentioned that individuals having similar tenure may develop unique interpretations and understanding from shared experiences on commonly experienced organisational events, and this may encourage employees to communicate only with others in their tenure. Furthermore, it is pointed out that the effects of similarity in organisational tenure are twice as higher than that of similarity in organisational age.

Similarly, McCain, O'Reilly and Pfeffer (1983) mentioned that employees have a tendency to communicate with others having the same or approximate similar tenure due to experiencing similar events in their organisation. They also stated that in a six or seven-year period, perceptions, values, and beliefs differ more. Thus, communication between different tenure groups becomes more difficult, and encourages conflict and power struggles.

Furthermore, Gizir mentioned that the faculty members complained about title-based communication in their departments. The faculty members mentioned that they had to define their communication style by taking into consideration academic title especially while communicating with professors, because professors' expectations were more aligned with a hierarchical system. Some of the interviewees also noted that faculty members holding lower academic titles were

not given chance to explain their ideas in formal meetings, especially faculty members holding higher academic titles dominate the formal meetings. Weisband, Schneider and Connolly (1995) similarly mentioned that high-status group members often talk more than low-status group members and exert more influence on final outcomes when groups make decisions.

Regarding title-based communication, when career level and organisational tenure increase, communication increases among the members who have similar tenure and career level, so career level and tenure affect communication process in an organisation. It may be related with the tendencies of employees to communicate with others who have similar attitudes, values, beliefs, and organisational experiences in an organisation (Zenger & Lawrence, 1989; McCain, O'Reilly & Pfeffer, 1983).

8. Lack of Common Goals

Lack of common goals and its effects on communication was another most frequently mentioned issue in Gizir's study. This issue was stated in such a way that faculty members did not have agreement on some basic issues and also common goals due to the chauvinism within and among departments interfering communication process in the faculty. Gizir mentioned about expectations of faculty members from the administrative staff in the departments were to set some common goals among the departments which may lead to better and higher degrees of communication. Gizir claimed that, setting common goals may create mutual effect, that is, the design of some common goals may enhance communication process among academicians, and enhanced communication process can cause to set some further common goals.

In the study, some faculty members related lack of common goals to high individualism as the following: "There are not common goals, there are only individual goals, even some individuals do not have any goals at all. So, in such an environment, such contradictions naturally interfere communication among faculty members" (Gizir, 1999, p. 113). In addition, some faculty members interviewed

confessed that they do not benefit from formal meetings which would be considered as a medium to get an agreement on some issues and to set some common goals by means of an effective communication network. Common goals are one of the basic requirements of an organisation for continuing its existence, wholeness, and effectiveness like communication process. The relationship between common goals reflecting cooperativeness and communication process in an organisation is expressed in the literature in such a way that common goals strengthening cohesiveness are strongly related to the skilled communication in which people expressed their views openly, considered the opinions of others, and combined ideas. And, these communication patterns are related with creative, high quality solutions, efficient use of resources, positive feelings, and confidence in future collaboration (Tijesvold & McNeilly, 1988).

Furthermore, lack of common goals as an issue may be caused by the tasks of higher education being both knowledge-intensive and knowledge extensive. Clark (1983a) stated, "goals are so broad and ambiguous that the university or system is left no chance to accomplish the goals, or to fail to accomplish them. There is no way that anyone can assess the degree of goal achievement" (p.19). Similarly, Baldridge et al., (2000) claimed that the goal ambiguity is one of the chief characteristics of academic organizations.

9. Inadequate Exchange of Scientific Knowledge

Inadequate exchange of scientific knowledge was also stated as an issue negatively influencing communication process in the university. Gizir (1999) mentioned that faculty members interviewed pointed out that they did not adequately share their scientific knowledge and work results with each other because of competition, high individualism, and lack of facilitators. Moreover, faculty members interviewed in the study argued that high individualism was caused by their field of study since they believed that their field of study requires creativeness which makes them introvert and individualistic. Also, some faculty members related inadequate exchange of scientific knowledge with lack of facilitators. They saw seminars as

one-way exchange method, and existence of a need for two-way mediums to share results of scientific work and knowledge.

Gizir expressed that almost all of the interviewees believed that inadequate exchange of scientific knowledge was caused by high individualism in the departments. Faculty members interviewed pointed out that almost all faculty members in the department work individually, so there are few collaborative scientific works in their department. As an example, one faculty member said, "even when we take a common project, this project is divided into pieces and shared among members, and then everyone studies their parts, that is, we do not have a culture of sharing" (p. 122).

In addition, Gizir mentioned that faculty members stated that they lose their scientific enthusiasm that causes faculty members not to exchange scientific knowledge with each other, and some of them also added that faculty members are too lazy to make an effort for sharing their scientific knowledge.

Moreover, as mentioned before, each discipline has a culture through faculty members share beliefs about theory, methodology, techniques, and problems (Becher & Trowler, 2001; Clark, 1983a). Gizir and Şimsek (in press) claimed that the existence of different disciplinary subcultures caused by their intellectual tasks, a knowledge tradition or categories of thought, and related codes of conduct led to inadequate exchange of scientific knowledge within and among the departments in the university.

2.4.2. Hypothetical Model of the Poor Communication among Faculty Members

At the end of her study, Gizir (1999) proposed a model including explored factors, and their relations in an academic context. She emphasised that some factors seem to be more influential in an academic context than the others. Similarly, a close inspection of the qualitative data obtained from her study showed that some factors were stressed more frequently than the others by the faculty members interviewed

and were appeared to have more negative influence on communication process in an academic context than the others as explained in detail above.

Hypothetical Model of the Poor Communication among Faculty Members, proposed in Figure 2.1, was drawn mainly from the qualitative case study done by Gizir (1999). In this hypothetical model, a set of direct and indirect relationships among nine factors negatively affecting communication process in higher education institutions were estimated as such: *the lack of motivation*, *individualism*, *inadequate exchange of scientific knowledge*, *introvert characteristic of the department*, *administrative issues*, *departmental atmosphere*, *lack of common goals*, *alliances*, *and scientific discourse*. Besides the relationships between aforementioned factors, the hypothetical model also included a set of direct and indirect relationships between these factors and *poor communication*.

In this hypothetical model, there is direct relationship between individualism and poor communication, and also departmental atmosphere and poor communication, while other factors have indirect relationships with poor communication. One of the indirect relationships assumed in the model is that relationship between lack of common goals and poor communication is mediated by both individualism and departmental atmosphere. In additon, it is depicted in the model that there is a direct relationship between lack of common goals and administrative issues, and then administrative issues is also directly related with departmental atmosfer. In other words, there is an indirect relationship between lack of communication and poor communication that goes through administrative issues and departmental atmosphere.

In addition, the model involves a reciprocal relationship between inadequate exchange of scientific knowledge and individualism, that is, there is an indirect relationship between inadequate exchange of scientific knowledge and poor communication. Furthermore, there is a direct relationship between alliances and inadequate exchange of scientific knowledge. In other words, there is an indirect relationship between alliances and poor communication mediated by inadequate exchange of scientific knowledge and individualism. Similarly, there is an indirect relationship between scientific discourse and poor communication and also

between lack of motivation and poor communication that goes through inadequate exchange of scientific knowledge and individualism. Furthermore, there is an indirect relationship between introvert charatersitics of the department and poor communication mediated by departmental atmosphere.

Moreover, the relationship in the model indicates that individualism and departmental atmosphere have a direct relationship. There is also a direct relationship between introvert characteristics of the department and inadequate exchange of scientific knowledge; between introvert characteristics of the department and alliances, and also between introvert characteristics of the department and departmental atmosphere.

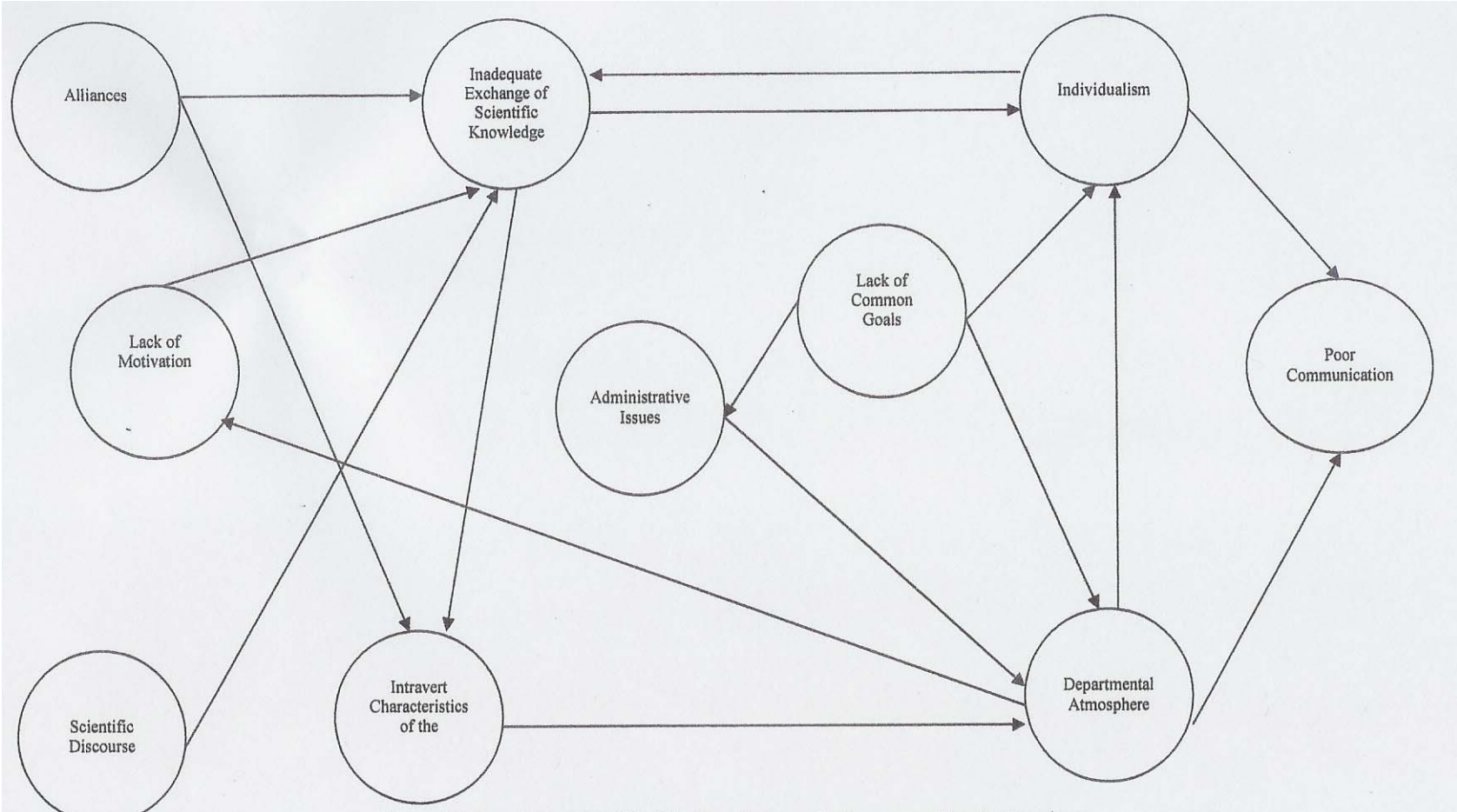

Figure 2.1 Hypothetical Model of the Poor Communication among Faculty Members

CHAPTER III

METHOD

In this chapter, overall design of the study and methodological procedures of the study will be presented including the sampling, data collection instrument, data collection procedure, and data analysis techniques, respectively. The sampling section deals with the sample selection procedures. The instrument section presents the instrument utilized in the collection of data. The procedure section deals with the way in which the data were collected. Finally, the analyses of the data section presents the statistical technique used in the study along with the explanations of basic terms and fundamental issues related to structural equation modeling.

3.1 Overall Design of the Study

This study collectively suggests the value of assessing relationships among factors negatively affecting communication process in Turkish state universities. Communication process in the academic context has remained largely unexplored, especially in Turkey. The researcher followed the suggestions of the pioneers in communication and higher education research separately and specified the particular spheres to which data apply and exclusively clarified the factors (Winter & Sarros, 2002; Gudykunst, 1997; Tierney, 1988; Clark, 1983a).

This study aims to investigate two issues in the same model: to assess the relationships among factors that negatively affecting communication process in Turkish state universities and to test a hypothetical model drawn from a qualitative case study done by Gizir (1999). The design and the sample from which the data collected in the present study appear to best fit the purpose conceptually.

The proposed model in the present study was developed mainly based on the qualitative study done by Gizir (1999) that explained in detail in the previous chapter. In the hypothetical model, a set of direct and indirect relationships among factors negatively affecting the communication process in higher education institutions were estimated as follows: *individualism, inadequate exchange of scientific knowledge, lack of motivation, alliances, administrative issues, lack of common goals, scientific discourse, introvert characteristic of the department, departmental atmosphere* and *poor communication*.

As displayed in Figure 2.1, out of ten variables, *lack of motivation*, *lack of common goals, alliances* and *scientific discourse* were treated as independent latent variables. The other four variables, labeled *inadequate exchange of scientific knowledge*, *introvert characteristic of the department*, *administrative issues*, and *departmental atmosphere* were treated both as independent and dependent latent variables while *poor communication* were defined as only latent dependent or outcome variable in the hypothesized path analytic model to be tested.

Thus, the major purpose of the present study is to predict a structural model best explaining the relationships between poor communication and some factors negatively affecting it in an academic context. Specifically, the present study is sought to answers the following two research questions:

1. What is the general structural model explaining the relationships between a set of latent variables and poor communication among faculty members in Turkish state universities?

2. How well does the model explain the poor communication among faculty members with respect to the relationships with nine factors?

In short, general hypothesis of this study can be expressed as follows: There are statistically significant relationships among the constructs of the hypothetical model (individualism, inadequate exchange of scientific knowledge, lack of motivation, alliances, administrative issues, lack of common goals, scientific

discourse, introvert characteristic of the department, departmental atmosphere and poor communication).

3.2 Sample

The sample of the study consisted of 480 faculty members employed in seven public universities representing seven regions of Turkey.

The sample selection process involved several consecutive steps. In the first step, seven public universities (Ankara University, Atatürk University, Çukurova University, Ege University, Gaziantep University, İstanbul University, and Karadeniz Technical University) representing seven regions of Turkey were identified by using criterion sampling strategy. In criterion sampling, some criteria are established and all cases that meet that criteria are selected. Gall et al. (2003) claim that a researcher can obtain high quality of information by using the criterion sampling strategy.

From 53 public universities in Turkey, the aforementioned universities were selected by taking their history, the number of faculties they have, the number of faculty members employed, and the number of students attending to the university into consideration. The aim was to cover the largest university in each region in order to enhance the representation power of the sample.

These selected universities have the oldest history, have more faculties and more faculty members, and more students compared to other public universities in the same region (CHE, 2004a).

The second step in the sample selection process was to identify the most common faculties present in all universities sampled in order to distribute the sample equally in the best way. This was the most challenging step in the sample selection process because of the diverse structures of these seven universities. These universities do not have the same faculties and the same departments in their faculties- even the names of faculties are different in some cases. For example, Arts and Science

departments are located under the *Faculty of Arts and Science* in Atatürk University, Çukurova University, Gaziantep University and Karadeniz Technical University, however, these departments are located in two separate faculties, *Faculty of Science* and *Faculty of Arts* in Ankara University, Ege University, and İstanbul University.

As a result of a round of reviewing process of all the departments in all the faculties of these seven universities, the most common and familiar faculties were identified. The sample of the present study included the faculty members from Faculty of Science, Faculty of Educational Sciences, Faculty of Political Sciences, and Faculty of Engineering located in *Ankara University*; Faculty of Science, Faculty of Education, Faculty of Economics and Administrative Sciences, and Faculty of Engineering located in *Ege University*; Faculty of Arts and Sciences, Faculty of Education, Faculty of Economics and Administrative Sciences and Faculty of Engineering in *Çukurova University*, *Karadeniz Technical University*, *Atatürk University* and *Gaziantep University*; Faculty of Arts and Sciences, Faculty of Education, Faculty of Administrative Sciences, Faculty of Management, Faculty of Economics and Faculty of Engineering –the last three faculties were treated as one faculty in calculation- in *İstanbul University*.

In addition, the departments from hard and soft sciences in the Faculty of Arts and Sciences were also identified and included in the sample in the most possible way in order to equally distribute the participants from hard and soft science departments in the sample.

After identifying faculties included in the sample, a sample of faculty members were selected from aforementioned departments by utilizing a stratified random sampling procedure. During the selection process, information about the numbers and names of the faculty members with respect to their academic status for each faculty in each university were obtained from the Council of Higher Education (CHE, 2004b). Based on this information, the proportions of faculty members for each university and then for each faculty were calculated. After that, the proportions of faculty members for each faculty with respect to their academic

status were calculated. The proportions of faculty members calculated and the faculties in each university sampled in the study are presented in detail in Table 3.1

Finally, a random sampling strategy was used to draw names of the faculty members from each stratum and 1000 faculty members were selected to form the sample.

Table 3.1

The faculties and the numbers of faculty members in each university sampled

UNV	FACULTY	PROF.		ASSOC.		ASSIST.		TOTAL	SAMPLE	
		a	b	a	b	a	b	a	c	%
ANKARA	SCIENCE	56	30	27	15	30	16	113	61	17.36
	EDUCATION	27	15	12	7	19	10	58	32	
	ECONOMICS	34	18	17	9	25	14	76	41	
	ENGINEERING	39	22	19	10	15	8	73	40	
	TOTAL	**156**	**85**	**75**	**41**	**89**	**48**	**320**	**174**	
ATATÜRK	SCIENCE	13	7	19	10	38	21	70	38	16.5
	EDUCATION	11	6	10	5	103	56	124	67	
	ECONOMICS	12	7	6	3	19	10	37	20	
	ENGINEERING	11	6	8	4	55	30	74	40	
	TOTAL	**47**	**26**	**43**	**23**	**215**	**116**	**305**	**165**	
ÇUKUROVA	SCIENCE	37	20	14	7	27	15	78	42	12.31
	EDUCATION	7	4	6	3	31	17	44	24	
	ECONOMICS	11	6	6	3	17	9	34	18	
	ENGINEERING	21	12	13	7	37	21	71	39	
	TOTAL	**76**	**41**	**39**	**21**	**112**	**61**	**227**	**123**	
EGE	SCIENCE	70	38	27	15	36	20	133	72	14.54
	EDUCATION	4	2	-	-	4	2	8	4	
	ECONOMICS	4	2	-	-	14	8	18	10	
	ENGINEERING	56	30	25	14	28	15	109	59	
	TOTAL	**134**	**73**	**52**	**28**	**72**	**39**	**268**	**145**	
GAZİANTEP	SCIENCE	-	-	1	-	3	2	4	2	4.61
	EDUCATION	-	-	2	1	6	3	8	4	
	ECONOMICS	-	-	-	-	9	5	9	5	
	ENGINEERING	13	7	27	15	24	13	64	35	
	TOTAL	**13**	**7**	**30**	**16**	**42**	**23**	**85**	**46**	
İSTANBUL	SCIENCE	41	22	21	11	43	23	105	57	22.4
	EDUCATION	5	3	3	2	13	7	21	11	
	ECONOMICS	78	43	29	16	60	33	167	91	
	ENGINEERING	58	31	21	11	41	22	120	65	
	TOTAL	**182**	**99**	**74**	**40**	**157**	**85**	**413**	**224**	
KARADENİZ	SCIENCE	16	9	13	7	20	11	49	27	12.2
	EDUCATION	4	2	6	3	18	10	28	15	
	ECONOMICS	7	4	15	8	22	12	44	24	
	ENGINEERING	30	16	29	16	45	24	104	56	
	TOTAL	**57**	**31**	**63**	**34**	**115**	**62**	**225**	**122**	
TOTAL		**665**	**361**	**376**	**204**	**802**	**435**	**1843**	**1000**	**100**

Note. a = Total number of the faculty; b = Number of inventory sent; c =Total number of inventory sent; % = Percentage of faculty members from each university sampled.

Data were obtained by mail and out of 1000 faculty members employed within the faculties, 480 returned the surveys, representing a 48 % return rate. The distribution of the participants by university, faculty and title information is presented in Table 3.2.

In addition, out of 480 faculty members, 128 were from Faculty of Science (26.7 %), 90 were from Faculty of Education (18.8 %), 102 were from Faculty of Economics and Political Sciences (21.3 %), and 160 were from Faculty of Engineering (33.3 %).

The mean age of the sample was 45.74 (SD = 8.5) with an age range of 30.0 to 67.0 years. Moreover, service year of faculty members within their current university was 18.1 (SD = 8.9) with a range of 1 to 41 years. Out of 480 faculty members, 115 were female (24 %) and 365 were male (76 %).

3.3. Data Collection Instrument

"Inventory of Communication Analysis in Academic Context" (ICAAC) was used in this study in order to assess the potential factors negatively affecting communication process among faculty members in the academic context (see Appendix A and Appendix B for Turkish and English form of the instrument, respectively).

Actually, ICAAC was mainly developed by the researcher by using the qualitative data obtained from the study done by Gizir (1999) following the procedure described below: First, the researcher reviewed the related literature and the qualitative data gathered through the study (Gizir, 1999) in order to identify the most common and frequently stressed factors negatively affecting communication process in the academic context. Second, the inventory items were written with respect to the gathered qualitative data along with the considered dimensions.

Table 3.2

Distribution of the participants by university, faculty and title

UNIVERSITY	FACULTY	TITLE			TOTAL
		ASSIST.	ASSOC.	PROF.	
ANKARA	Science	3	4	10	17
	Education	8	-	9	17
	Economics	5	2	9	16
	Engineering	1	5	15	21
Total		**17**	**11**	**43**	**71**
ATATÜRK	Science	10	5	8	23
	Education	24	4	5	33
	Economics	8	2	4	14
	Engineering	11	1	5	17
Total		**53**	**12**	**22**	**87**
ÇUKUROVA	Science	8	4	8	20
	Education	11	1	4	16
	Economics	4	-	7	11
	Engineering	8	4	8	20
Total		**31**	**9**	**27**	**67**
EGE	Science	5	5	12	22
	Education	2	-	2	4
	Economics	4	-	1	5
	Engineering	5	8	10	23
Total		**16**	**13**	**25**	**54**
GAZİANTEP	Science	2		-	2
	Education	2	1	-	3
	Economics	2	1	-	3
	Engineering	9	8	5	22
Total		**15**	**10**	**5**	**30**
İSTANBUL	Science	11	8	10	29
	Education	2	3	1	6
	Economics	14	5	21	40
	Engineering	7	11	11	29
Total		**34**	**27**	**43**	**104**
KARADENİZ	Science	5	5	5	15
	Education	6	2	3	11
	Economics	7	1	5	13
	Engineering	9	9	10	28
Total		**27**	**17**	**23**	**67**
TOTAL		**193**	**99**	**188**	**480**

Third, the draft copy of the inventory was given to six experts from different academic status and different field of study including, Educational Administration and Planning, Curriculum Development and Instruction, Measurement and Evaluation, and Statistics to evaluate the wording of the items in the inventory and choose the best fitting items for each dimensions of the inventory. Fourth, the recommended changes were made in the inventory by considering the feedback provided by the experts. Fifth, a preliminary study was conducted and the inventory was given to 36 faculty members working in the Faculty of Education at Middle East Technical University to take their evaluations and opinions related to the inventory. As a result of this feedback, it was observed that some items were not exactly related to the factors intended to measure, while some items were related to both factors intended to measure in the study. In addition, it was observed that some items needed to be clarified with respect to their wording. Thus, some changes were made on the inventory in terms of adding or removing some items and wording of the some inventory items based on the feedbacks of the faculty members.

The final design of the ICAAC composed of two parts. The first part included 9 questions to obtain information from the faculty members for the purpose of biographical information including their university, faculty, and department in which they employed, their title, fields of study, and service year in current university, university from which the faculty members earned their doctorate degree, as well as their age and gender.

The second part of the inventory included 10 sub-categories and 53 items of 5-point Likert scale, ranging from “strongly agree = 5” to “strongly disagree = 1”. The sub-categories included in the inventory were *Poor Communication* including 7 items, *Individualism* including 6 items, *Inadequate Exchange of Scientific Knowledge* including 4 items, *Lack of Motivation* including 4 items, *Alliances* including 8 items, *Administrative Issues* including 7 items, *Lack of Common Goals* including 5 items, *Scientific Discourse* including 3 items, *Introvert Characteristics of the Department* including 4 items, and *Departmental Atmosphere* including 5 items.

3.3.1 Measurement Model and Construct Related Evidence for Validity of the ICAAC

The purpose of a measurement model is to describe how well the observed variables (items) serve as a measurement instrument for the latent variables (factors) and the key concepts are measurement, reliability and validity. Moreover, measurement models often suggest ways in which the observed measurements can be improved (Jöreskog & Sörbom, 1993).

In measurement model of ICAAC, the method of confirmatory factor analysis (CFA) was used. Because, confirmatory factor analysis reflects measurement models in which observed variables define constructs or latent variables (Schumacker & Lomax, 1996). It is also used to evaluate construct validity (Kline, 1998). Moreover, using the confirmatory factor analysis, an assumed model can be built to describe, explain, or account for the empirical data in terms of relatively few parameters (Toit, Toit, Jöreskog, & Sörbom, 1999). Confirmatory factor analysis has several advantages. First, confirmatory factor analysis enables alternative hypothesized models about the underlying factor structure to be directly tested. It also provides useful information about how well a factor model accounts for the observed data and how much one can improve an alternative model to fit the model being tested (Harvey, Billings, & Nilan, 1985). With this background, using the theoretical background of the ICAAC as a starting point, groups of items chosen to form the latent variables were evaluated through confirmatory factor analysis and the CFA model was estimated in order to determine the "optimal model" for the sample. Measures of model fit[3], correlations among the factors[4], factor loading patterns[5] and substantive criteria (meaningful relations based on item wording) were used to make decision about the optimal CFA model.

[3] For the measures of model fit, Standardized Root Mean Squared Residual (SRMR), Root-Mean-Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Incremental Fit Index (IFI), and Relative Fit Index (RFI) were used in the present study.

[4] If the correlation between two constructs (factors) was greater than .90, it was determined that these factors were not distinct, and the factors were combined into one factor.

[5] A minimum of two or more items (observed variables) was required to load on one factor and items that consistently and strongly loaded on more than one factor (crossloadings) were dropped for conceptual clarity.

The construct validity analyses of the ICAAC by using confirmatory factor analysis revealed ten identifiable latent variables (factors) as theoretically considered. Accordingly, the latent variables were as follows: Poor Communication, Individualism, Inadequate Exchange of Scientific Knowledge, Lack of Motivation, Alliances, Administrative Issues, Lack of Common Goals, Scientific Discourse, Introvert Characteristics of the Department, and Departmental Atmosphere.

The results of the confirmatory factor analysis also indicated that ICAAC composed of 36 observed variables (items) instead of 53 observed. Variables. Lambda-x values, which are the loadings of each observed variable on respective latent variable, ranged from 0.44 to 0.90. More detailed information related to the observed variables contained in the latent variables and their factor loadings in the CFA model can be found in the results section of the study.

3.3.2 Reliability of the ICAAC

The reliability analysis was conducted seperately for each latent variable of the ICAAC in order to obtain the internal consistency estimates of reliability as estimated by Chronbach Alpha coefficients. Results of the reliability analysis demonstrated that the reliability evidence for the latent variables of ICAAC was satisfactory and reliability for each latent variable of the ICAAC as estimated by Chronbach Alpha ranged from 0.67 to 0.88. The alpha reliability coefficients of the latent variables are presented in detail in the results section.

3.4 Data Collection Procedure

In January 2004, extensive data related to 53 public universities in Turkey with respect to the date of establishment of the universities, faculties including departments located in these universities, numbers of faculty members employed, and numbers of students attending were obtained from the Council of Higher Education (CHE, 2004a).

Afterwards, the faculty members included in the sample of the present study were identified by using the information obtained from the Council of Higher Education (CHE) related to the numbers and names of the faculty members with respect to their academic status for each faculty in each university. Then, the inventory and a cover letter explaining the purpose of the study (see Appendix C for the cover letter) were posted with an additional stamped envelop to the adresses of 1000 faculty members included in the sample of this study in April 2004.

In order to maximize the return rate, the researcher tried to produce a well-designed inventory whose purpose is clear, use good-quality envelops, send by first-class post with an additional stamped envelop and avoid mailing at holiday periods.

3.5 Analysis of Data

In the present study, structural equation modeling was used to analyze the data. The statistical analyses were conducted through the following steps:

First, the data files were imported from SPSS 13.0 for Windows to PRELIS 2.30 for Windows (Jöreskog & Sörbom, 1999a) and the data screening was conducted in order to obtain the distributions of the variables and to check the normality of the variables.

Then, a nested series of confirmatory factor analysis (CFA) models were estimated in order to determine the latent variables and the "optimal measurement model" by using LISREL (Linear Structural Relations Statistics Package Program) 8.30 for Windows with SIMPLIS Command Language (Jöreskog & Sörbom, 1999b).

Finally, LISREL 8.30 for Windows with SIMPLIS Command Language was used again for the necessary formulation and estimation of the structural equation model including the relationships among the potential factors negatively affecting communication among the faculty members in academic context.

For all the statistical procedures performed, the alpha value of .05 was established as a level of significance and the maximum likelihood (ML) estimation method was used in all the LISREL analyses.

3.5.1 Structural Equation Modeling

Structural Equation Modeling (SEM) is a comprehensive statistical approach to develop measurement models in order to test hypothesis about relationships or structural equations among the observed and latent variables (Hoyle, 1995; Schumacker & Lomax, 1996).

In order to avoid possible semantic difficulties, basic terms and fundamental concepts related to SEM used in the present study are explained below:

a. Observed or Indicator Variables

Observed variables are the directly observable or measured variables (Schumacker & Lomax, 1996). Observed variables typically serve as approximate measures or indicators of latent variables in the general class of structural equation models (Hoyle, 1995) and may be called a manifest variable or, more commonly, an indicator (Kline, 1998).

b. Latent variables

Latent variables are factors or constructs that are not directly observed or measured (Hoyle, 1995) but can be indirectly measured or inferred through observable or measured or indicator variables (Schumacker & Lomax, 1996). A latent variable in a model can be either a dependent latent variable or an independent latent variable. In other words, any latent variable that is influenced by some other latent variable in the model is called as *latent dependent variable* and any latent variable which is not influenced by some other latent variable in the model is called as *latent independent variable* (Schumacker & Lomax, 1996).

c. Path Diagrams

A path diagram is a diagram that gives the structural relations forming the model and it is quite useful, in practice, to represent models using path diagrams. There is a standard convention that squares and rectangles are used to represent observed variables and circles or ellipses are used to represent latent variables. Directional effects or causal relations between the variables are specified using unidirectional or single-headed arrows. Nondirectional or correlational relationships between variables are represented using bi-directional or two-headed arrows (Hoyle, 1995; Kelloway, 1998).

d. Structural Equation Models

Structural equation models establish the relationships among latent variables or constructs given in a theoretical perspective. The structural equation models are composed of two parts, measurement model and structural model. The measurement model assesses how well the observed variables define the latent variables of interest. On the other hand, the structural model shows the direct and indirect relationships among latent variables. In structural equation models, both the independent and dependent latent-variable measurement models are used and the structural equations specify the relationship between the dependent and the independent latent variables(s) (Schumacker & Lomax, 1996). Moreover, the path diagrams in which the factors are viewed as latent variables are often used in order to diagram the structural equation models (Jöreskog & Sörbom, 1993).

e. Measurement Model

Measurement model is a confirmatory factor analysis model that treats the latent variables of the structural equation model as common factors with no constraints on the correlations among the factors. This model tests the measurement assumptions, relating the indicators of the structural equation model to the latent variables (Hoyle, 1995). In other words, the measurement model specifies the certain relationships between the observed variables and the latent variables in

terms of reliability and validity. These relationships are described on the basis of the factor loadings. Factor loadings give information about the extent to which a specified observed variable is able to measure the hypothesized latent variable and they are used as the validity coefficients while a measurement error serves as a measure of reliability (Schumacker & Lomax, 1996).

In the LISREL measurement model, two CFA models are built, one for exogenous variables and the other for endogenous variables (Maruyama, 1998).

f. Structural Model

The structural model establishes the direct and indirect relationships between and among the latent variables. It indicates the amount of explained and unexplained variance. Hence, structural model shows the extent to which hypothesized relationships are supported by the sample data (Schumacker & Lomax, 1996).

g. LISREL 8.30 with SIMPLIS Command Language

LISREL is one of the first computer programs developed by Jöreskog and Sörbom about 30 years ago to perform structural equation modeling (Kline, 1998). It is currently in its eighth version (Jöreskog & Sörbom, 1993).

Although the original programming language for LISREL is based on matrix algebra (Kline, 1998), a new programming language, which is called SIMPLIS, is available in LISREL 8.30 (Jöreskog & Sörbom, 1993). The SIMPLIS command language has the advantage of moving away from the matrix formulation of the LISREL model and a more national language is used in SIMPLIS language to define LISREL models (Kelloway, 1998). In other words, SIMPLIS programming language requires naming the observed and latent variables and specifying the paths with equation-type statements (Kline, 1998). There is also a companion program, which is called PRELIS2, to LISREL 8.30. PRELIS2 is designed in order to screen raw data and prepare covariance matrices for analysis with LISREL (Kline, 1998).

h. The Measurement Coefficients

The λ_y (lowercase lambda sub y) and λ_x (lowercase lambda sub x) values indicate the relationships between the latent variables and observed variables. Moreover, these coefficients are referred to as factor loadings and serve as the validity coefficients (Schumacker & Lomax, 1996).

The ε (lowercase epsilon) and δ (lowercase delta) are the measurement errors for Ys and Xs, respectively. They serve as the reliability coefficients (Schumacker & Lomax, 1996).

i. The Structure Coefficients

The β (lowercase beta) values indicate the strength and direction of the relationship among the latent dependent variables (Schumacker & Lomax, 1996). The γ (lowercase gamma) values indicate the strength and direction of the relationship among latent dependent variables and latent independent variables (Schumacker & Lomax, 1996).

3.5.2 The Stages of Applications of Structural Equation Modeling

There are five stages that characterize most of the applications of structural equation modeling (Bollen & Long, 1993). These five stages including, model specification, identification, estimation, testing fit, and respecification are explained below in detail.

1. Model Specification

   Specification of a model refers to the initial model that formulated prior to estimation and it is the foremost requirement for any form of structural equation modeling. This proposed model is most frequently formulated on the basis of a theory or a review of the research literature in the subject field (Schumacker & Lomax, 1996).

2. Identification

The issue of identification deals with inquiring whether unique values or solution can be found for the parameters to be estimated in the theoretical model (Chou & Bentler, 1998; Schumacker & Lomax, 1996). More specifically, identification concerns whether a single, unique value for each or every free parameter can be obtained from the observed data (Hoyle, 1995). Traditionally, there are three levels of model identification, namely, under-identified (or not identified), just-fitted, and over-identified models. If a model is either just-fitted or over-identified, then it is said that the model is identified (Hoyle, 1995; Schumacker & Lomax, 1996).

3. Estimation

The purpose of estimation is to obtain numerical values for the unknown parameters (Chou & Bentler, 1998). There is a variety of estimation techniques depending on the variable scale and/or distributional property of the variable(s) used in the model (Schumacker & Lomax, 1996). The very common fitting criteria are ordinary least squares (OLS), generalized least squares (GLS), and maximum likelihood (ML). ML estimation is the default method in many model-fitting programs. Neither of the other estimation options is as widely used as ML estimation. ML estimation works just fine for most types of structural equation models so long as the data have been properly screened and their distributions are reasonably normal (Kline, 1998).

4. Testing fit

Testing fit of the model is related to the interpreting model fit or comparing fit indices for alternative or nested models. There are numerous fit indices or goodness-of-fit criteria (GOF) that indicate whether the data fit the theoretical model (Schumacker & Lomax, 1996). Multiple measures of fit indices can be used with the varying definitions of model fit. Moreover, the literature provides on the basis for a strategy of model testing on several fundemental points.

The fairly widely used Goodness-of-fit criteria for SEM are summarized as follows:

a. Chi-square (χ^2)

A significant χ^2 value, relative to the degrees of freedom, indicates that the observed and estimated matrices differ. This statistical significance shows the probability that the difference between the matrices is related to the sampling variation. On the other hand, a non-significant χ^2 value shows that two matrices are not statistically different (Schumacker & Lomax, 1996). In other words, a non-significant χ^2 value indicates that the model fits the data (Kelloway, 1998). So, obtaining a non-significant χ^2 value with associated degrees of freedom is the main interest of the model fit criteria. But, the χ^2 statistic is sensitive to sample size and, the χ^2 tests have a tendency to indicate a significant probability level when the sample size increases generally above 200 (Schumacker & Lomax, 1996). To reduce the sensitivity of the χ^2 statistics to sample size, it is recommended to divide its value by degrees of freedom (χ^2/df), which results in a lower value and the ratio less than 3 considered as a minimally acceptable value (Kline, 1998).

b. Standardized Root-Mean-Square Residual (SRMR)

The SRMR is a standardized summary of the average discrepancy between the observed and predicted (model-implied) covariances (Kline, 1998). In other words, the SRMR is the square root of the mean of the squared differences between the observed and model-implied covariance matrices (Schumacker & Lomax, 1996). The SRMR has a lower bound of 0 and upper bound of 1. When the fit of the model is perfect, the SRMR equals to 0. As the average discrepancy between the observed and predicted covariances increases, so does the value of the SRMR close to 1 (Kline, 1998). For the interpretation of indicating a good fit to the data, values less than 0.05 are generally favorable (Kelloway, 1998).

c. Root-Mean-Squared Error of Approximation (RMSEA)

The RMSEA is computed on the basis of the analysis of residuals and adjusts for degrees of freedom. A test of significance of the RMSEA is provided by LISREL and values of RMSEA less than 0.05 are acceptable to indicate a better fit to the data (Kelloway, 1998).

d. Goodness-of-Fit Index (GFI)

The ratio of the sum of the squared differences between the observed and reproduced matrices to the observed variances is the base of the GFI (Schumacker & Lomax, 1996). Values of GFI theoretically range from 0 (poor fit) to 1 (perfect fit) (Kline, 1998) and the values exceeding 0,9 indicate a good fit to the data (Kelloway, 1998).

e. Adjusted Goodness-of-Fit Index (AGFI)

The AGFI index is the adjusted GFI for the degrees of freedom of a model relative to the number of variables (Schumacker & Lomax, 1996). As GFI, the AGFI has a range from 0 to 1, with values 0.9 indicating a good fit to the data (Kelloway, 1998). The AGFI measure will also provide an index of model parsimony that refers to the number of estimated coefficients required to achieve a specific level of fit (Schumacker & Lomax, 1996).

The fit of two different models with the same data or the fit of models with different data can be compared by using the GFI and AGFI indices (Schumacker & Lomax, 1996). Moreover, values of GFI and AGFI are more standardized and may be less sensitive to sample size than the χ^2 statistic (Kline, 1998).

f. Comparative Fit Index (CFI)

Another commonly used index is CFI, which based on the noncentral χ^2 distributions and measures the improvement in noncentrality in going from researcher's model M_i to M_k (Schumacker & Lomax, 1996).

Values of CFI theoretically range from 0 (poor fit) to 1 (perfect fit) and the values exceeding 0.90 indicate a good fit to the data (Kelloway, 1998).

g. Normed Fit Index (NFI)

The NFI is based on the percentage improvement in fit over the baseline independence model (Bentler & Bone, 1980). Values of NFI theoretically range from 0 (poor fit) to 1 (perfect fit) and the values exceeding 0.90 indicate a good fit to the data. A NFI of 0.90 means that the model is 90% better fitting than the null model (Kelloway, 1998).

h. Non-Normed Fit Index (NNFI)

The NNFI is the adjusted NFI for the number of degrees of freedom in the model. For a better fitting model, higher values of NNFI of 0.90 indicate a good fit of the model to the data (Kelloway, 1998).

i. Incremental Fit Index (IFI)

The IFI is based on the scaling factor (Bollen,1989). The range of IFI is from 0 to1. The higher values of IFI indicate a better fit of the model to the data.

j. Relative Fit Index (RFI)

The RFI is based on assessing the fit of the indicator variables to the latent variables (Schumacker & Lomax, 1996). The range of RFI is from 0 to 1. The high values of RFI approaching unity indicate a good fit to the data (Kelloway, 1998).

5. Respecification

One of the more controversial aspects of SEM is respecification, or modification, of a model (MacCallum, 1995). Model modification typically follows estimation of a model that resulted in unfavorable or poor indicators of fit (Hoyle, 1995) and the goal of the model respecification is either improving the parsimony or the fit of the model (MacCallum, 1995).

The most well known of the statistical search strategies make use of the modification index provided by the LISREL program (Hoyle, 1995). On the basis of the modification indices and parameter tests, decisions regarding how to delete, add, or modify paths in the model are made and the new modified model is reassessed again on the same data (Schumacker & Lomax, 1996).

3.6 Limitations and Delimitations of the Present Study

This study has some limitations that may affect the interpretation and generalization of the study. First, this study was not intended to account all potential factors affecting communication process in academic context; thus, only 10 factors drawn from an earlier qualitative case study mentioned previously and relationships among them were investigated.

Second, this study was carried out only with a sample of 480 faculty members drawn from seven public universities representing seven regions of Turkey. The universities comprising the sample of this study are the oldest ones in terms of their age, faculties are comparably the large ones with respect to numbers of faculties, and faculty members when compared to the other public universities in each region in Turkey. Thus, because of the limited sample size, the results cannot be generalized to all faculty members from other universities in Turkey. Moreover, although faculty members from other universities in Turkey may be likely to share common concerns, the results reported in this study should be treated cautiously because of the restrictions in the generalizability of the findings.

Third, this study was conducted only with a sample of 480 faculty members including professors, associate professors, and assistant professors drawn from the departments in seven public universities in Turkey. Foreign academicians, instructors, academicians employed as part time, academicians at Technical Vocational Schools of Higher Education, and resarch assistants were excluded. Thus, the results cannot be generalized to all faculty members.

Fourth, faculy members constituting the sample of this study were only from Faculty of Education, Faculty of Engineering, Faculty of Architecture, Faculty of Economic and Administrative Sciences, and Faculty of Arts and Sciences. Moreover, although faculty members from other faculties in public universities in Turkey may be likely to share common concerns, caution must be paid in generalizing the results reported in this study.

Finally, factors negatively affecting communication process among faculty members were assessed, that is, factors positively affecting communication process among faculty members were out of concern of the present study.

CHAPTER IV

RESULTS

The results are presented in two sections. The first section presents the measurement model of the ICAAC with descriptive statistics including, means and the standard deviations of the observed variables, as well as the correlations between all latent variables used in the structural model. The second section includes findings related to the hypothesized structural equation model. In other words, poor communication in the academic context model investigating the relationships between latent variables negatively affecting communication process were estimated. Moreover, the direct and indirect relationships among latent variables, and total effects of independent and dependent latent variables on poor communication are explained separately.

4.1 Measurement Model of the ICAAC

As mentioned in the method section, using the theoretical background of the ICAAC as a starting point, groups of items chosen to form the latent variables were evaluated through confirmatory factor analysis and the CFA model was estimated in order to determine the “optimal measurement model” for further analysis.

4.1.1 Results of the Confirmatory Factor Analysis of the ICAAC

The theoretical background of the ICAAC was taken as the starting point for a series of CFA models. First, a CFA model (Model 1) was estimated that it was equivalent to the theoretical model. Based on the theoretical background, modification indices, measures of model fit, and factor inter-correlations, a nested

series of modifications were made to this model to estimate an "optimal" and "preferred" CFA model (Model 2).

When forming latent variables for the further analysis, three important criteria were also used. First, the number of observed variables was kept to two as the minimum (Kline, 1998). Second, since a model testing was conducted in this study, the typical items representing the latent variable (factor) with greater parameter estimates including factor loadings ($\lambda > 0.40$) and squared multiple correlations ($R^2 > 0.20$) were primarily preferred. Third, for conceptual clarity, the researcher did not choose a model in which observed variables loads on more than one factor.

Model fit was assessed according to multiple goodness-of-fit indices in the present study. The χ^2 statistics assessed the absolute fit of the model to the data (Bollen, 1989), but it is sensitive to sample size and have a tendency to indicate a significant probability level and assumes the correct model when the sample size increases generally above 200 (Schumacker & Lomax, 1996). As norms about good fit were developed as LISREL became broadly used, a χ^2/df ratio of less than 2.00 was proposed as a conservative indicator of an acceptable fit (Byrne, 1989, as cited in Peng & Peterson, 1998). Kline (1998) also noted that although no exact guideline exists, a χ^2/df ratio of less than 3.00 is also considered acceptable.

Accordingly, other "ad hoc" indices were also used in the present study to examine the overall fit of the CFA models and judge the model fit, including *Root Mean Squared Error of Approximation* (RMSEA), *Standardized Root Mean Squared Residual* (SRMR), *Goodness-of-Fit index* (GFI), *Adjusted Goodness-of-Fit Index* (AGFI), *Comparative Fit Index* (CFI), *Normed Fit Index* (NFI), *Non-Normed Fit Index* (NNFI), *Incremental Fit Index* (IFI), and *Relative Fit Index* (RFI) estimates. The expected values for a good model data fit interpretation are possible if the RMSEA and SRMR index values are below .05; GFI, AGFI, CFI, NFI, NNFI, IFI, and RFI index values are above .90 (Schumacker & Lomax, 1996).

As mentioned above, modifications to the CFA models were also performed based on theoretical, empirical (statistical) and substantive information to improve the

factorial validity of the questionnaire by identifying a subset of observed variables that best tapped the latent variables. For the purpose of revising the model data fit, modification indexes were also considered.

Thus, in the present analysis, relative to all the items of the inventory, ten observed variables, including observed variable 9 '*Individualism due to academic promotion system*' (λ = 0.34, R^2 = 0.12); observed variable 15 '*Inadequate face-to-face communication due to communication technology*' (λ = 0.31, R^2 = 0.10); observed variable 16 '*Competition among faculty members in the department*' (λ = 0.22, R^2 = 0.05); observed variable 17 '*Individualism due to external factors out of university promotion system*' (λ = 0.25, R^2 = 0.06); observed variable 22 '*Alliances among faculty members due to studying on the same academic subjects*' (λ = 0.01, R^2 = 0.01); observed variable 23 '*Solving scientific issues in one's own group'* (λ = 0.11, R^2 = 0.02); observed variable 24 '*Inadequate communication among faculty members due to departmental characteristics*' (λ = 0.32, R^2 = 0.11); observed variable 41 '*Lack of common goals due to a lot of different academic sub-groups/specializations in the department*' (λ = 0.33, R^2 = 0.13); observed variable 48 '*Inadequate communication with other departments due to having different scientific terminology from each other*' (λ = 0.29, R^2 = 0.08); and observed variable 49 '*Inadequate common projects among departments due to differences in approaches used in scientific subjects*' (λ = 0.31, R^2 = 0.09); exhibited so weak parameter estimates and excluded from the preferred optimal CFA model.

Second, there is consistent evidence that seven observed variables load on more than one factor. Specifically, observed variable 5 '*Untrust among faculty members in the department*' which was first conceptualized to measure the latent variable *poor communication*, crossloads on *departmental atmosphere* and observed variable 12 '*Poor communication among faculty members due to extreme specialization*' which was first conceptualized to measure the latent variable *individualism* crossloads on *alliances*. Also, the observed variable 21 loads not only *lack of motivation* but also crossloads on *departmental atmosphere*. Moreover, the observed variable 27 '*Alliances with respect to age and title*' crossloads on

poor communication and *departmental atmosphere* and the observed variable 29 '*Alliances among faculty members due to working long years together*' crossloads on *departmental atmosphere* and *administration* although these two variables considered to be measure only the latent *variable alliances*. The observed variable 34 '*Unskilled administrators*' also crossloads on *departmental atmosphere* and it seemed to tap a more general aspects of administrative issues compared to the other observed variables of *Administrative Issues* latent variable. Finally, observed variable 38 '*Inadequate communication among faculty members due to the differences in goals among departments they worked*' loads not only latent variable *lack of motivation,* but also the latent variable *inadequate exchange of scientific knowledge.* For reasons of conceptual clarity, these seven observed variables which crossloads on latent variables were dropped from the preferred optimal CFA model.

As a result, as shown in Table 4.1, the result of the confirmatory factor analysis for the preferred model (Model 2) with ten latent variables yielded following goodness-of-fit indices: $\chi^2(528) = 736.48$, $p < .05$; $\chi^2/df = 1.39$; RMSEA = .029; SRMR = .037; GFI = .92; AGFI = .90; CFI = .98; NFI = .92; NNFI = .97; IFI =.98; and RFI = .90. These indices indicated that the preferred measurement model (Model 2) with 36 observed variables (items) were deemed more adequate than the hypothetical measurement model (Model 1) with 53 observed variables in order to treat the respective observed variable groups as distinct latent variables in the structural model (Table 4.1).

Table 4.1

Chi-Square and Goodness-of-Fit Statistics of Measurement Models for ICAAC

Indexes	Hypothetical Model (Model 1)	Preferred Model (Model 2)	Criteria
χ^2/df	2.47	1.39	χ^2/df < 2
RMSEA	.055	.029	RMSEA < .05
SRMR	.073	.037	SRMR < .05
GFI	.80	.92	GFI > .90
AGFI	.78	.90	AGFI > .90
CFI	.87	.98	CFI > .90
NFI	.78	.92	NFI > .90
NNFI	.85	.97	NNFI > .90
IFI	.87	.98	IFI > .90
RFI	.76	.90	RFI > .90

Note. RMSEA = Root mean square error of approximation; SRMR = Standardization root mean square residual; GFI = Goodness-of-fit-index; AGFI = Adjusted goodness-of-fit-index; CFI = Comparative fit index; NFI = Normed fit index; NNFI = Non-normed fit index; IFI = Incremental fit index; RFI= Relative fit index.

Table 4.2 also indicates the standardized Lambda-x values, *t*-values, and squared multiple correlations (R^2) as obtained for each of the observed variables from the confirmatory factor analysis. All parameter estimates were statistically significant ($p<0.05$). Moreover, all Lambda-x values, which are the loadings of each observed variable on respective latent variable, ranged from 0.44 to 0.90 and supported the idea of using these latent variables in the proposed path analytic model to explain the poor communication among faculty members in the academic context.

As can be seen from the Table 4.2, the first latent variable represented observed variables related to *Poor Communication*. Five observed variables were positively and significantly loaded on this latent variable, including "*Communicating only related to academic issues*" ($\lambda = 0.57$, $p < 0.05$), "*Limited personal communication*" ($\lambda = 0.58$, $p < 0.05$), "*Giving extra effort for communicating with others*" ($\lambda = 0.59$, $p < 0.05$), "*No need to communicate with each other*" ($\lambda = 0.68$, $p < 0.05$), "*Insensitivity among faculty members*" ($\lambda = 0.82$, $p < 0.05$). One of the five variables, "*Insensitivity among faculty members*" accounted for the greatest variance ($R^2 = 0.68$) of the latent variable *Poor Communication*.

Table 4.2

Standardized Lambda-x Estimates, *t*-values, and Squared Multiple Correlations of the Observed Variables of ICAAC

Latent and Observed Variables	**λ**	***t***	**R^2**
Poor Communication			
1 Communicating only related to academic issues	0.57	12.66	0.32
2 Limited personal communication	0.58	13.15	0.34
3 Giving extra effort for communicating with others	0.59	13.43	0.35
4 No need to communicate with each other	0.68	15.79	0.46
6 Insensitivity among faculty members	0.82	20.58	0.68
Individualism			
7 Inadequate participation in social activities	0.65	14.86	0.42
8 Individualism in scientific studies	0.57	12.59	0.32
13 Individualism among faculty members due to competition	0.46	9.79	0.21
14 Focusing only on personel work and activities	0.69	16.06	0.48
Inadequate Exchange of Scientific Knowledge			
10 Inadequate exchange of scientific knowledge	0.83	19.83	0.69
11 Not informed related to others' scientific activities	0.72	16.77	0.51
Lack of Motivation			
18 Inadequate reward system for motivation	0.44	9.14	0.20
19 Low involvement in scientific activities	0.74	16.84	0.55
20 Low motivation for conducting research	0.74	16.96	0.55
Alliances			
25 Alliances with respect to gender	0.57	11.41	0.33
26 Alliances with respect to title	0.67	13.23	0.45
28 Alliances with respect to service year	0.72	14.18	0.51
Administrative Issues			
30 Unclear organizational structure	0.71	17.39	0.51
31 Lack of administrative control on communication	0.56	12.64	0.31
32 Up-down and one-way communication structure	0.77	19.19	0.60
33 Alliances in the administrative staff	0.72	17.29	0.51
35 Inadequate social activities organized by administrators	0.61	14.28	0.37
36 Double standards	0.78	18.99	0.60
Lack of Common Goals			
37 Lack of common scientific goals among faculty	0.77	18.76	0.59
39 Lack of common goals for future among faculty	0.83	21.80	0.69
40 Lack of common solutions to depatmental issues	0.90	24.26	0.81
Scientific Discourse			
42 Taking scientific discourse as personal	0.64	14.95	0.42
43 Scientific discourse through gossip	0.80	19.67	0.64
44 Avoid discussing issues because of interpersonal relations	0.68	15.89	0.46
Introvert Characteristics of the Department			
45 Inadequate scientific communication with other departments	0.86	20.80	0.73
47 Only personal contact with other departments	0.78	18.55	0.60
Departmental Atmosphere			
46 Artificial, cold and boring atmosphere in the department	0.85	22.26	0.72
50 Lack of sense of cohesiveness among faculty	0.84	21.89	0.70
51 Feeling oneself as a part of the department	0.55	12.56	0.31
52 Feeling of security within the department	0.63	14.92	0.40
53 Feeling close onself to other faculty members in department	0.65	15.28	0.42

In the second latent variable, the following observed variables were positively and significantly loaded on the *individualism* latent variable: "*Inadequate participation in social activities*" ($\lambda = 0.65$, $p < 0.05$), "*Individualism in scientific studies*" ($\lambda = 0.57$, $p < 0.05$), "*Individualism among faculty members due to competition*" ($\lambda = 0.46$, $p < 0.05$), "*Focusing only on personel work and activities*" ($\lambda = 0.69$, $p < 0.05$), "*Focusing only on personal work and activities* " ($\lambda = 0.68$, $p < 0.05$). One of the four variables, "*Focusing only on personel work and activities*" accounted for the greatest variance ($R^2 = 0.48$) of the latent variable *Individualism*.

Moreover, two observed variables including "*Inadequate exchange of scientific knowledge*" ($\lambda = 0.83$, $p < 0.05$) and "*Not informed related to other's scientific activities*" ($\lambda = 0.72$, $p < 0.05$) were loaded significantly and positively on the third latent variable called *Inadequate Exchange of Scientific Knowledge*. The observed variable accounted for the greatest variance of this latent variable is "*Inadequate exchange of scientific knowledge*" ($R^2 = 0.69$).

In the fourth latent variable, "*Inadequate reward system for motivation*" ($\lambda = 0.44$, $p < 0.05$), "*Low involvement in scientific activities*" ($\lambda = 0.74$, $p < 0.05$), "*Low motivation for conducting research*" ($\lambda = 0.74$, $p < 0.05$), were deemed to represent and positively and significantly loaded on the latent variable *Lack of motivation*. Among the three observed variables, both "*Low involvement in scientific activities*" and "*Low motivation for conducting research*" accounted for the greatest variance ($R^2 = 0.55$) of the latent variable *Lack of Motivation*.

In addition, three observed variables including "*Alliances with respect to gender*" ($\lambda = 0.57$, $p < 0.05$), "*Alliances with respect to title*" ($\lambda = 0.67$, $p < 0.05$) and '*Alliances with respect to service year*' ($\lambda = 0.72$, $p < 0.05$) were loaded significantly and positively on the fifth latent variable called *Alliances*. The observed variable of '*Alliances with respect to service year*' also accounted for the greatest variance ($R^2 = 0.51$) of this latent variable.

The sixth latent variable represented observed variables related to *Administrative Issues*. Six observed variables were significantly and positively loaded on this latent variable, including "*Unclear organizational structure*" ($\lambda = 0.71$, $p < 0.05$),"*Lack of administrative control on communication*" ($\lambda = 0.56$, $p < 0.05$), "*Up-down and one-way communication structure*" ($\lambda = 0.77$, $p < 0.05$), "*Alliances in the administrative staff "* ($\lambda = 0.72$, $p < 0.05$), "*Inadequate social activities organized by administrators*" ($\lambda = 0.61$, $p < 0.05$), "*Double standards*" ($\lambda = 0.78$, $p < 0.05$). Out of the six variables, both "*Up-down and one-way communication structure*" and "*Double standards*" accounted for the greatest variance ($R^2 = 0.60$) of the latent variable *Administrative Issues*.

In the seventh latent variable, observed variables "*Lack of common scientific goals among faculty*" ($\lambda = 0.77$, $p < 0.05$), "*Lack of common goals for future among faculty*" ($\lambda = 0.83$, $p < 0.05$), "*Lack of common solutions to depatmental issues*" ($\lambda = 0.90$, $p < 0.05$) were deemed to represent the latent variable named as *Lack of Common Goals*. All the three variables were positively and significantly loaded on this latent variable. Among these three variables, "*Lack of common solutions to depatmental issues*" accounted for the greatest variance ($R^2 = 0.81$) of the latent variable *Lack of Common Goals*.

The eighth latent variable called *Scientific Discourse* consisted of three observed variables, namely "*Taking scientific discourse as personal"* ($\lambda = 0.64$, $p < 0.05$), "*Scientific discourse through gossip*" ($\lambda = 0.80$, $p < 0.05$), "*Avoid discussing issues because of interpersonal relations*" ($\lambda = 0.68$, $p < 0.05$). All the aforementioned observed variables were positively and significantly loaded on *Scientific Discourse* and "*Scientific discourse through gossip"* accounted for the greatest variance ($R^2 = 0.64$) of this latent variable.

Two observed variables, namely "*Inadequate scientific communication with other departments*" ($\lambda = 0.86$, $p < 0.05$) and "*Only personal contact with other departments*" ($\lambda = 0.78$, $p < 0.05$) were loaded significantly and positively on the ninth latent variable called *Intravert Characteristics of the Department*. The

observed variable "*Inadequate scientific communication with other departments*" also accounted for the greatest variance ($R^2 = 0.73$) of this latent variable.

In the last latent variable, observed variables "*Artificial, cold and boring atmosphere in the department*" ($\lambda = 0.85$, $p < 0.05$), "*Lack of sense of cohesiveness among faculty*" ($\lambda = 0.84$, $p < 0.05$), "*Feeling oneself as a part of the department*" ($\lambda = 0.55$, $p < 0.05$), "*Feeling of security within the department*" ($\lambda = 0.63$, $p < 0.05$), and "*Feeling close onself to other faculty members in department*" ($\lambda = 0.65$, $p < 0.05$) were deemed to represent the latent variable named *Departmental Atmosphere*. All the five variables were positively and significantly loaded on this latent variable. Among the five observed variables, "*Artificial, cold and boring atmosphere in the department*" accounted for the greatest variance ($R^2 = 0.72$) of the latent variable *Departmental Atmosphere*.

4.1.2 Reliability of the ICAAC

As shown in Table 4.3, the internal consistencies as estimated by Chronbach alpha for ten latent variables of the ICAAC were ranged from 0.67 to 0.88. These results indicated that the reliability evidence for the aforementioned latent variables were satisfactory.

Table 4.3

Alpha Reliability Coefficients of Latent Variables of the ICAAC

Latent Variables	**Cronbach Alpha**
1. Poor Communication	0.81
2. Individualism	0.68
3. Inadequate Exchange of Scientific Knowledge	0.76
4. Lack of Motivation	0.67
5. Alliances	0.69
6. Administrative Issues	0.85
7. Lack of Common Goals	0.85
8. Scientific Discourse	0.75
9. Intravert Characteristics of the Department	0.80
10. Departmental Atmosphere	0.88

4.1.3 Descriptive Statistics for the Observed Variables of ICAAC

Descriptive statistics for the observed variables of latent variables including, *Poor Communication*, *Individualism*, *Inadequate Exchange of Scientific Knowledge*, *Lack of Motivation*, *Alliances*, *Administrative Issues*, *Lack of Common Goals*, *Scientific Discourse*, *Introvert Characteristics of Department*, and *Departmental Atmosphere* are presented in Table 4.4.

Table 4.5 also reports the correlations between the latent variables namely, *Poor Communication*, *Individualism*, *Inadequate Exchange of Scientific Knowledge*, *Lack of Motivation*, *Alliances*, *Administrative Issues*, *Lack of Common Goals*, *Scientific Discourse*, *Introvert Characteristics of the Department* and *Departmental Atmosphere*.

As were seen in Table 4.5 all the correlations among latent variables range from 0.11 to 0.74 and statistically significant. The correlation between *Administrative Issues* and *Lack of Motivation* was the highest one (r=.74), while the correlation between *Deparmental Atmosphere* and *Alliances* seemed to be the lowest one (r=.11).

Table 4.4

Descriptive Statistics for the Observed Variables of ICAAC

Latent and Observed Variables	Mean	S.D.
Poor Communication	11.55	4.20
1 Communicating only related to academic issues	2.35	1.15
2 Limited personal communication	2.25	1.09
3 Giving extra effort for communicating with others	2.16	1.07
4 No need to communicate with each other	2.23	1.12
6 Insensitivity among faculty members	2.56	1.14
Individualism	12.50	3.29
7 Inadequate participation in social activities	3.08	1.18
8 Individualism in scientific studies	3.43	1.17
13 Individualism among faculty members due to competition	2.92	1.10
14 Focusing only on personel work and activities	3.08	1.14
Inadequate Exchange of Scientific Knowledge	6.28	2.10
10 Inadequate exchange of scientific knowledge	3.25	1.18
11 Not informed related to others' scientific activities	3.02	1.16
Lack of Motivation	9.80	2.78
18 Inadequate reward system for motivation	3.61	1.18
19 Low involvement in scientific activities	3.13	1.19
20 Low motivation for conducting research	3.06	1.22
Alliances	9.31	2.64
25 Alliances with respect to gender	2.82	1.13
26 Alliances with respect to title	3.18	1.15
28 Alliances with respect to service year	3.32	1.08
Administrative Issues	18.22	5.41
30 Unclear organizational structure	2.94	1.14
31 Lack of administrative control on communication	3.55	1.13
32 Up-down and one-way communication structure	2.80	1.16
33 Alliances in the administrative staff	2.89	1.27
35 Inadequate social activities organized by administrators	3.44	1.18
36 Double standards	2.60	1.28
Lack of Common Goals	9.52	3.31
37 Lack of common scientific goals among faculty	3.13	1.20
39 Lack of common goals for future among faculty	3.24	1.32
40 Lack of common solutions to depatmental issues	3.15	1.26
Scientific Discourse	9.67	2.86
42 Taking scientific discourse as personal	3.36	1.10
43 Scientific discourse through gossip	3.15	1.22
44 Avoid discussing issues because of interpersonal relations	3.16	1.18
Intravert Characteristics of the Department	7.13	2.02
45 Inadequate scientific communication with other departments	3.41	1.15
47 Only personal contact with other departments	3.71	1.07
Departmental Atmosphere	12.54	4.75
46 Artificial, cold and boring climate in the department	2.58	1.23
50 Lack of sense of cohesiveness among faculty	3.00	1.25
51 Feeling oneself as a part of the department	3.82	1.12
52 Feeling of safety within the department	3.61	1.14
53 Feeling close onself to other faculty members in department	3.60	1.06

Table 4.5

Correlations among Latent Variables

	1	2	3	4	5	6	7	8	9	10
1. Poor Communication	-									
2. Individualism	.552**	-								
3. Inadequate Exchange of Scientific Knowledge	.547**	.623**	-							
4. Lack of Motivation	.453**	.556**	.541**	-						
5. Alliances	.113*	.277**	.221**	.149**	-					
6. Administrative Issues	.541**	.508**	.494**	.507**	.172**	-				
7. Lack of Motivation	.574**	.590**	.568**	.541**	.182**	.739**	-			
8. Scientific Discourse	.466**	.523**	.539**	.543**	.309**	.615**	.672**	-		
9. Introvert Characteristics of Department	.430**	.458**	.501**	.468**	.156**	.546**	.609**	.612**	-	
10. Departmental Atmosphere	.607**	.500**	.501**	.433**	.110*	.671**	.680**	.584**	.534**	-

*p < 0.05; **p < 0.01

˙4.2 Structural Model of the Poor Communication among Faculty Members

The following strategy pursued to test the hypothesized structural equation model in the present study. The actual structural equation model presented in Figure 2.1 in Chapter 2 was tested. In this model, four latent variables including, *Lack of Motivation, Alliances, Lack of Common Goals*, and *Scientific Discourse* were specified as independent latent variables. Five latent variables namely, *Individualism, Inadequate Exchange of Scientific Knowledge, Administrative Issues, Intravert Characteristics of the Department,* and *Departmental Atmosphere* were considered as both independent and dependent latent variables while the latent variable of *Poor Communication* was treated as only dependent (outcome) latent variable.

In addition to the model data fit indexes such as χ^2, χ^2/df, GFI, AGFI, CFI, RMSEA, SRMR, NFI, NNFI, IFI, and RFI, the significance of the paths from independent and/or dependent latent variables to latent dependent variables was also considered with respect to the *t*-test results. For the purpose of revising or improving the model data fit, modification indexes were also taken into account.

Firstly, Hypothetical Model of the Poor Communication among Faculty Members presented in Figure 2.1 in Chapter 2 was estimated. Although this initial model indicated approximately a good fit to the data except AGFI and RFI (see Table 4.6), three paths between latent variables was found to be non-significant in this model.

Specifically, the paths from *Alliances* to *Introvert Characteristics of the Department* ($\gamma = 0.06$, $t = 1.00$), and *Inadequate Exchange of Scientific Knowledge* to *Introvert Characteristics of the Department* ($\beta = 0.02$, $t = 0.31$), indicated non-significant *t*-values. The path from *Scientific Discourse* to *Inadequate Exchange of Scientific Knowledge* was also found to be non-significant ($\gamma = 0.17$, $t = 1.87$). These three paths were deleted from the model.

˙Moreover, as a result of inspecting the modification indexes, two new paths were added into the model between *Scientific Discourse* and *Introvert Characteristics of the Department*; and between *Scientific Discourse* and *Lack of Motivation*.

Significant improvements in model fit of the modified structural model, as evidenced by the decrease in χ^2 and increases in GFI, AGFI, and CFI were obtained when the alterations proposed by the modification indices were considered. The final SIMPLIS syntax for the modified model can be found in Appendix D.

Consequently, as shown in Table 4.6, the goodness-of-fit indices calculated for the fitted modified model provided a very good fit to the data. The model fit statistics were as follows: $\chi^2(555) = 828.11$, $p < 0.05$; $\chi^2/df = 1.49$; RMSEA = 0.032; SRMR = 0.041 GFI = 0.91; AGFI = 0.90; CFI = 0.97; NFI= 0.91; NNFI = 0.96; IFI = 0.97; and RFI = 0.90. These values were deemed adequate to interpret the significant relationships among the latent variables.

In comparing the fit of this modified model with the initial hypothetical model, the fit of the modified model was much better (see Table 4.6). All the statistics for the modified model indicate a very close fit of the model to the data.

Tablo 4.6.

Chi-Square and Goodness-of-Fit Statistics for the Initial and the Modified Model

Indexes	**Initial Model**	**Modified Model**	**Criteria**
χ^2/df	1.66	1.49	$\chi^2/df < 2$
RMSEA	.037	.032	RMSEA < .05
SRMR	.046	.041	SRMR < .05
GFI	.90	.91	GFI > .90
AGFI	.88	.90	AGFI > .90
CFI	.95	.97	CFI > .90
NFI	.90	.91	NFI > .90
NNFI	.95	.96	NNFI > .90
IFI	.96	.97	IFI > .90
RFI	.89	.90	RFI > .90

In the fitted modified model, three latent variables including, *Alliances, Lack of Common Goals*, and *Scientific Discourse* were specified as independent latent variables. Six latent variables namely, *Individualism, Inadequate Exchange of*

˙*Scientific Knowledge, Lack of Motivation, Administrative Issues, Intravert Characteristics of the Department,* and *Departmental Atmosphere* were considered as both independent and dependent latent variables while the latent variable of *Poor Communication* was treated as only dependent (outcome) latent variable.

Table 4.7 presents standardized Lambda-x and Lambda-y estimates, t-values, and squared multiple correlations for the fitted modified model. As can be seen from Table 4.7, all Lambda-x and Lambda-y values, which are the loadings of each observed variable on a respective latent variable, ranged from 0.44 to 0.89 and all parameter estimates were statistically significant as obtained through *t* values.

Figure 4.1 also displays LISREL estimates of the parameters in the estimated structural model in which the coefficients were in standardized values and *t*-values. Besides, LISREL estimates of parameters in the measurement model with coefficients in standardized values and *t*-values were given in Appendix E and Appendix F, respectively.

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Table 4.7

Standardized Lambda-x and Lambda-y Estimates, *t*-values and Squared Multiple Correlations for the Fitted Model

Latent and Observed Variables	λ	*t*	R^2
Poor Communication			
1 Communicating only related to academic issues	$0.57\lambda_y$	9.83	0.32
2 Limited personal communication	$0.59\lambda_y$	10.05	0.34
3 Giving extra effort for communicating with others	$0.59\lambda_y$	10.23	0.35
4 No need to communicate with each other	$0.68\lambda_y$	11.09	0.46
6 Insensitivity among faculty members	$0.82\lambda_y$	11.99	0.66
Individualism			
7 Inadequate participation in social activities	$0.65\lambda_y$	6.28	0.42
8 Individualism in scientific studies	$0.56\lambda_y$	6.15	0.32
13 Individualism among faculty members due to competition	$0.45\lambda_y$	5.66	0.20
14 Focusing only on personel work and activities	$0.69\lambda_y$	6.33	0.47
Inadequate Exchange of Scientific Knowledge			
10 Inadequate exchange of scientific knowledge	$0.80\lambda_y$	6.38	0.64
11 Not informed related to others' scientific activities	$0.71\lambda_y$	6.43	0.51
Lack of Motivation			
18 Inadequate reward system for motivation	$0.44\lambda_y$	8.24	0.20
19 Low involvement in scientific activities	$0.72\lambda_y$	11.79	0.51
20 Low motivation for conducting research	$0.73\lambda_y$	11.86	0.53
Alliances			
25 Alliances with respect to gender	$0.58\lambda_x$	11.52	0.34
26 Alliances with respect to title	$0.68\lambda_x$	13.19	0.46
28 Alliances with respect to service year	$0.70\lambda_x$	13.59	0.49
Administrative Issues			
30 Unclear organizational structure	$0.71\lambda_y$	13.14	0.51
31 Lack of administrative control on communication	$0.56\lambda_y$	10.71	0.31
32 Up-down and one-way communication structure	$0.77\lambda_y$	13.47	0.60
33 Alliances in the administrative staff	$0.72\lambda_y$	12.86	0.52
35 Inadequate social activities organized by administrators	$0.61\lambda_y$	11.70	0.37
36 Double standards	$0.78\lambda_y$	13.22	0.60
Lack of Common Goals			
37 Lack of common scientific goals among faculty	$0.76\lambda_x$	18.58	0.57
39 Lack of common goals for future among faculty	$0.83\lambda_x$	21.90	0.69
40 Lack of common solutions to depatmental issues	$0.89\lambda_x$	24.10	0.79
Scientific Discourse			
42 Taking scientific discourse as personal	$0.64\lambda_x$	14.85	0.41
43 Scientific discourse through gossip	$0.79\lambda_x$	19.74	0.63
44 Avoid discussing issues because of interpersonal relations	$0.67\lambda_x$	15.76	0.45
Introvert Characteristics of the Department			
45 Inadequate scientific communication with other departments	$0.86\lambda_y$	13.24	0.74
47 Only personal contact with other departments	$0.77\lambda_y$	13.52	0.60
Departmental Atmosphere			
46 Artificial, cold and boring climate in the department	$0.85\lambda_y$	14.16	0.72
50 Lack of sense of cohesiveness among faculty	$0.84\lambda_y$	14.14	0.70
51 Feeling oneself as a part of the department	$0.55\lambda_y$	10.40	0.30
52 Feeling of safety within the department	$0.63\lambda_y$	11.63	0.40
53 Feeling close onself to other faculty members in department	$0.65\lambda_y$	11.83	0.42

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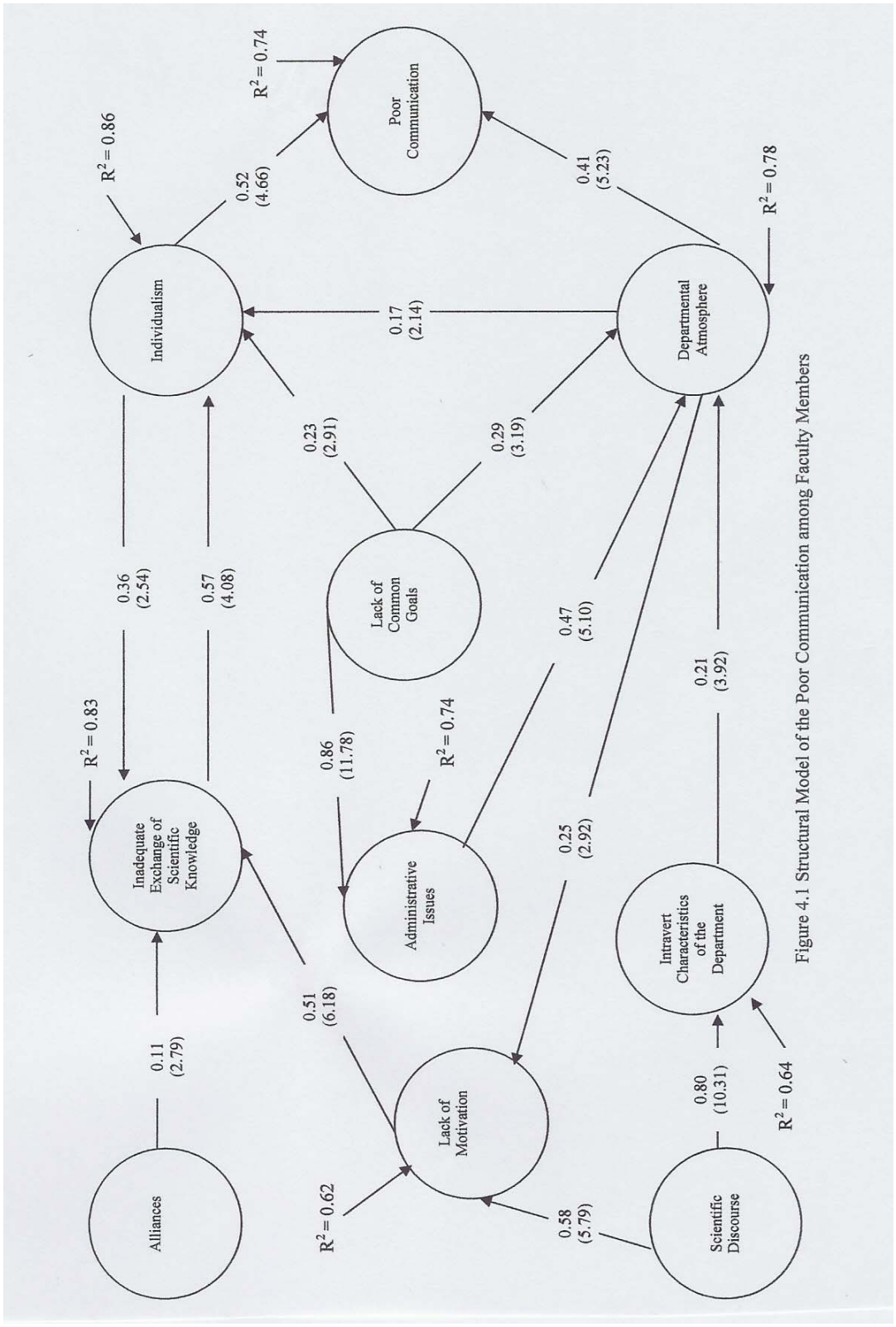

Figure 4.1 Structural Model of the Poor Communication among Faculty Members

˙*Direct Relationships*

Table 4.8 presents the Lowercase Beta (β) estimates, which are the structure coefficients indicating the strength and direction of the relationship among the dependent latent variables. The Table 4.5 also presents the Lowercase Gamma (γ) estimates, which are the structure coefficients indicating the strength and direction of the relationship between the independent and dependent latent variables.

As can be seen from Table 4.8 and Figure 4.1, which displays the structural model of the factors for the poor communication among faculty members, the standardized path coefficients changed between 0.11 and 0.86 in the fitted model. Cohen (as cited in Kline, 1988; and Schoon, Sacker, & Bartley, 2003) interpreted the absolute magnitudes of path coefficients or the effect sizes of the parameter estimates. It is described that standardized path coefficients with absolute values less than 0.10 indicate a *small* effect; while values around 0.30 indicate a *medium* and values above 0.50 indicate a *large* effect, respectively (Cohen as cited in Kline, 1988; Schoon, Sacker, & Bartley, 2003). With respect to these criteria, significant relationships among the ten latent variables which explain the poor communication among faculty members were found.

Out of nine latent variables, two latent variables including *Individualism* and *Departmental Atmosphere* have direct, positive and strong impact on *Poor Communication.* Specifically, the path coefficient from *Individualism* to *Poor Communication* indicated a large effect size (β=0.52); as well as *Departmental Atmosphere* to *Poor Communication* indicated almost a large effect size (β=0.40). The results also indicated that these latent variables explained 74 % of the total variance of *Poor Communication* in the fitted model.

Table 4.8

Standardized Direct Relationships and *t*-Values of Latent Independent & Latent Dependent Variables on Latent Dependent Variables in the Fitted Model

	Latent Independent Variables			Latent Dependent Variables					
	Lack of Common Goals	**Scientific Discourse**	**Alliances**	**Individualism**	**Inadequate Exchange of Sci. Know.**	**Lack of Motivation**	**Administrative Issues**	**Introvert Characteristics of Dept.**	**Departmental Atmosphere**
Poor Communication	- - -	- - -	- - -	0.52 (4.66)	- - -	- - -	- - -	- - -	0.40 (5.23)
Individualism	0.23 (2.91)	- - -	- - -	- - -	0.57 (4.08)	- - -	- - -	- - -	0.17 (2.14)
Inadequate Exchange of Scientific Knowledge	- - -	- - -	0.11 (2.79)	0.36 (2.54)	- - -	0.51 (6.18)	- - -	- - -	- - -
Lack of Motivation	- - -	0.58 (5.79)	- - -	- - -	- - -	- - -	- - -	- - -	0.25 (2.92)
Administrative Issues	0.86 (11.78)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Introvert Characteristics of the Department	- - -	0.80 (10.31)	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Departmental Atmosphere	0.29 (3.19)	- - -	- - -	- - -	- - -	- - -	0.47 (5.10)	0.21 (3.92)	- - -

Note: *t*-values are shown in paranthesis in the table.

˙In addition, the fitted model identified positive and direct relationships between the other latent variables explained as follows:

As shown in Table 4.8, one independent and two dependent latent variables directly and significantly predicted *Individualism*. The path coefficient from *Inadequate Exchange of Scientific Knowledge* to *Individualism* specified a large effect size (β=0.57), whereas the path coefficients from *Departmental Atmosphere* and *Lack of Common Goals* to *Individualism* pointed out medium effect sizes (β=0.17 and γ=0.23, respectively). 86 % of the total variance of *Individualism* was predicted by the factors mentioned in the fitted model.

In the model fitted, another greatest relationship came from the path coefficient from *Lack of Motivation* to *Inadequate Exchange of Scientific Knowledge* (β=0.51), while the path coefficient from *Individualism* to *Inadequate Exchange of Scientific Knowledge* shown moderate (β=0.36), and *Alliances* to *Inadequate Exchange of Scientific Knowledge* indicated small (γ=0.11) effect sizes. These latent variables explained 83 % of the total variance of *Inadequate Exchange of Scientific Knowledge* in the fitted model.

When *Lack of Motivation* was taken into consideration, it was observed that the path coefficient from *Scientific Discourse* to *Lack of Motivation* indicated a large effect size (γ=0.58), but the path coefficient from *Departmental Atmosphere* to *Lack of Motivation* specified almost a moderate effect size (β=0.25). The total variance explained by the latent variables was 62 % for *Lack of Motivation* in the fitted model.

In a similar vein, the path coefficient from *Administrative Issues* to *Departmental Atmosphere* indicated a large effect size (β=0.47), whereas the path coefficient from *Lack of Common Goals* to *Departmental Atmosphere* gave a moderate effect size (γ=0.29). The path coefficient from *Introvert Characteristics of the Department* to *Departmental Atmosphere* signified almost a medium effect size

˙(β=0.21) in the model. Moreover, the latent variables explained 78 % of the total variance of *Departmental Atmosphere* in the estimated model.

The other two greatest effect in the fitted model were the path coefficient from *Scientific Discourse* to *Introvert Characteristics of the Department* (γ=0.80), and the path coefficient from *Lack of Common Goals* to *Administrative Issues* (γ=0.86). The explained total variances by latent variables were 64 % for the former and 74 % for the latter latent variable in the model fitted.

When the directions of the relationships were considered, it was observed that all the relationships among latent variables were positive in the fitted model.

Indirect Relationships

As it can be seen from Table 4.9, when the indirect relationships considered, the results of the present study indicated that there are positive and significant indirect relationships between all the nine latent (three exogenous and six endogenous) variables and *Poor Communication* in the explained model.

Specificaly, the exogenous variable of *Lack of Common Goals* has a greatest indirect and significant influence on *Poor Communication* (γ=0.54) goes through *Individualism* and *Departmental Atmosphere*, separately.

Again, the dependent latent variable of *Inadequate Exchange of Scientific Knowledge* has almost a large indirect impact on *Poor Communication* (β=0.37) mediated by *Individualism*.

In addition, *Administrative Issues*, *Lack of Motivation* and *Scientific Discourse* have almost moderate indirect relationships with *Poor Communication* (β=0.26; β=0.19; and γ=0.21, respectively).

Table 4.9

Standardized Indirect Effects of Latent Independent & Latent Dependent Variables on Latent Dependent Variables in the Estimated Model.

	Latent Independent Variables			Latent Dependent Variables					
	Lack of Common Goals	**Scientific Discourse**	**Alliances**	**Individualism**	**Inadequate Exchange of Sci. Know.**	**Lack of Motivation**	**Administrative Issues**	**Introvert Characteristics of Dept.**	**Departmental Atmosphere**
Poor Communication	0.54 (8.22)	0.21 (5.05)	0.04 (2.55)	0.14 (2.76)	0.37 (4.55)	0.19 (4.11)	0.26 (4.37)	0.12 (3.51)	0.16 (2.74)
Individualism	0.28 (3.56)	0.27 (3.62)	0.08 (2.42)	0.26 (2.53)	0.15 (2.14)	0.37 (3.67)	0.15 (2.50)	0.07 (2.32)	0.14 (2.84)
Inadequate Exchange of Scientific Knowledge	0.27 (3.08)	0.42 (5.11)	0.03 (1.81)	0.10 (1.34)	0.26 (2.53)	0.13 (2.49)	0.11 (2.76)	0.05 (2.50)	0.24 (3.19)
Lack of Motivation	0.17 (2.87)	0.04 (2.37)	---	---	---	---	0.11 (2.60)	0.05 (2.37)	---
Administrative Issues	---	---	---	---	---	---	---	---	---
Introvert Characteristics of the Department	---	---	---	---	---	---	---	---	---
Departmental Atmosphere	0.40 (4.95)	0.17 (3.90)	---	---	---	---	---	---	---

Note 1: *t*-values are shown in paranthesis in the table.

˙However, all the other path coefficients from *Departmental Atmosphere*, *Individualism*, *Introvert Characteristics of the Department*, and *Alliances* to *Poor Communication* indicated small but significant indirect effects with various magnitudes (β=0.16; β=0.14; β=0.12; and γ=0.04, respectively).

In addition, the fitted model identified significant indirect relationships between the other latent variables. Specifically, the independent latent variables of *Lack of Common Goals*, *Scientific Discourse*, *Alliances*, and the dependent latent variables of *Individualism*, *Inadequate Exchange of Scientific Knowledge*, *Lack of Motivation*, *Administrative Issues*, *Departmental Atmosphere*, and *Introvert Characteristics of Department* have significant indirect influence on *Individualism* with various magnitudes changing between 0.07 and 0.37.

Similarly, all nine aforementioned latent variables have also indirect impact on *Inadequate Exchange of Scientific Knowledge* with again various magnitudes changing between 0.03 and 0.42. But, the path coeefficients from *Individualism* and *Alliances* to *Inadequate Exchange of Scientific Knowledge* were considired to be non-significant with respect to t-values (t = 1.34 and t = 1.81, respectively).

Moreover, the indirect influence of *Lack of Common Goals* on *Lack of Motivation* were approximately moderate (γ=0.17), while the indirect influence of *Administrative Issues* (β=11), *Introvert Characteristics of Department* (β=0.05), and *Scientific Discourse* (β=0.04) on *Lack of Motivation* were small.

Finally, *Lack of Common Goals* (γ=0.40), and *Scientific Discourse* (γ=0.17) have also strong indirect relationships with *Departmental Atmosphere*.

Total Effects

As shown in Table 4.10, when the total effects of the latent variables on *Poor Communication* were considered, *Individualism*, *Departmental Atmosphere*, *Lack of Common Goals*, and *Inadequate Exchange of Scientific Knowledge* has the greatest total effects on *Poor Communication*, respectively

Table 4.10

Standardized Total Effects of Latent Independent & Latent Dependent Variables on Latent Dependent Variables in the Estimated Model

	Latent Independent Variables			Latent Dependent Variables					
	Lack of Common Goals	**Scientific Discourse**	**Alliances**	**Individualism**	**Inadequate Exchange of Sci. Know.**	**Lack of Motivation**	**Administrative Issues**	**Introvert Characteristics of Dept.**	**Departmental Atmosphere**
Poor Communication	0.54 (8.22)	0.21 (5.05)	0.04 (2.55)	0.65 (5.12)	0.37 (4.55)	0.19 (4.11)	0.26 (4.37)	0.12 (3.51)	0.57 (6.54)
Individualism	0.51 (5.48)	0.27 (3.62)	0.08 (2.42)	0.26 (2.53)	0.72 (3.85)	0.37 (3.67)	0.15 (2.50)	0.07 (2.32)	0.31 (2.82)
Inadequate Exchange of Scientific Knowledge	0.27 (3.08)	0.42 (5.11)	0.15 (2.68)	0.46 (2.17)	0.26 (2.53)	0.64 (5.92)	0.11 (2.76)	0.05 (2.50)	0.24 (3.19)
Lack of Motivation	0.17 (2.87)	0.62 (6.72)	---	---	---	---	0.11 (2.60)	0.05 (2.37)	0.25 (2.92)
Administrative Issues	0.86 (11.78)	---	---	---	---	---	---	---	---
Introvert Characteristics of the Department	---	0.80 (10.31)	---	---	---	---	---	---	---
Departmental Atmosphere	0.69 (9.74)	0.17 (3.90)	---	---	---	---	0.47 (5.10)	0.21 (3.92)	---

Note: *t*-values are shown in paranthesis in the table.

˙Moreover, *Administrative Issues, Lack of Motivation* and *Scientific Discourse* have moderate total effects on *Poor Communication* (β=0.26; β=0.19; and γ=0.21, respectively); whereas the total effects of *Introvert Characteristics of the Department* and *Alliances* on *Poor Communication* were considered small (β=0.12; and γ=0.04, respectively). The total effects among the other independent and dependent variables can also be seen in Table 4.10.

4.3 Comparison of the Initial Hypothetical Model and the Modified Model

The main purpose of the present study is to predict a structural model best explaining the relationships between poor communication and the factors affec it in an academic context. For this reason, the initial hypothetical model mainly based on the results of the study done by Gizir (1999) was developed and tested. As mentioned above, the initial hypothetical model was modified in some respects and the modified fitted model was accepted as the best one explaining the relationships between poor communication and the factors affect the communication process within an academic context.

As a result of comparison of the initial hypothetical model and the fitted or modified model (see Figure 4.2), it was pointed out that there were few differences between the two models. Although there was a direct relationship between S*cientific Discourse* and *Inadequate Exchange of Scientific Knowledge* in the hypothetical model, there was an indirect relationship between S*cientific Discourse* and *Inadequate Exchange of Scientific Knowledge* that goes through *Lack of Motivation* in the modified model.

In addition, there was a path representing a direct relationship between *Alliances* and *Introvert Characteristics of the Department* in the hypothetical model, but there was not such a relationship between these two latent variables in the modified model. Similarly, it was clear that there was a direct relationship between *Inadequate Exchange of Scientific Knowledge* and *Introvert Characteristics of the Department* in the hypothetical model while such a relationship between these two factors was not observed in the modified model.

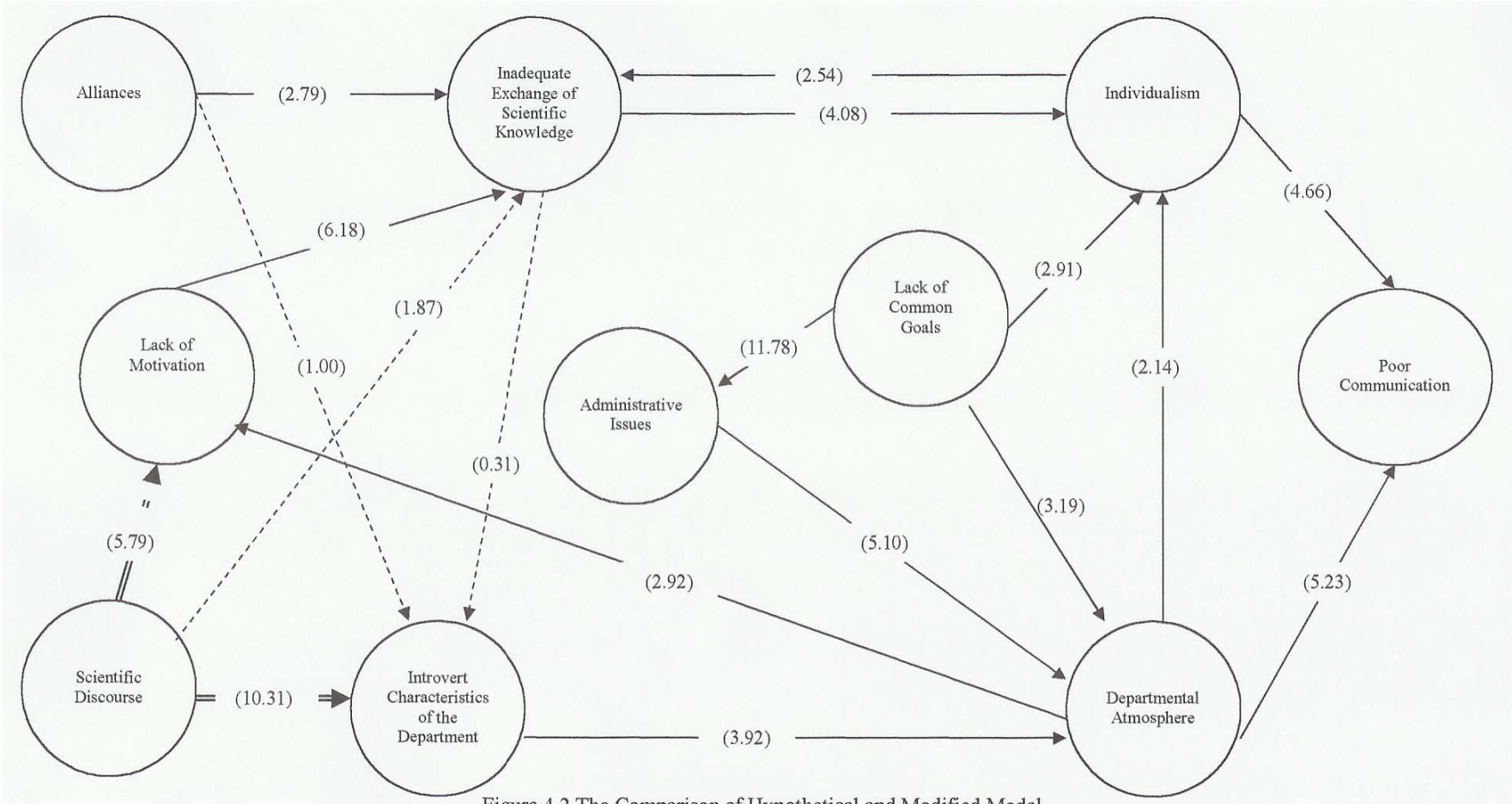

Figure 4.2 The Comparison of Hypothetical and Modified Model

Note. "--->" lines indicate deleted paths, while "=>" lines indicate added paths in the modified model. Other lines are the same in both hypothesized and modified models. *t*-values indicating the significance of the paths were given in paranthesis (generally $t < 2$ indicates a non-significant relationship).

˙Moreover, comparison of the hypothetical model and the modified model indicated that there were new paths representing relationships between some factors in the fitted model. The new paths observed in the modified model represented a direct relationship between *scientific discourse* and *lack of motivation*, and between *scientific discourse* and *introvert characteristics of the department*.

To conclude, three paths representing relationships between some factors in the hypothetical model were not observed in the modified model, while the existence of two new paths representing relationships between some factors were observed in the fitted modified model.

However, other relationships between latent variables and also between latent variables and poor communication observed in the hypothetical model were valid in the fitted model. So, it may be said that the similarities between the hypothetical model and fitted modified model are more than the differences. This may be because of the hypothetical model was based on the results of a qualitative study done by Gizir (1999) suggesting strong theoretical relationships among the aforementioned latent variables.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

In this chapter, the results obtained from the statistical analyses will be discussed along with the general findings, model building and theory construction; and finally implications for practice and research. Specifically stated, in the first section, discussion regarding the relationships between nine factors and poor communication and, the relationships between factors negatively affecting the communication process in the academic context were presented. Then, the present study was examined regarding model testing and theory construction. The second section includes the implications of the present study for practice and research, and also recommendations for future research.

5.1 The Relationships between the Nine Factors and Poor Communication

Analysis of the data revealed that there were direct and indirect relationships between nine factors and poor communication, and also direct and indirect relationships between nine factors negatively affecting the communication process in academic context.

The results indicated that there were direct relationships between individualism and poor communication and along with the departmental atmosphere and poor communication, while other relationships between each seven factors and poor communication were indirect. Firstly, the aforementioned direct relationships were explained, and then indirect relationships were explained in details below.

The strongest direct relationship was found between *individualism and poor communication.* As one of the most frequently mentioned factor influencing communication process within a department by the faculty members interviewed in Gizir's study (1999), high individualism was indicated as the main cause of inadequate exchange of scientific knowledge in the department, while the size of the department, lack of motivation, competition, the feelings of domination or possession of knowledge, the nature of the field, promotion system based on publication and other criteria, lack of common goals were stated as the main causes of it. In addition, Gizir (1999) assented that although there were some differences in reported causes of it, high individualism was one of the most common issues regarding work-related communication within the department. She also claimed that individualism in scientific activities is also reflected in informal relations.

Wagner III (1995) defined individualism as the condition in which personal interests are accorded greater importance than are the needs of groups. Thus, individualists look after themselves and tend to ignore group interests if they conflict with personal desires and they are able to pursue private interests irrespective of their bearing on the interests of others. In addition, he claimed that an individualist acts as though he or she defines "self" as an entity consisting of a single person, bounded by his or her skin, while a "collectivist" acts as if he or she defines self as an entity extending beyond the individual to include a particular group of others, bounded by the social perimeter of that group

A close inspection of the items supposed to measure poor communication may refer to the existence of poor communication among faculty members. These items imply the existence of insensitivity among faculty members, faculty members with not needing to communicate with each other, and the requirement of giving extra effort for communicating with other faculty members. So, the existence of poor communication in academic context seems to be quite acceptable when taken into consideration a context in which people pursuit personal gains, private interests irrespective of their bearing on the interests of others and ignore group interests if

they conflict with personal desires, and less concern about the need and interests of others (Darwish & Huber, 2003; Wagner III, 1995).

Another direct relationship was found between *departmental atmosphere and poor communication.* Related with departmental atmosphere, Gizir (1999) mentioned that faculty members interviewed perceived their departmental atmosphere as not warm enough to facilitate communication and labelled it as "cold, artificial, or boring". Unresolved problems that cause faculty members to be unhappy and disappointed were stated as causes of such an atmosphere. In addition, Gizir (1999) explained this finding as quite acceptable when the responses regarding alienation, high individualism, technology, competition, some administrative issues, lack of feeling of belongingness, lack of trust among faculty members, the existence of isolated persons and alliances within the department taken into consideration.

Moreover, cohesiveness, which is one of the main components of climate or atmosphere, is more influential within environments in which the value of collegiality is so prized (i.e. witness the need for joint academic research, committee-generated output, team teaching efforts in educational settings) (Pelton et. al, 1994). A lack of conflict and the presence of team spirit and cooperation are distinguishing characteristics of cohesive climates, and members of a cohesive work groups are more satisfied and possess more positive outlooks than do members of less cohesive groups. Optimistic predispositions and satisfaction are positively related to prosocial behaviors within work settings including self-disclosure, the willing acceptance of others, empathy, and enhance levels of trust (Pelton et al, 1994). In such climates, open communication including instructions, scientific discourse, complaints, suggestion, good ideas, bad ideas, and personal opinions are pervasive among its members (Myers et al, 1999).

Less cohesiveness, not having a feeling of belonging and a feeling of insecurity as implied in the items supposed to measure departmental atmosphere in the present study seem to cause poor communication among faculty members. The existence of poor communication among faculty members in a department seems to be

acceptable when an atmosphere in which faculty members, who are individually oriented, do not have feeling of belongingness and feeling of insecurity were taken into consideration.

The results of this study also indicated that the factor of lack of common goals had the strongest indirect impact on poor communication, while there was not a direct significant relationship between lack of common goals and poor communication. The results showed that lack of common goals influenced individualism, and, in turn, individualism affected poor communication. This means that *the relationship between lack of common goals and poor communication is mediated by individualism.*

The finding related with *the relationship between lack of common goals and individualism* is consistent with the reports of Gizir (1999) who found that high individualism was mainly caused by lack of common goals in an academic context. In her study, the relationship between high individualism and lack of common goals was explained by faculty members interviewed in such a way that there are no common goals, everyone has their own individual goals, and they try to achieve these goals by themselves. Also, this issue was stated in such a way that faculty members did not have agreement on some basic issues and also common goals due to the chauvinism within and among departments interfering communication process in the faculty.

Furthermore, common goals are one of the basic requirements of an organisation for continuing its existence, wholeness, and effectiveness like. Also, goals give feeling of belongingness and motivation, and provide a means of justifying the institution to its various publics (Patterson, 2001). The relationship between common goals reflecting cooperativeness and communication process in an organisation is expressed in the literature in such a way that common goals strengthening cohesiveness are strongly related to the skilled communication in which people expressed their views openly, considered the opinions of others, and combined ideas. These communication patterns are related with creative, high

quality solutions, efficient use of resources, positive feelings, and confidence in future collaboration (Tjesvold & McNeilly, 1988).

In addition, Tjesvold (1985) indicated that in addition to expressing their ideas more openly, individuals with cooperative goals have been found to ask each other questions, demonstrate that they are working for mutual benefit, and integrate their ideas to create new solutions, while competitive goals lead individuals to avoid discussing their ideas, trying to dominate, and being unable to integrate ideas and reach agreement. Specifically, Tjesvold (1985) found that employees with competitive goals had pessimistic expectations, thought they communicated ineffectively, and were able to develop quality, and creative solutions. There was also a third situation, namely independence, in which individuals believe that their goals are unrelated, so that one individual's progress neither assist nor frustrate others (Tjesvold & McNeilly, 1988).

Lack of common goals is a very significant problem for an organization since common goals are one of the most important bases of an organisation. Common goals encourage collective growth in a common direction, and focus on similarities, not differences. It may be argued that without common goals, an organization becomes only a collection of individuals. Book et al. (1980) define organization as a collection of individuals who desire to achieve some set of goals, recognise that goal achievement is best attained by cooperation rather than independent action, gather whatever materials and information, and return the modified materials and information to the environment with the intent of obtaining sufficient rewards.

Moreover, in contrast to the business organizations, having a clear unity of mission, complexity of mission and multiplicity of goals are some of the notably unique features of universities. This complexity comes from their various constituencies and interest groups, namely academic staff, students, administrators, councils, government, the public, and the Ministry (Patterson, 2001; Clark, 1983a). Each group holds divergent, even opposing views on university goals and goal priorities, both within and between the groups. For instance, administrators try to find out

efficient use of resources, while academic staff focuses on both teaching and research with different strengths of commitment to each. Patterson (2001) also stated that individual, group, and institutional goals are so different, even conflicting, that it is likely to be extremely difficult to formulate a statement of meaningful goals for the university. He also claimed that attempts to impose uniformity through specific goal-directed activity will always lie uneasily alongside this structure of segmented professionalism, and be inconsistent with the essential character and purpose of the institution –the challenging, reworking, maintaining, disseminating, expanding, defending, and evolving of knowledge generated by the commitment to research. Similarly, Cohen and March (2000) state that "efforts to generate normative statements of the goals of a university tend to produce goals that are meaningless or dubious" (p. 16).

In a similar way, Clark (1983b; as cited in Patterson, 2001) claimed that although academics may share common the fact that they work with and upon knowledge, they do not share common knowledge; infact, they are rewarded primarily for going off in opposite directions. Disciplinary fields continue to become ever more specialised, and tend to function as separate cell groups. As a result, there is a high degree of professional autonomy and authoritativeness at the operating level of the university. In addition, he states that the university is both discipline based and discipline diversified, because the curical links for the specialist groups are from identification with others working in the same specialised fields, either within or outside the academic system; with loyalty to the employing university institution frequently second order. He also views university as a loose confederation of knowledge-bearing groups, continually cell splitting and mutuating, disunited by their disparate loyalties, interests, ideas and approaches to knowledge, each with a high degree of self-control.

In addition, Baldridge et al. (2000) stated that universities are professionalized organizations in which faculty members as employees demand a large measure of control over institutional decision process, so these organizations have blurred lines of authority and professional employees who demand in their work. With similar

reasons, Cohen and March (2000) believed that academic organizations can be best described as “organized anarchy”. They stated that each individual in university anarchy is seen as making autonomous decisions and in universities generous resources allow people to go different directions without coordination by a central authority, so leaders are relatively weak and decisions are made by individual action.

Ogawa et al. (1999) stated that an enduring and fundamental dilemma for the organizations lies in the difficult relationship between organizational and individual goals. They claimed that the interaction among individual, organizational, and contextual factors can lead to a productive linkage of individual and organizational goals. Such an interaction is obtained by effective communication in organizations. The existence of some communication problems in a university (Gizir & Şimşek, in press; Kondakçı, 2000) may be seen as obstacles for interaction among individual, organizational and contextual factors. So, it might be proposed that lack of such an interaction leads faculty members to be individually oriented, and then they try to achieve their own goals and to satisfy their own needs with less concern to others’ needs, because common goals serve as basis for action and integrate the behaviors of members toward these goals and create cooperativeness rather individual action (Patterson, 2001; Kondakçı, 2000).

In addition, it seems that the distinct quality of academic institutions and systems is caused by organizational structure and administrative processes, including high degree of fragmented professionalism, employees being a special kind of professional people characterized by a particular high need for autonomy as mentioned in detail in the related literature previously (Rowland, 2002; Clark, 2000; Baldridge et al. 2000; Bolman & Deal, 1991; Birnbaum, 1988). This situation leads faculty members not to share the common goals which might cause to individualism, and in turn, individualism negatively affect communication process in an academic context.

Another finding of the present study was *the relationship between lack of common goals and poor communication that goes through departmental atmosphere*. In other words, there was a direct relationship *between lack of common goals and departmental atmosphere*. As mentioned before, common goals are one of the basic requirements of an organisation for continuing its wholeness and they give feeling of belongingness and motivation, and provide a means of justifying the institution to its various publics (Patterson, 2001). In addition, common goals strengthen cohesiveness and they are strongly related to the skilled communication in which people expressed their views openly, considered the opinions of others, and combined ideas. Such communication patterns are mainly related with positive feelings and confidence in future collaboration (Tjesvold & McNeilly, 1988).

Pelton et al. (1994) mentioned about the concept of cohesiveness as one of the main components of climate or atmosphere. They stated that this concept is more influential especially within environments in which the value of collegiality is so prized. Patterns of cohesiveness are evident in climates distinguished by the presence of team spirit and cooperation, and members of a cohesive work groups are more satisfied and possess more positive outlooks than do members of less cohesive groups (Pelton et al, 1994).

Based on this background and the result of a close inspection of the items, which were supposed to measure departmental atmosphere in the present study, imply that statements such as "*there is no sense of cohesiveness among faculty members within my department*", and "*I feel myself as a part of this department*" (reversely coded), it may be claimed that there is an atmosphere or climate in which faculty members do not have a feeling of belonging and it might be mentioned about the absence of wholeness in their departments because of lack of common goals. In such an atmosphere, poor communication among faculty members seems to be inevitable.

The results of the present study also showed that there is *indirect relationship between lack of common goals and poor communication mediated by*

administrative issues, and then department atmosphere. The direct relationship between lack of common goals and administrative issues, which was one the finding of the present study, again supports the findings of study conducted by Gizir (1999). Related with this finding, Gizir (1999) mentioned about expectations of faculty members from the administrative staff in the departments to set some common goals within and among the departments which may lead to better and higher degrees of communication. Gizir (1999) claimed that setting common goals may create mutual effect, that is, the design of some common goals may enhance communication process among academicians, and enhanced communication process can cause to set some further common goals.

Furthermore, Gizir (1999) stated that formal meetings which would be considered as a medium to get an agreement on some issues and to set some common goals by means of an effective communication network were seen as ineffective initiatives by faculty members. As a result of their study focusing on identifying the strengths and weaknesses of communication practices of education managers at work within a specified time, Hunt, et al (2000) claimed that the organization of meetings, the transmission of information and the use of appropriate channels were problematic between managers and staff. Specifically, the main weakness found in Hunt et al.'s study was that staff wanted to more able to express their opinion, lack of time, large school size and location, while the major strength of communication in the workplace was meetings.

According to Birnbaum (1988) as colleges and universities become more diverse, fragmented and specialized, their missions do not become clearer, rather they multiply and become sources of conflict rather than integration. He also claims that the problem is not that institutions cannot identify their goals; the actual problem is that they simultaneously embrace a large number of conflicting goals. In a similar way, Baldridge et al. (2000) state that "colleges and universities have vague, ambiguous goals and they must build decision processes to grapple with a higher degree of uncertainty and conflict" (p. 128).

Moreover, lack of common goals as an issue may be caused by the tasks of higher education being both knowledge-intensive and knowledge extensive. Clark (1983) stated that, "Goals are so broad and ambiguous that the university or system is left no chance to accomplish the goals, or to fail to accomplish them. There is no way that anyone can assess the degree of goal achievement" (p.19). Similarly, Baldridge et al., (2000) claimed that the goal ambiguity is one of the chief characteristics of academic organizations.

Besides professional fragmentation, Patterson (2001) mentioned about the existence of a wide diversity in leadership style and status found at the faculty departmental level. Patterson (2001) stated that heads of departments are far from comprising a managerial level that will uniformly interpret, adopt and reflect upper-echelon philosophy and many of them give a higher priority on their own and departmental goals than overall organizational goals. Different goals and the differences in their priority of goals among administrators seem to lead some administrative issues in universities.

When taking into consideration the complexity of the goals issue for universities and the characteristics of the university institution which inhibit goal clarification; administrative structure and also the importance of common goals for the existence, wholeness, and effectiveness of an organization, the relationship between lack of common goals and administrative issues seems quite acceptable. Because common or cooperative goals are highly influential on the effectiveness of administrative processes, such as decision making, motivation, organizational change, personnel management, and productivity (Lunenburg & Ornstain, 1996).

Another direct relationship found in the present study was the relationship between *administrative issues and departmental atmosphere*. Similarly, Gizir (1999) found such a relationship between administrative issues and atmosphere at the end of her study. She stated that administrative issues can cause an atmosphere in which faculty members observe double standards and need to formal and informal-

gathering places or mediums. She believed that their administrators were not aware of communication problems experienced among faculty members.

Pelton et al. (1994) claimed that perceptions of administrative fairness are generally predicated on the presence of procedural and outcome justice. While procedural justice relates the objectivity of the institutional means used to resolve conflicts, outcome justice refers to the objectivity of the ends actually achieved, and each form of justice must be present in approximately equivalent amounts within professional organizations for employees to perceive the presence of a fair climate or atmosphere. Pelton et al. (1994) also stated that the fairness of a department's reward (e.g., promotion and tenure) and/or corrective (e.g., termination) systems exist as unblinking reflections of the organizations normative structures, and the judgments of faculty members about the administrative unfairness negatively affecting their evaluation of the level of trust they invest in their administrators. Thus, a close inspection of the items, which were supposed to measure administrative issues in the present study, imply that statements such as "*administrative rules are used differently for different people*" might refer to a lack of trust among faculty members to their administrators and the existence of a judgment or perception of faculty members about the absence of a fair climate or atmosphere in the academic context.

In addition, Pelton et al. (1994) reported that autonomy is a basic component of the climate associated with any organizational setting. The desire for the academic freedom that presumably accompanies the professorial role and the type of person usually shape the faculty members' academic lifestyle and silent faculty needs are satisfied through the receipt of greater autonomy. The realization of autonomy generally cultivates feelings of greater security among recipients and this security provides a stabilizing function, which may promote trust (Pelton et al., 1994). In Turkey, the existence of the Council of Higher Education and the administrative structure of the universities showing hierarchical characteristics are perceived as threats on their academic freedom by faculty members (Kondakçı, 2000; Gizir, 1999; Şimşek & Aytemiz, 1998). This perception might cause a feeling of

insecurity as implied in a reversely coded statement of "*I have a feeling of security in my department*" that is supposed to measure departmental atmosphere in the present study.

At this point, mentioning about *the indirect relationship between administrative issue and poor communication mediated by departmental atmosphere*, the situation makes clear an indirect relationship between lack of common goals and poor communication mediated by administrative issues, and then departmental atmosphere as mentioned before. Taking these explanations into consideration about the relationships between lack of common goals and administrative issues, between administrative issues and departmental atmosphere, and between departmental atmosphere and poor communication as mentioned above, it may be said that lack of common goals or plurality of the goals of universities leads to administrative issues which cause a departmental atmosphere in which faculty members do not have feeling of belongingness, and feeling of security, and also saw their departmental atmosphere as artificial, boring and not warm enough. This situation creates a basis for poor communication among faculty members.

Another indirect relationship found in the present study was between *inadequate exchange of scientific knowledge and poor communication that goes through individualism*. In other words, there was a *direct relationship between inadequate exchange of scientific knowledge and individualism*.

One of the results of the study is *the reciprocal relationship between individualism and inadequate exchange of scientific knowledge.* Similarly, Gizir (1999) pointed out that faculty members did not adequately share their scientific knowledge and work results with each other because of competition, high individualism, and lack of facilitators. In Gizir's study (1999) faculty members interviewed argued that high individualism was caused by their field of study since they believed that their field of study requires creativeness which makes them introvert and individualistic. Besides the nature of the field, other stated causes of high individualism were the size of the department, lack of motivation, competition, the feelings of domination

or possession of knowledge, promotion system based on publication and other criteria, and lack of common goals.

Gizir (1999) also reported that faculty members interviewed pointed out that almost all faculty members in the department work individually, so there are few collaborative scientific works in their department. As an example, one faculty member said, “even when we take a common project, this project is divided into pieces and shared among members, and then everyone studies their parts, that is, we do not have a culture of sharing” (p. 122).

Moreover, regarding competition, Gizir (1999) mentioned that faculty members pointed out that there were few collaborative scientific works since everyone works individually in their offices to get an academic title. They even mentioned that a faculty member stands in her/his office without communicating anyone else in a whole day, so they do not share many things including academic work at all in the department.

Furthermore, Clark (1983a) related individualism with the nature of academic work. He mentioned that the favourite doctrines of faculty members, freedom of research, teaching and learning, are heavily individualistic. Clark also stated that each person is to judge and choose for him/herself, so this idea seems to be atomistic. He believed that individualism remains much a shared value, some faculty members sense they share, but some incalculate respect for the choices and actions of others. He also mentioned that values do not produce similar behaviors to be integrated, in other words, faculty members acting differently according to their individual judgment and dictate, while they may also be aware of moral bases for such actions, share attachment to the premises, exchange respect, and grand authority accordingly. So, individualism seems to be a flexible pattern through one that has an elective affinity for the evermore variegated nature of academic work, that is, it may cause to legitimate and rationalize so much variety, at the same time to operate as a shared perspective.

Moreover, Darwish and Huber (2003) stated that individually oriented people try to promote their self-interest (underlying individual rights, not responsibilities), personal autonomy, privacy, self-realization, individual initiative, independence, individual decision making, and understanding of personal identity as the sum of attributes of the individual, and less concern about the need and interests of others. In addition, according to Wagner II (1995) individualists who feel independent and self-reliant are less apt to engage in cooperative behavior

In addition, Gizir (1999) mentioned that collaborative studies within and between disciplines, seminars, symposiums, co-teaching, co-advising, double-major and minor-major undergraduate programs were the most suitable mediums for exchanging scientific knowledge among faculty members, and lack of such mediums cause faculty members to conduct scientific studies individually. However, Kondakçı (2000) mentioned about the observation of the administrators that faculty members were not willing to attend to seminars, symposiums and workshops. Also, Grbich (1998) stated that the limitation of research seminars is the "show and tell" aspect which resulted from the lack of critical debate. She claimed that "one obstacle to the development of such debate may be traced to the multiplicity of disciplines" (p. 72).

As a result, proposing that individualism in academic context leading to inadequate exchange of scientific knowledge and inadequate collaboration among faculty members seems to be quite acceptable when taken into consideration the definition of individualism as presented above, the individualistic nature of academicians, professional fragmentation, differences in disciplinary cultures, and lack of common goals among academicians. Furthermore, lack of formal channels and/or mediums like seminars, symposiums, co-teaching, co-advising, double-major and minor-major undergraduate programs in which faculty members get to chance to communicate and collaborate with each other may lead faculty members to behave individually.

With this background, it may be claimed that inadequate exchange of scientific knowledge leads faculty members to behave individually with less concern on needs and interest of others within their departments, and then an effective communication cannot be observed among individually oriented faculty members as explained before.

In addition, another finding of the present study was *indirect relationship between lack of motivation and poor communication mediated by inadequate exchange of scientific knowledge, and individualism.* It was found in the present study that there was *a direct relationship between lack of motivation and inadequate exchange of scientific knowledge***.** This finding supported the results of the study done by Gizir (1999). She stated that the issue of lack of motivation mainly refers to the faculty members not having much enthusiasm to conduct scientific research, to improve their intellectual qualities and to teach the students. In her study, departmental atmosphere, age profile of faculty members, inbreeding, and being together with the same people in the same place for a long time as issues negatively affecting communication among faculty members were related with lack of motivation. Specifically, Gizir (1999) claimed that faculty members lose their scientific enthusiasm causing faculty members not to exchange scientific knowledge with each other.

In the related literature, it was stated that the best motivators in academia are self-achievement, the internal reward along with a feeling of accomplishment, self-actualization, preferred effort given the role and self-judged competence, that is, personal variables (Johnsrud, 2002; Grbich, 1998; Johnsrud & Heck, 1998; Pinto & Pulido, 1997; Rowley, 1996; At-Twaijri & Al-Khursani, 1994). In addition, as a result of their study on motivation in academia, At-Twaijri and Al-Khursani (1994) stated that social relations, the opportunity for presenting new ideas and development, and cooperative work among faculty members were the second important motivators.

Inadequate exchange of scientific knowledge among faculty members seems to be quite acceptable when an academic context in which faculty members work individually, not having motivation to make scientific studies, to make collaborative studies and exchange scientific knowledge, and form alliances in which members communicate more frequently while they communicate superficially with other faculty members were taken into consideration. So, poor communication may be experienced among faculty members who inadequately exchange their scientific knowledge because of lack of motivation.

Another set of findings of the present study was the relationship between scientific discourse and poor communication that goes through lack of motivation, inadequate exchange of scientific knowledge and individualism, along with the finding of relationship between scientific discourse and lack of motivation. Because there is no directly analogous study in Turkey and also in abroad, it is difficult to claim whether the results of this study confirm or disconfirm the previous ones. However, a close inspection of the items supposed to measure scientific discourse in the instrument used in the present study, such as "*scientific discourse is generally made through gossips in my department*", "*taking scientific discourse as personal negatively affects scientific communication among faculty members in my department*.", and "*being afraid of damaging interpersonal relations, negative views are not expressed in my department*" may refer to a lack of scientific discourse among faculty members or refer to the problematic nature of scientific discourse among faculty members.

If scientific discourse seen as a mean or a medium giving opportunity for faculty members to improve their scientific works and other scientific activities, and also seen as supportive behavior from their colleagues, it seems to be acceptable that a lack of scientific discourse or problematic scientific discourse negatively affect motivation of faculty members. Because perceived support of colleagues and research challenges are some of the factors affecting motivation in academia (Tu et al., 2005; Oshagbemi, 2001).

As a result, it may be argued that poor communication is inevitable among individually oriented faculty members who do not express their negative opinions and not have scientific motivation which leads to inadequate exchange of scientific knowledge.

It was also found in the present study that alliances within the department lead to poor communication. In other words, there was an *indirect relationship between alliances and poor communication that goes through inadequate exchange of scientific knowledge and individualism.* This indirect relationship requires explanation of *the direct relationship between alliances and inadequate exchange of scientific knowledge.* This finding was consistent with the results of Gizir (1999) who found that alliances based on age, tenure, title, field of study and political opinion negatively influenced exchange of scientific knowledge among faculty members within the department. Gizir (1999) stated that faculty members in the same alliance communicate frequently especially in scientific issues with each other, while communication with other faculty members is more superficial.

In addition, this finding supported the results of the study done by Zenger and Lawrence (1989). They emphasised that an organisation's demographic composition affects communication since people tend to communicate with those who are similar to them. They also pointed out that the degree to which an employee is demographically similar to others in an organisation might be an important determinant of how frequently those employees communicate within the organisation. These similarities both produce a common language and encourage communication. They also claimed that there was a mutual relationship between work-related and non-work-related communication, that is, non-work-related experiences appear to produce shared attitudes, interests, and beliefs among faculty members that also facilitate work-related communication, or work-related communication facilitates non-work-related communication in a similar way.

Similarly, McCain, O'Reilly and Pfeffer (1983) mentioned that employees have a tendency to communicate with others having the same or approximate similar

tenure due to the experiencing similar events in their organisation. They also stated that in a six or seven-year period, perceptions, values, and beliefs differ more. Thus, communication between different tenure groups becomes more difficult, and encourages conflict and power struggles.

It seems that the finding related with the relationship between inadequate exchange of scientific knowledge and alliances is acceptable when taking into consideration superficial communication among faculty members from different alliances while intense work-related and/or non-work-related communication among faculty members within group. In other words, it may be proposed that there is poor communication among faculty members belonging to different alliances.

Results of the present study also showed that *departmental atmosphere mediated the relationship between introvert characteristics of the department and poor communication.* Results indicated that there was *a direct relationship between introvert characteristics of the department and departmental atmosphere.* It is difficult to claim whether the results of this study confirm or disconfirm the previous ones, since there is no directly analogous study in Turkey and also in abroad.

However, related with the introvert characteristic of the department, Gizir (1999) claimed that this issue seems to be quite acceptable with the fact that in a department whose faculty members compete with each other and individually oriented, an effective communication with other departments is not expected. She reported that faculty members did not need to communicate with faculty members from other departments in the university, because they believed that other departments were not like them, so they did not attend activities of other departments, and did not inform them about their own activities, and each department continues their existence within their own borderlines.

Furthermore, it seems that the structural configuration of universities based on disciplines which are the lifeblood of higher education institutions as their main

organizing base and their main social framework (Becher, 1994) inevitably causes departments to be introvert. In university-type organizations, disciplines are loosely connected at the operational level, they have only small number of higher levels of coordination (Clark, 1983, p. 17), and each discipline that is defined as organized social grouping has its own set of concepts, methods and fundamental aims (Becher, 1994; Gaff & Wilson, 1988). Clearly divided disciplines enact across and within departments. Becher and Trowler (2001) viewed disciplines as academic tribes inhabiting different academic territories, and the location of the academic territory forms the basis for the social life of the field: the aims, typical modes of action and interaction, publication patterns, core values and beliefs of the tribe. In addition, they mentioned that the academic tribes have their own traditions with heroes, tabus and rituals, as well as their own ways to control, punish, and reward their members.

In a similar way, Ylijoki (2000) claimed that disciplines have their own traditions and categories of thought providing the members of the field with shared concepts of theories, methods, techniques and problems. In addition to the common cognitive basis, disciplines have their own social and cultural characteristics: norms, values, modes of interaction, life-style, pedagogical and ethical codes, etc. (Hearn & Anderson, 2002; Trowler & Knight, 2000; Ylijoki, 2000; Becher, 1994; Huber, 1992; Moses, 1990; Clark, 1983; Biglan 1973).

In additon, Kuh and Witt (2000) claimed that culture gives a sense of identity, helps to become as entity, such as the college or peer group, other than self, enhances a group's social system, and it is a sense making device that guides and shapes behavior. Taking into consideration of faculty members' work in a unique disciplinary culture which differentiates them from faculty members in other disciplinary cultures in the university, introvert characteristic of departments seems to be acceptable.

The item of the instrument used in the present study appears to reflect the perception of faculty members about their departmental atmosphere that is

measured by the following item: "*There is an artificial, boring and cold atmosphere in my department*". This perception may be caused from a department in which faculty members are not faced with new challenges, new experiences, new relationships, new interaction patterns, different points of view, etc., because with the belief that they are different from others. Faculty members, who are individually oriented and compete with each other even within their departments, do not communicate with other faculty members in other departments. In other words, it seems that faculty members do not adequately exchange their experiences, ideas, thoughts, scientific works and work results which may enrich to their worklife.

Another finding of the present study was *the indirect relationship between scientific discourse and poor communication that goes through introvert characteristics of the department and departmental atmosphere***.** *The direct relationship between scientific discourse and introvert characteristics of the department* was one of the findings of the present study. Because there is no directly analogous study in Turkey and also in abroad, it is difficult to claim whether the results of the study confirm or disconfirm the previous ones.

However, taken into consideration the explanations of Gizir (1999) regarding criticism raised as an issue negatively affecting communication, this finding seems to be meaningful. Gizir (1999) stated that criticism made for exchanging scientific knowledge and experiences among faculty members was taken personal and they prefer not to criticize each other since they afraid of damaging their relations, that is, academic and personal issues were not clearly separated. In other words, task-related and non-task-related issues were mixed which, in turn, inhibits communication.

It may be proposed that lack of scientific discourse through which faculty members exchange their negative or positive ideas about others' scientific works, thought and experiences without hesitation cause departments to be introvert. Also, it may be caused from the faculty members who are individually oriented, inadequately

exchange scientific knowledge with other faculty members even within their departments. In addition, disciplinary cultures having their own traditions and categories of thought which provide the members of the field with shared concepts of theories, methods, techniques and problems (Ylijoki, 2000) might cause the lack of scientific discourse, and then cause the departments to be introvert and poor communication among faculty members.

It was also found that lack of motivation, inadequate exchange of scientific knowledge, and individualism mediated the relationship between departmental atmosphere and poor communication. Because of the existence of direct relationship between departmental atmosphere and poor communication as explained previously, this indirect relationship does not need to be clarified. However, *the direct relationship between departmental atmosphere and lack of motivation* through the aforementioned indirect relationship between departmental atmosphere and poor communication may need to be explained. As mentioned, *the direct relationship between departmental atmosphere and lack of motivation* was also one of the findings of the present study. In the related literature, it was stated that cooperative work relationships among professionals motivate faculty members (At-Twaijri & Al-Khursani, 1994). In addition, researchers focusing on motivation in higher education state that motivation of academic staff is mainly related with the job satisfaction and productivity (Johnsrud, 2002; Grbich, 1998; Johnsrud & Heck, 1998; Lacy & Sheehan, 1997; Pinto & Pulido, 1997; Rowley, 1996; At-Twaijri & Al-Khursani; 1994). Specifically, faculty morale, academics' perception of climate or atmosphere, university atmosphere, perceived support of colleagues, the relationship with one's department, the work context were expressed in the related literature as factors influencing the level of job satisfaction of faculty members (Tu et al., 2005; Küskü, 2003; Johnsrud, 2002; Oshagbemi, 2001, 2000a, 2000b, 1999, 1997; Johnsrud & Heck, 1998; Grbich, 1998; Lacy & Sheenan, 1997; Rowley, 1996).

The items of the instrument used in the present study appear to reflect the perception of faculty members about their departmental atmosphere that is

measured by the following items: "there is an artificial, boring and cold atmosphere in my department", "*there is no sense of cohesiveness among faculty members within my department", "I have a feeling of security in my department" (reversely coded), and "I feel myself as a part of this department"* (reversely coded). It seems that there is not a departmental atmosphere which motivates faculty members and gives a feeling of satisfaction among faculty members.

Another finding of the present study was *the indirect relationship between departmental atmosphere and poor communication that goes through individualism***.** But explaining this indirect relationship seems to be unnecessary because of the existence of direct relationship between them.

It is also found in the present study that there was *a direct relationship between departmental atmosphere and individualism* through the indirect relationship between departmental atmosphere and poor communication. This finding is consistent with the findings of the study done by Gizir (1999). As mentioned before, in her study, departmental atmosphere was raised as an issue negatively influencing communication process within the department, and it was mentioned as not warm enough to facilitate communication and labeled as "cold, artificial, or boring" by the faculty members interviewed. She stated that unsolved problems causing faculty members to be unhappy and disappointed were stated as causes of such an atmosphere and faculty members also mentioned the existence of 'silent unhappiness' in the department.

As mentioned previously, Pelton et al. (1994) stated that the concept of cohesiveness is one of the main components of climate or atmosphere. They stated that this concept is more influential within environments in which the value of collegiality is so praised (i.e. witness the need for joint academic research, committee-generated output, team teaching efforts in educational settings). Patterns of cohesiveness or discord can be observed at either department-wide or faculty-wide level. Patterns of cohesiveness are evident in climates distinguished by a lack of conflict and the presence of team spirit and cooperation, and members of a

cohesive work groups are more satisfied and possess more positive outlooks than do members of less cohesive groups. Optimistic predispositions and satisfaction are positively related to prosocial behaviors within work settings including self-disclosure, the willing acceptance of others, empathy, and enhance levels of trust (Pelton et al, 1994).

A close inspection of the items, which were supposed to measure departmental atmosphere in the present study, imply that statements such as "*there is no sense of cohesiveness among faculty members within my department*", and "*I feel myself as a part of this department*" (reversely coded) might give an idea that there is not cohesiveness or less cohesiveness in departments sampled in the present study. In addition, it seems that such an atmosphere leads faculty members to try to promote their self-interest, personal autonomy, privacy, self-realization, individual initiative, independence, individual decision making, and understanding of personal identity and less concern about the need and interests of others (Darwish & Huber, 2003).

In conclusion, it can be stated that departmental atmosphere is one of the most influenced factor from other factors, while it directly influences communication in universities. In addition, another more influenced factor from the others was individualism which was directly related to poor communication. Also, inadequate exchange of scientific knowledge appeared to be another more influenced factor from the others. However, lack of common goals emerged as more influential factor on other factors. This seems to be quite acceptable when the distinguishing characteristics of universities as organizations including multiplicity of goals, the nature of academic profession, and structural and administrative configuration were taken into consideration.

Universities have complex and multiple goals, because the structures of universities based on knowledge specialization or disciplines which is defined as organized social grouping with its own set of concepts, methods and fundamental aims (Becher, 1994; Gaff & Wilson, 1988) and which have unique cultures referring to

their own traditions and categories of thought which provide the members of the field with shared concepts of theories, methods, techniques and problems (Ylijoki, 2000). Thus, universities are seen as multiple configurations which are dynamic in character and the lived reality in one department is quite different from that in another (Alvesson, 1993). Even, Toma (1997) claimed that with rise of new paradigms, scholars working in the same university departments increasingly find themselves grounded within different intellectual traditions and distinct academic cultures. Furthermore, the nature academic profession which is a special kind of profession characterized by a particular high need for autonomy and which is naturally individualistic (Clark, 2000; 1983a) leads to complexity in administrative structure and differentiate universities from other organizations.

Gizir and Şimşek (in press) claimed that findings of the study explaining communication in an academic context are rather different compared to the findings of similar studies in business enterprises. For example, alienation, high individualism, conservatism, criticism, lack of traditions, and some administrative issues, especially the issue of only personal contact reflecting lack of formal channels are rarely found in findings of studies done in business enterprises, because organizational communication studies on business enterprises generally focus on superior-subordinate communication, leadership styles and subordinate satisfaction, amount of information, job types and communication, the relationship between communication and satisfaction, and performance (Courtright, Fairhurst, & Rogers, 1989; Gioia & Sims, 1986; Snyder & Morris, 1984; Huber, 1982; Machintosh, 1981). Similar argument is true for the present study. The findings demonstrated that universities are different types of organizations with their unique culture including several sub-cultures in which communication take place. By considering the most pervasive definition of the concept of culture as “the way we do things around here” (Deal & Kennedy, 1983. p.13), it may be said that all the relationships between nine factors and poor communication, and between nine factors which are the findings of the present study reflect the general cultural configuration of universities as organizations which are also different from other professional organizations.

In addition, in literature, especially among communication scholars, there is an agreement on the existence of a reciprocal relationship between culture and communication (Kowalski, 2000). In this respect, Gudykunski (1997) stated that individuals are socialized in a culture influencing the way that communicates, and the way that individuals communicate can change the culture they share over time. Moreover, Kowalski (2000) claims that cultures are communicative creations; cultures affect communication, but communication is central to building, maintaining and changing culture. So, it may be claimed that communication in academic context has some features that make it unique or different from other aspects of university organizations.

5.2 Model Testing and Theory Construction

Scientific knowledge is basically defined as "a system for description and explanation" of "why things happen" under what conditions (Reynolds, 1971, p, 3-4). A body of scientific knowledge is seen as useful for science when it provides:

a. A typology which is method of organizing and categorizing things,
b. Predicting events that will occur in the future,
c. Explanations of events that have occurred in the past,
d. A sense of understanding about what causes events,
e. The potential for control of events (occasionally) (Reynolds, 1971, p. 4-5).

Moreover, abstractness (independence of time and space), intersubjectivity and empirical relevance are desirable characteristics of scientific knowledge. Reynolds (1971) also defines scientific knowledge as "a collection of abstract theoretical statements" (p. 83). He explains that theoretical statements with no empirical support are considered hypothesis, those with some support are considered empirical generalizations, and those with overwhelming support are considered laws. He mentions about three different conceptions of how sets of statements should be organized so as to constitute a theory: (1) set-of-laws, (2) axiomatic, and (3) causal process.

According to Reynolds (1971), the development of a theory using the *set-of-laws* conception of theory is to consider abstract theoretical statements as having different degrees of empirical support. In other words, he claims that all laws are directly supported by empirical research, that is, all concepts used in laws must have operational definitions allowing their identification in concrete situations. He mentions that a set-of-theory provides typology, predictions of future events, and explanation of past events, but it does not provide a sense of understanding.

An axiomatic form of theory is defined as an interrelated set of definitions and relational statements, while *the causal process form of theory* is defined as an interrelated set of definitions and a set of causal statements (Reynolds, 1971). These two forms of theories are suitable for three purposes of science: providing typology, logical explanation and prediction, but only the causal form, or the statements from an axiomatic theory put in causal process form, can provide a sense of understanding. He also divides research strategy into two classes "*research-then-theory"* and "*theory-then-research*". In this division, the axiomatic-causal process form of theory appears to enable more efficient research if the theory-then-research strategy is adopted. However, in research-then-theory strategy in science, firstly a research is conducted and then it is attempted to infer what systematic patterns among the data might be considered to be laws. In this type of strategy, the set-of-laws conception of theory may lead to the most efficient form of research. In summary, Reynolds (1971) claims that research efficiency is related both the conception of theory and the strategy employed for developing a scientific knowledge.

Reynolds (1971) also argues that considerable effort may be spent on collecting data that have no useful purpose in the research-then-theory strategy, but it may provide some useful information for inventing theories. In addition, the theory-then-research strategy is more efficient when one only collects information related to a few important hypotheses, but it has the disadvantages that the scientist may have no initial information on which to base the first attempts at a theory. Thus,

Reynolds (1971) proposes *a composite approach* having the advantages of both of the aforementioned strategies. In this approach, scientific activity is divided into three stages. *Exploratory* is the first stage in which research is designed to allow investigators to just look around with respect to some phenomena and to develop suggestive ideas in order to provide guidance for procedure to be employed in research activity during stage two. *Descriptive*, the second stage, aims at developing careful descriptions of patterns that were suspected in the exploratory research. In this stage, the purpose is to develop intersubjective descriptions, i.e., empirical generalizations. Reynolds (1971) states that "ones an empirical generalization is developed, it is then considered worth explaining, i.e., the development of a theory" (p. 154). The third stage is *explanatory* in which the goal is to develop explicit theory that can be used to explain the empirical generalizations that evolve from the second stage. He claims that this is a continuous cycle of: theory construction, then theory testing, and then theory reformulation, then again back to theory construction. In sum, initial research is conducted in an attempt to provide suggestive patterns that may be established by descriptive research and once an empirical generalization is established, a theory may be constructed to explain this regularity.

As mentioned in detail previously, the present study was mainly based on a qualitative case study conducted by Gizir (1999). At the end of her qualitative study, Gizir proposed a model reflecting a pattern in which relationships between factors negatively affecting communication process in an academic context were presented. Regarding composite approach proposed by Reynolds (1971), Gizir's study may be seen as an *exploratory* to provide guidance for procedures to be employed in the present study. Because the present study tried to examine the proposed model in Gizir's study, that is, to examine the patterns including relationships between factors negatively affecting communication process in academic context. Here, it must be remembered that examined hypothetical model in the present study was not included all the relationships proposed in Gizir's earlier study, the only ones which are more frequently stressed were included. At the end of the present study, a fitted model including relationships between factors

negatively affecting communication process and poor communication in academic context was proposed. Few differences were observed between the hypothetical model and modified model. The differences between these two models may be caused by using different research approaches in the Gizir's earlier study and the present study. While Gizir adopted a qualitative research approach in her study, a quantitative research approach was adopted in the present study.

The final model or fitted model referring a pattern including relationships between factors and poor communication in academic context was explained in detail in the present study. In other words, at the end of the present study, some empirical generalizations with respect to the relationship between nine factors and poor communication were developed. So, it must be said that the whole pattern presented in the fitted model or each relationships between factors needs to be supported with further empirical research in order to test these empirical generalizations proposed in the present study.

5.3 Implications and Recommendations for Practice

It was mentioned in higher education literature that results of studies focusing on business organizations and reform and/or organizational change initiatives programmed by taking into consideration the general characteristics of business organizations cannot be applied to universities as organizations (Gizir & Şimşek, in press; Patterson, 2001; Baldridge et al., 2000; Etzioni, 2000; Ackroyd & Ackroyd, 1999; Gizir, 1999; McAleer & McHugh, 1994; Birnbaum, 1988; Clark, 1983). Because universities as higher education institutions have some distinguishing characteristics that make them more complex organizations and consequently differentiate them with respect to their structure of authority, mission, performance appraisals, type of specilization regarding work activities, employees, and hierarchy line compared with other types of organizations.

Because the present study is directly focused on communication processes among faculty members in universities as organizations, the results might be valuable for

educational administrators who intent to develop university reform agenda in Turkey and abroad.

In addition, the restructuring of higher education in the world which has been caused by changing nature of students, marketplace requirements, employer needs, decreasing public spending, calls for broader range of services to society, economic recession, and confusion about academic goals (Levin, 2003; Jacob & Hellström, 2003; Altbach, 1995) has generated various critical debates on almost all aspects of universities, such as collegial tradition, departmental structure, academic culture, knowledge ethics and roles of academics, etc. (Jacob & Hellström, 2003; Marginson, 2000; Edwards, 1999; Adams, 1998; Tapper & Palfreyman, 1998; Altbach, 1995; Kerr, 1994; Barnett, 1993). The results of the present study may make a contribution to the mentioned debates with respect to communication process-related consequences of departmental structure of universities, academic and disciplinary cultures, roles of academics, the nature of academic profession, and atmosphere in academic context.

Moreover, changing nature of faculty members' worklife and workplace as a result of restructuring of higher educational organizations has an intense impact on their perception on their workplace and worklife (Adams, 1998). Thus, assessing factors influencing communication process in higher education institutions may give valuable information with respect to changing perceptions of faculty members with respect to communication process.

Furthermore, a university as an open system has permeable boundaries and many of interaction occur between the environment and many of the system elements (Michael, 2004; Valimaa, 1998) and also it has complex inputs which can not be clearly assessed or controlled, such as people, ideas, tangible resources, and involvement with other institutions and systems (Gizir, 1999; Birnbaum, 1988). In addition, universities are composed of many semi-autonomous or loosely coordinated subsystems, namely departments. Each subsystem have culture which are different from each other by having different norms, values, modes of

interaction, life-style, pedagogical and ethical codes etc., so it can be said that universities can be seen as multicultural entities (Hearn & Anderson, 2002; Trowler & Knight, 2000; Ylijoki, 2000; Becher, 1994; Huber, 1992). In such complex organizations, communication gains more importance to control and coordinate organizational activities, and to achieve institutional goals. Also, within this framework, it is not easy to establish an effective communication network in a university and to continue its effectiveness. Because of communication is an endless process until an organization itself stops to exist, it is required periodically to asses its effectiveness, and testing communication effectiveness of any university also gives an idea about its effectiveness (Millet, 1968).

In addition, there have been some kinds of problems regarding higher education institutions in Turkey. Küskü (2003) mentioned about a need felt by the government, society, the employment sector, and CHE to ensure that universities are accountable for the resources they consume. In other words, all aspects of society expect high quality service from higher education institutions. Quality in research, teaching and service which are the basic tasks of a university are obtained by improving the quality in administrative processes, academic staff and related aspects of their worklife and workplace, technical infrastrusture, etc. Assessing problems and the causes of these problems regarding administrative processes, academic staff and related aspects of their worklife and workplace, technical infrasturcture, and any attempt to solve these problems and to improve them contribute to increase in quality of basic tasks of a university. Thus, assessing factors negatively influencing communication in academic process may provide additional evidence regarding how communication process in academic context are made more effective and how quality is increased in universities related with the communication process. It may be said that such attempts gain more importance in Turkey especially when taken into consideration the increase in number of public and private universities in various cities of the country.

In addition, assessing the factors negatively affecting communication process and their relationships among them in the academic context may make a contribution to

the administrators who try to find solutions to the communication problems experienced in academic context.

5.4 Implications and Recommendations for Research

As mentioned in detail previously, the instrument used in the present study was mainly developed based on the qualitative data obtained during Gizir's study (1999). In addition, the hypothetical model which was tested in the present study was drawn from the same qualitative case study. In other words, it may be said that Gizir's study was used as a preliminary study in the present study. The Gizir's qualitative study provided some substantive categories and hypothesis to the present study. Then, the present study tried to test the hypothetical model including relationships between the constructs. Thus, it might be claimed that the present study may be seen as an important step to build a theory. In other words, there is a need for further research to validate various types of hypotheses that may be drawn from this earlier model. Further research studies may investigate whether the fitted model obtained in the present study is valid in other cultures, such as individualistic cultures or collectivist cultures. In addition, the fitted model should be re-tested overtime. Furthermore, each factor and their relationships with poor communication represented in the fitted model may be studied separately.

Moreover, the results of the present study may not give information only related with the communication process among faculty members, but also its results give valuable information about some characteristics of faculty members, some work-related relationships among them, academic and disciplinary culture in universities and some characteristics of universities as organizations.

As a result of literature review, it can be said that there are limited number of studies on communication process in academic context in Turkey and abroad. In this respect, despite its limitations, this study may make a contribution to understand the complex nature of communication process in universities as complex organizations and also to the related literature.

In addition, assessing factors positively affecting communication process in academic context may give valuable information to see whole picture of relationships between factors affecting communication process in academic context.

Moreover, similar studies may be carried out in private universities to assess factors negatively affecting communication process among faculty members. So, a comparison can be made between public and private universities with respect to factors negatively influencing communication process in academic context. In addition, a similar comparison may be made between old and new universities, and also between universities in Turkey and abroad for further research studies.

In addition, by considering rapid changes in Turkey and in the world, a series of follow-up studies should be conducted over a period of time to identify the long-range fluctuation in the relationships among factors negatively affecting communication process among faculty members.

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APPENDICES

APPENDIX A

TURKISH

AKADEMİK ORTAM İLETİŞİM ANALİZİ ENVANTERİ

Sayın Öğretim Üyesi,

Bu veri toplama aracı, öğretim üyelerinin bölümleri içerisindeki diğer öğretim üyeleri ile olan iletişimlerini etkileyen faktörler ve bu faktörler arasındaki ilişki örüntülerini belirlemek amacıyla yapılmakta olan bir araştırma için hazırlanmıştır.

Anket iki kısımdan oluşmaktadır. Birinci kısım kişisel bilgileri, ikinci kısım ise akademik ortamda iletişim ile ilgili maddeleri içermektedir.

Ankete vereceğiniz yanıtlar kesinlikle gizli tutulacak ve araştırma dışında hiçbir yerde kullanılmayacaktır.

Yardımlarınız için teşekkür eder, saygılar sunarım.

Tez Danışmanı: Prof. Dr. Hasan ŞİMŞEK

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Doktora Öğrencisi
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Görev Yaptığınız Üniversite	:……
Görev Yaptığınız Fakülte	:……
Görev Yaptığınız Bölüm	:……
Akademik Çalışma Alanınız	:……
Şu Andaki Akademik Unvanınız	: □Yrd. Doç. Dr. □Doç. Dr. □Profesör
Öğretim Üyesi Olarak Bulunduğunuz Üniversitedeki Hizmet Yılınız	:…….
Doktora Derecenizi Aldığınız Üniversite	:.....…….....
Cinsiyetiniz	: □Kadın □Erkek
Yaşınız	: …….....

AKADEMİK ORTAM İLETİŞİM ANALİZİ ENVANTERİ

Lütfen, her ifadeye ilişkin katılma derecenizi aşağıdaki ölçeğe göre değerlendiriniz.

5. Kesinlikle Katılıyorum
4. Katılıyorum
3. Kararsızım
2. Katılmıyorum
1. Kesinlikle Katılmıyorum

1. Bölümümdeki diğer akademisyenlerle iletişimim akademik konularla sınırlıdır.	5	4	3	2	1
2. Bölümümdeki diğer akademisyenlerle fazla kişisel iletişim kurmam.	5	4	3	2	1
3. Bölümümdeki akademisyenlerle iletişim kurmak için çok çaba harcamam gerekir.	5	4	3	2	1
4. Bölümümdeki akademisyenler birbirleriyle iletişim kurmaya ihtiyaç duymazlar.	5	4	3	2	1
5. Bölümümdeki akademisyenler birbirlerine güvenmezler.	5	4	3	2	1
6. Bölümümdeki akademisyenler birbirlerine karşı duyarsızdırlar.	5	4	3	2	1
7. Bölümümde yapılan sosyal faaliyetlere akademisyenlerin katılımı çok azdır.	5	4	3	2	1
8. Bölümümde akademik çalışmalar daha çok bireysel yapılır.	5	4	3	2	1
9. Akademik yükselmelerde kullanılan puan sistemi bölümde bireyselliği artırıyor.	5	4	3	2	1
10. Bölümümde akademisyenler arasında bilimsel bilgi alış-verişi azdır.	5	4	3	2	1
11. Bölümdeki akademisyenler birbirlerinin akademik etkinliklerinden habersizdir.	5	4	3	2	1
12. Bölümümde aşırı uzmanlaşma akademisyenler arasındaki iletişimi olumsuz yönde etkilemektedir.	5	4	3	2	1
13. Bölümümde akademisyenler arasındaki bilimsel rekabet nedeniyle bireysellik vardır.	5	4	3	2	1
14. Bölümümde akademisyenler genelde "dersimi verir, kendi işime bakarım" şeklinde düşünür.	5	4	3	2	1
15. İletişim teknolojisinin ilerlemesi bölümümde kişiler arası yüzyüze paylaşımı azaltıyor.	5	4	3	2	1
16. Bölümümde akademisyenler arasında bilimsel rekabet vardır.	5	4	3	2	1
17. Akademik yükselmelerde kullanılan üniversite dışı etkenler (Doçentlik unvanı almak için tek yazarlı yurt dışı yayın yapmış olmak vb. şartlar) akademisyenleri bireyselliğe yöneltmektedir.	5	4	3	2	1
18. Bölümümde ödüllendirme sisteminin yetersizliği akademisyenlerin bilimsel çalışma yapma konusunda motivasyonlarının düşmesine neden olur.	5	4	3	2	1
19. Bölümümdeki akademisyenlerin bilimsel seminer ve konferanslara katılımı çok azdır.	5	4	3	2	1
20. Bölümümdeki akademisyenlerin bilimsel çalışma yapma konusunda motivasyonları düşüktür.	5	4	3	2	1
21. Bölümümdeki genç akademisyenlerin çoğu bölümün kendi mezunu olduğundan bölüme yenilik girmiyor.	5	4	3	2	1
22. Bölümümde benzer akademik konularda çalışma yapanlar kendi aralarında daha sık iletişim kurarlar.	5	4	3	2	1
23. Akademik konulardaki sorunlarımı kendi grubum içinde hallederim.	5	4	3	2	1
24. Bölümümdeki anabilim dallarının her birinin kendi başına bir bölüm gibi olması bu anabilim dallarındaki akademisyenler arasındaki iletişimi olumsuz yönde etkilemektedir.	5	4	3	2	1
25. Bölümümde bay ve bayan akademisyenler kendi hemcinsleriyle daha sık iletişim kurarlar.	5	4	3	2	1
26. Bölümümde akademik unvanı birbirine yakın olanlar kendi aralarında daha sık iletişim kurarlar.	5	4	3	2	1

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
27. Bölümümde genç akademisyenler unvan olarak kendilerinden üst olanlarla iletişim kurmakta zorlanırlar.	5	4	3	2	1
28. Bölümümde genç akademisyenler kendi aralarında, hizmet yılı fazla olan akademisyenler kendi aralarında daha sık iletişim kurarlar.	5	4	3	2	1
29. Bölümümde uzun yıllar bir arada bulunan akademisyenler arasında aynı bölümde uzun süre birlikte çalışmaya bağlı bloklaşma/ gruplaşma vardır.	5	4	3	2	1
30. Bölümümde yönetsel örgütlenme yapısı net olmadığı için iletişim aksıyor.	5	4	3	2	1
31. Bölümümde iletişimi denetleyecek bir yönetsel mekanizma yoktur.	5	4	3	2	1
32. Bölümümde yukarıdan aşağıya, tek taraflı iletişim vardır.	5	4	3	2	1
33. Yöneticinin bölümde var olan belli bir gruptan gelmesi bölümdeki gruplaşmayı artırıyor.	5	4	3	2	1
34. Bölümümdeki yöneticiler yönetim becerilerine sahip değiller.	5	4	3	2	1
35. Bölümümdeki yöneticiler bölüm-içi iletişimi artırmak için yeterince sosyal etkinlikler düzenlemiyorlar.	5	4	3	2	1
36. Bölümümde idari kurallar herkese farklı uygulanır.	5	4	3	2	1
37. Bölümümdeki akademisyenler arasında ortak bilimsel amaçlar yoktur.	5	4	3	2	1
38. Bölümümde anabilim dalları arasındaki amaç farklılıkları akademisyenler arasındaki iletişimi olumsuz yönde etkiler.	5	4	3	2	1
39. Bölümümün gelecek için ortak bir hedefi yoktur.	5	4	3	2	1
40. Bölümümde karşılaşılan sorunlara ortak çözümler üretilmemektedir.	5	4	3	2	1
41. Bölümümde çok farklı akademik alanların / uzmanlıkların olması ortak bir amaca sahip olmamızı olumsuz yönde etkiliyor.	5	4	3	2	1
42. Bölümümde akademik olarak yapılan eleştirilerin kişisel algılanması akademisyenler arasındaki bilimsel iletişimi olumsuz etkiliyor.	5	4	3	2	1
43. Bölümde bilimsel eleştiriler genelde dedikodu şeklinde yapılır.	5	4	3	2	1
44. Bölümümde kişisel ilişkiler bozulmasın diye olumsuzluklar dile getirilmez.	5	4	3	2	1
45. Bölümüm diğer bölümlerle yeterince bilimsel iletişim kurmaz.	5	4	3	2	1
46. Bölümümde suni, sıkıcı ve soğuk bir ortam vardır.	5	4	3	2	1
47. Kişisel girişimler dışında diğer bölümlerle yeterince bilimsel iletişim kurulamıyor.	5	4	3	2	1
48. Her bölümün kendine özgü bilimsel bir terminolojisinin olması diğer bölümlerle iletişimi olumsuz yönde etkiliyor.	5	4	3	2	1
49. Konulara yaklaşım tarzımızın faklı olması diğer bölümlerle ortak çalışmalar yapmamızı engelliyor.	5	4	3	2	1
50. Bölümümde birliktelik hissi yoktur.	5	4	3	2	1
51. Kendimi bu bölümün bir parçası gibi hissediyorum.	5	4	3	2	1
52. Bölümümde kendimi güvende hissediyorum.	5	4	3	2	1
53. Bölümümdeki insanlara kendimi yakın hissediyorum.	5	4	3	2	1

APPENDIX B

ENGLISH

INVENTORY OF COMMUNICATION ANALYSIS IN ACADEMIC CONTEXT

Dear Faculty Member,

This inventory is designed for a research study aiming at assessing factors affecting departmental communication process among faculty members and the relationships among these factors.

The inventory is consisted of two parts. First part includes items related with personal information, and the second part involves items related with communication in academic context.

Your answers to the inventory will be kept confidential and they will not be used for any purpose other than this study.

Thank you for your help,

Supervisor: Prof. Dr. Hasan ŞİMŞEK

Sıdıka GİZİR
METU, Educational Sciences
PhD Student
e-mail : gizir72@yahoo.com

University in which you are employed	:……
Faculty in which you are employed	:……
Department in which you are employed	:……
Your academic field of study	:……
Your academic title	: Assist. Prof. Assoc. Prof. Professor
Your service year in university which you are employed as faculty member	:……
University from which you received your Ph.D.	:.....……
Gender	: Female Male
Age	: ……..

INVENTORY OF COMMUNICATION IN ACADEMIC CONTEXT ANALYSIS

Using the scale below, please mark or encircle the best choice that you think the most closely reflects your perception for each statement.

5. Strongly Agree
4. Agree
3. Undecided
2. Do not Agree
1. Strongly Disagree

1. My communication with other faculty members in my department is limited with academic issues.	5	4	3	2	1
2. I have limited personal communication with other faculty members in my department.	5	4	3	2	1
3. I have to give extra effort for communicating with other faculty members in my department.	5	4	3	2	1
4. Faculty members in my department do not need to communicate with each other.	5	4	3	2	1
5. Faculty members in my department do not trust each other.	5	4	3	2	1
6. Faculty members in my department are insensitive to each other	5	4	3	2	1
7. Faculty members' participation in social activities in my department is very low.	5	4	3	2	1
8. Scientific works are generally conducted individually in my department.	5	4	3	2	1
9. Academic promotion based on quantitative point system increase individualism.	5	4	3	2	1
10. Exchange of scientific knowledge among faculty members in my department is very limited.	5	4	3	2	1
11. Faculty members in my department are unaware of others' scientific activities.	5	4	3	2	1
12. Extreme specialization negatively affects communication among faculty members in my department.	5	4	3	2	1
13. There is individualism among faculty members due to competition in my department.	5	4	3	2	1
14. Faculty members in my department usually think in the way that "I teach, and then I engage in my own business".	5	4	3	2	1
15. Improvement in communication technology causes a decrease in face-to-face communication among faculty members in my department.	5	4	3	2	1
16. There is a scientific competition among faculty members in my department.	5	4	3	2	1
17. Factors external to the university (e.g. the rule of promotion to associate professorship based on single-author international publication) leads faculty members to be individualistic.	5	4	3	2	1
18. Inadequate reward system leads to decrease in motivation among faculty members in my department.	5	4	3	2	1
19. Faculty members' involvement in seminars and conferences is low in my department.	5	4	3	2	1
20. Faculty members' motivation for conducting scientific research is low in my department.	5	4	3	2	1
21. Innovation is very limited in my department since many of the young faculty members employed are the graduates of the same department.	5	4	3	2	1
22. Faculty members studying and doing research on similar subjects communicate more frequently with each other.	5	4	3	2	1
23. I solve my academic problems within my own group.	5	4	3	2	1
24. The existence of disciplinary divisions being and acting like separate departments negatively affect communication among faculty members.	5	4	3	2	1

	Strongly Agree	Agree	Undecided	Do not Agree	Strongly Undecided
25. Female and male faculty members communicate more frequently with the same gender.	5	4	3	2	1
26. Faculty members having similar or same academic titles communicate more frequently with each other in my department.	5	4	3	2	1
27. Young faculty members have some difficulties in communication with faculty members who have higher academic titles in my department.	5	4	3	2	1
28. Communication is more intense among young faculty members themselves and old faculty members themselves.	5	4	3	2	1
29. There are alliances among faculty members due to working long years together in my department.	5	4	3	2	1
30. Unclear organizational structure leads to communication problems in my department.	5	4	3	2	1
31. There is no administrative control mechanism on communication in my department.	5	4	3	2	1
32. There is a top-down and one-way communication in my department.	5	4	3	2	1
33. Administrative staff coming from a particular alliance leads to increase in groupings in my department.	5	4	3	2	1
34. Administrators in my department do not have administrative skills.	5	4	3	2	1
35. Administrators in my department do not organize adequate social activities to facilitate communication.	5	4	3	2	1
36. Administrative rules are used differently for different people..	5	4	3	2	1
37. There are no common scientific goals among faculty members in my departments.	5	4	3	2	1
38. Differences in goals of disciplinary divisions negatively affects communication in my department	5	4	3	2	1
39. There is no common goal for future in my department.	5	4	3	2	1
40. Collective solutions can not be produced for the problems faced in my department.	5	4	3	2	1
41. Existence of many different academic sub-fields/specializations is an obstacle to have common goals among faculty members in my department.	5	4	3	2	1
42. Taking scientific discourse personal negatively affects scientific communication among faculty members in my department.	5	4	3	2	1
43. Scientific discourse is generally made through gossips in my department.	5	4	3	2	1
44. Being afraid of damaging interpersonal relations, negative views are not expressed in my department.	5	4	3	2	1
45. My department does not have adequate scientific communication with other departments.	5	4	3	2	1
46. There is an artificial, boring and cold atmosphere in my department.	5	4	3	2	1
47. There is inadequate scientific communication with other departments except personal contacts by individual faculty members.	5	4	3	2	1
48. Existence of different scientific terminology of each department negatively affects communication among departments.	5	4	3	2	1
49. Differences of approaches to issues negatively affect collaborative works with other departments.	5	4	3	2	1
50. There is no sense of cohesiveness among faculty members in my department.	5	4	3	2	1
51. I feel myself as part of this department.	5	4	3	2	1
52. I have a feeling of security in my department.	5	4	3	2	1
53. I feel myself close to other faculty members in my department.	5	4	3	2	1

APPENDIX C

COVER LETTER OF THE INVENTORY

TURKISH

Sayın Öğretim Üyesi,

ODTÜ, Eğitim Fakültesi, Eğitim Bilimleri Bölümü, Eğitim Yönetimi, Teftişi ve Planlaması Ana Bilim Dalı'nda doktora öğrencisiyim. Doktora tezim gereği, en önemli yönetimsel süreçlerden biri olan "örgüt-içi iletişim" konusunda yapmış olduğum literatür taraması sonucunda, modern üniversitelerin birçok alt birimden oluşması nedeniyle oldukça karmaşık bir yapıya sahip örgütler oldukları ve bu sebeple, bu örgütlerin amaçlarını gerçekleştirmeleri ve varlıklarını sürdürmelerinin, pek çok diğer etkenin yanısıra, başarılı bir iletişim sisteminin kurulması ve bunun sürdürülmesine bağlı olduğu bilgisine ulaşılmıştır.

Buna bağlı olarak, üniversitelerimizde istihdam edilmekte olan öğretim üyelerinin bölümleri içerisindeki diğer öğretim üyeleri ile olan iletişimlerini etkileyen faktörler ve bu faktörler arasındaki ilişki örüntülerini belirlemek amacıyla yapmakta olduğum tez çalışmamda, 53 devlet üniversitesinin resmi kuruluş tarihleri, fakülte sayıları, istihdam edilen öğretim elemanı sayıları ve öğrenci sayıları dikkate alınmış ve ülkemizdeki yedi bölgeden her birini en iyi temsil ettiği düşünülen toplam yedi üniversite örnekleme dahil edilmiştir. Örnekleme dahil edilen yedi üniversitenin ortak fakülteleri belirlenmiş ve bu fakültelerdeki öğretim üyeleri arasından örnekleme dahil edilecek olanlar seçkisiz (tesadüfi) örnekleme yöntemi kullanılarak belirlenmiştir.

Bu araştırmada veri toplama aracı olarak kullanılan anket, Orta Doğu Teknik Üniversitesi bünyesindeki beş fakülteyi en iyi temsil ettiği düşünülen beş bölüm içerisindeki iletişim sürecini tanımlamak ve yaşanan iletişim sorunları ile bunlara çözüm önerilerini öğretim elemanlarının bakış açılarını dikkate alarak belirlemek amacıyla nitel (kalitatif) araştırma

metotlarından biri olan "görüşme" tekniğini kullanarak yapılan araştırma sonucunda elde edilen nitel verilerden yararlanılarak oluşturulmuştur.

Örnekleme dahil edilen ilgililer tamamiyle seçkisiz (tesadüfi) seçilmelerinin yanısıra isimleri hiçbir koşulda, tarafım haricinde, bilinmeyecek ve kullanılmayacaktır. Elde edilen bilgiler şahıs olarak değil, grup olarak değerlendirilecek ve sadece tezim için kullanılacaktır.

Bu konudaki katkılarınız, Türkiye'de örgüt-içi iletişim konusundaki çalışmaların azlığı da dikkate alındığında, bu alandaki çalışmalar ve benim için büyük önem taşımaktadır.

Yardımlarınız için teşekkür eder, saygılar sunarım.

NOT 1 : Sayın Öğretim Üyesi, "Akademik Ortamda İletişim Anketi"ni doldurduktan sonra lütfen size gönderdiğimiz zarfın içine koyarak en geç **30 Nisan 2004** tarihine kadar postaya veriniz.

NOT 2 : Lütfen göndereceğiniz zarfın ağzını yapıştırmayınız, **sadece zımbalayınız.**

Tez Danışmanı: Prof. Dr. Hasan ŞİMŞEK

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APPENDIX D
THE FINAL SIMPLIS SYNTAX FOR THE MODIFIED MODEL

ACCAI Structural Equation Model
Observed Variables
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10
Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20
Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30
Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40
Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49 Q50
Q51 Q52 Q53
Covariance Matrix From File accai.cov
Sample Size 480

Latent Variables: COMMUNICATION INDIVIDUALISM INADEQUATE MOTIVATION ALLIANCES ADMINISTRATION GOALS DISCOURSE INTRAVERT ATMOSPHERE

Relationships:
Q1 Q2 Q3 Q4 Q6 = COMMUNICATION
Q7 Q8 Q13 Q14 = INDIVIDUALISM
Q10 Q11 = INADEQUATE
Q18 Q19 Q20 = MOTIVATION
Q25 Q26 Q28 = ALLIANCES
Q30 Q31 Q32 Q33 Q35 Q36 = ADMINISTRATION
Q37 Q39 Q40 = GOALS
Q42 Q43 Q44 = DISCOURSE
Q45 Q47 = INTRAVERT
Q46 Q50 Q51 Q52 Q53 = ATMOSPHERE

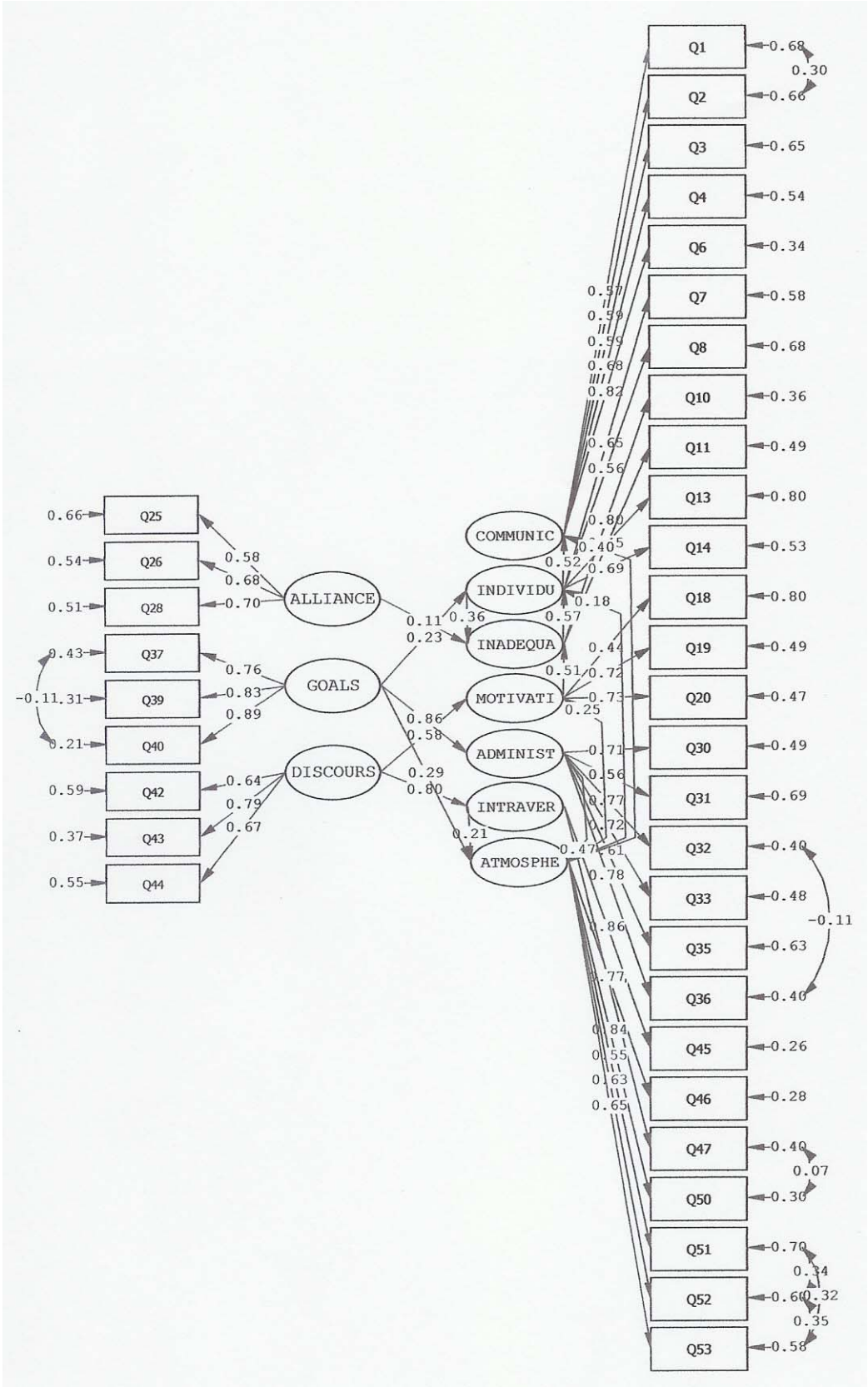
COMMUNICATION = INDIVIDUALISM ATMOSPHERE
INDIVIDUALISM = INADEQUATE GOALS ATMOSPHERE
INADEQUATE = INDIVIDUALISM MOTIVATION ALLIANCES
MOTIVATION = ATMOSPHERE DISCOURSE
ADMINISTRATION = GOALS
INTRAVERT = DISCOURSE
ATMOSPHERE = ADMINISTRATION GOALS INTRAVERT

Set to Error Covariance Between Q53 and Q52 Free
Set to Error Covariance Between Q2 and Q1 Free
Set to Error Covariance Between Q52 and Q51 Free
Set to Error Covariance Between Q53 and Q51 Free
Set to Error Covariance Between Q40 and Q37 Free
Set to Error Covariance Between Q36 and Q32 Free

Path Diagram
Wide Print
Print Residuals
Admissibility Check = 30
Iterations = 30
Method of Estimation = Maximum Likelihood
Lisrel Output: EF SS SC
End of Problem

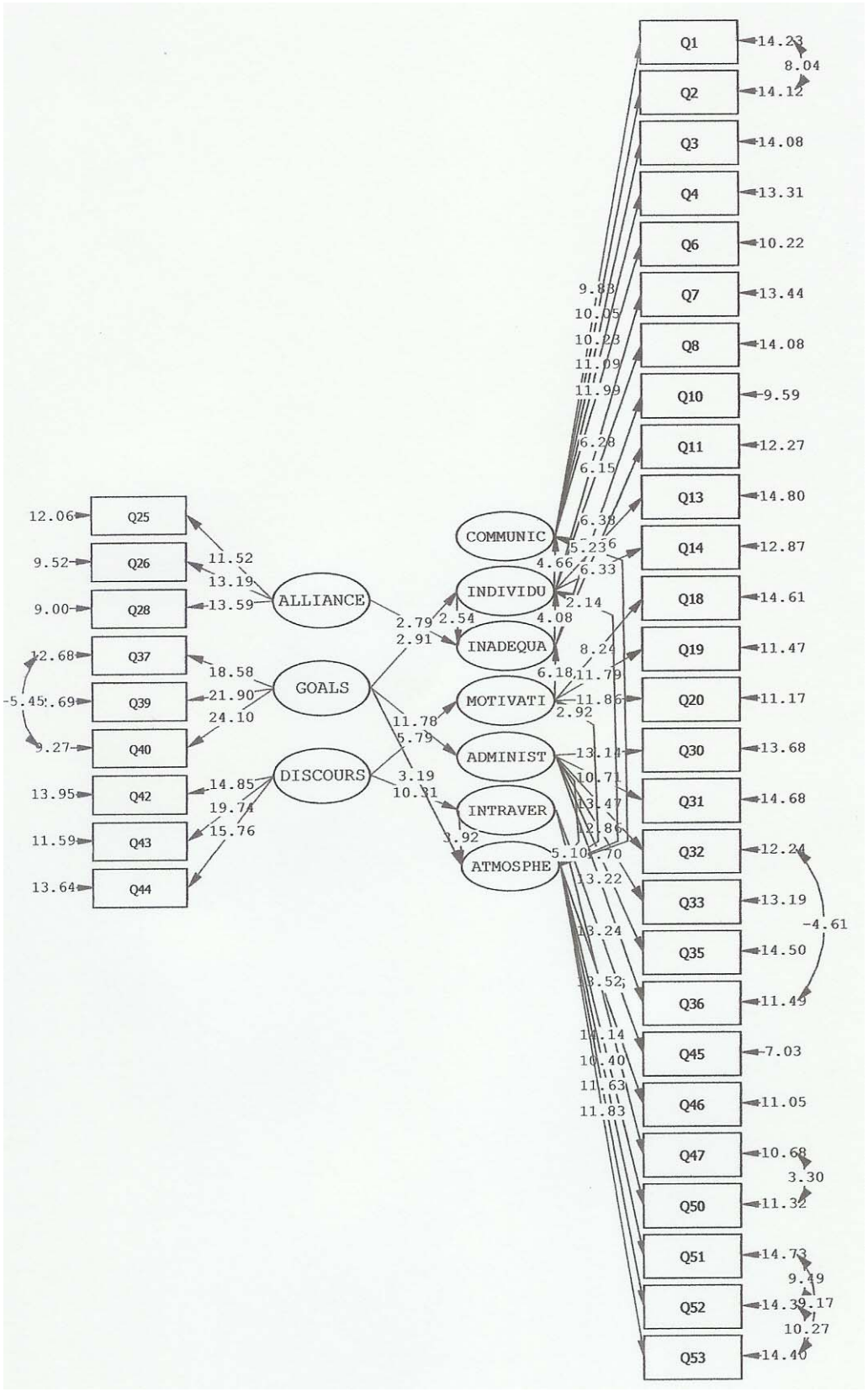
APPENDIX E

LISREL Estimates of Parameters in Measurement Model of Estimated Structural Model with Coefficients in Standardized Values



APPENDIX F

LISREL Estimates of Parameters in Measurement Model of Estimated Structural Model with Coefficients in *t* Values



APPENDIX G

TURKISH SUMMARY

TÜRK DEVLET ÜNİVERSİTELERİNDE İLETİŞİM SÜREÇLERİNİ OLUMSUZ ETKİLEYEN FAKTÖRLERİN İNCELENMESİ

GİRİŞ

Ülkemizde ve dünyada sosyal, siyasal, ekonomik ve teknolojik gelişmelerin son yıllarda hız kazanması ve bu gelişmelerde yüksek öğrenimin önemli bir etkiye sahip olmasının yanısıra bu gelişmelerden kaçınılmaz olarak etkilendiğinin farkına varılmasıyle birlikte, üniversiteler, örgüt ve yönetim konusunda çalışmalar yapan bilim insanlarının en önemle üzerinde durdukları araştırma konularından birisi olmuştur (Aypay, 2003; Cabal, 1993). Üniversitelerin örgütlenmesi ve yönetimi, işlevleri, liderlik, motivasyon ve karar verme süreçleri gibi temel ve sıklıkla araştırılan konuların yanısıra, bu örgütlerin kültürleri ve iklimleri gibi konularda da yapılan çalışmalar sıklaşmaya başlamıştır (Brown II, 2000).

Bununla birlikte, demografik etkiler ve nitelikli insan gücüne duyulan ihtiyacın artması, Türkiye'deki yüksek öğrenim sistemi ve üniversitelerin nitelik ve nicelik olarak iyileştirilmesini hedef alan girişimleri gerekli kılmış ve bu doğrultuda ülkemizde son 15 yılda önemli değişimler gözlenmiştir. Bu gelişmelerden en belirgin olanı, ülkenin birçok şehrinde devlet ile özel kişi ve kurumlarca birçok üniversitenin açılmasıdır (Şimşek, 1999). Yeni açılan bu üniversitelerle birlikte, 53'ü devlet, 23'ü vakıfl olmak üzere Türkiye'deki üniversite sayısı 76'ya ulaşmıştır (HEC, 2004a). Bahsedilen iyileştirme girişimlerinin sonucunda, üniversitelerde

nitelik ve nicelik açılarından birtakım gelişmeler gözlenmesine rağmen, bu kurumlar nitekli işgücü, finansal kaynaklar, bürokratik yönetim anlayışı, eğitim, araştırma ve hizmet alanlarında kalitenin düşmesi gibi konularda bazı sorunlar yaşamaya devam etmektedirler (Aypay, 2003; Küskü, 2003; Şimşek, 1999).

Yukarıda bahsedilen sorunların varlığı ve bu kurumlarla ilişkili olan bütün kesimlerin kaliteli hizmet beklentileri, Türkiye'deki üniversitelerin verimliğinin incelenmesini gerekli kılmaktadır. Bir örgüt olarak üniversitelerin verimliliğinin incelenmesi, karar verme, personel yönetimi, yönetimsel yapılanma, motivasyon, ve iletişim gibi temel yönetimsel tema ve süreçlerin öncelikle ele alınmasını gerektirmektedir. İletişim süreci, bahsedilen temel yönetimsel süreçler arasında en önemli olanlardan birisidir. İletişim bir örgütün etkinlikleri, kontrolü ve eşgüdümünde, kısacası varlığını sürdürmesinde önemli bir role sahiptir (Gizir, 2002).

Türk Yükseköğretim Kurumları'nda iletişim süreçlerini olumsuz etkileyen faktörlerin incelenmesi, bu kurumların verimliği ve bu verimliliğin sürekliliğinin sağlanması konularında yapılan çalışmalara ışık tutacaktır.

ÜNİVERSİTE

Sistem Olarak Üniversiteler

Araştırmacılar üniversitelerin birer sistem ve örgüt olarak görülmesinin üniversitelerin işleyişini anlamada kolaylık sağlayacağına inanırlar (Birnbaum, 1988; Bess, 1988; Blau, 1973; Millett, 1968). Üniversiteler birer örgüt olarak görüldükleri zaman, bir çalışmanın temel amacı formel bir yapı içerisinde belli rollere sahip insanların belli amaçlara ulaşmak için birlikte çalışmaları olmaktadır (Birnbaum, 1988). Bu kurumlar birer sistem olarak ele alındıklarında ise bir bütün ve bütünün parçaları arasındaki ekileşime dayalı dinamikler ön plana çıkmaktadır. Üniversitelerin kendilerine özgü belirleyici bir takım özelliklere sahip olmaları

nedeniyle bu kurumlara birer sistem olarak yaklaşmak onların incelenmesinde en uygun yöntem olarak görülmektedir.

Üniversitelere birer sistem olarak yaklaşıldığında bu kurumların oldukça karmaşık bir yapıya sahip oldukları görülür. Üniversitelerin karmaşık bir yapıya sahip olmalarının nedenlerinden birisi geçirgen sınırlara sahip olmaları ve örgüt sistemlerinin elementleri ile çevre arasında çok çeşitli ilişkilerin varlığıdır. Bunun yanısıra, bir örgüt olarak üniversite, insanlar, fikirler, kaynaklar, diğer kurum ve sistemlerle ilişkileri gibi net olarak değerlendirlemeyen birçok girdiye sahiptir (Birnbaum, 1988).

Aynı zamanda birçok yarı özerk ve gevşek eşgüdümlü alt sistemleri içinde barındıran üniversitelerde çalışanlar ve çalışanların görevleri disiplinlere göre gruplandırılır. Diğer bir deyişle, üniversitelerin alt birimleri işlerini yapmak için kullandıkları beceri ve düşünce yapılarının niteliklerine göre gruplandırılırlar (Aypay 2003; Toma, 1977). Bilgi alanlarını bu şekilde gruplandırılması üniversitelerin temel görevleri olan öğretim ve araştırma faaliyetlerini kolaylaştırmakla birlikte bu kurumların yapılarının karmaşıklaşmasına da neden olurlar. Üniversitelerin birçok altsisteme ve bu sistemlere ait biribirinden oldukça farklı birçok kültüre sahip olmaları ve en temel unsurlar olan öğretim elemanlarının mesleklerinin doğasından kaynaklanan akademik özgürlük, özerklik ve bireysellik gibi özellikleri (Clark, 1983), diğer kurumlarla karşılaşıldığında farklı ve çok sayıda amaçlara sahip olmaları bu kurumların karmaşık ve kendine özgü yapısını ortaya koyar.

Üniversitelerin Örgüt Olarak Ayırtedici Özellikleri

Bütün örgütler ortak amaçlar, eşgüdüm mekanizması, yönetimsel basamaklar, iletişim sistemleri ve buna benzer bir takım süreçlere sahip olmalarına karşın her bir örgütün yapısal profili biribirinden farklılıklar gösterir. Diğer örgütler gibi üniversiteler de amaçlara, hiyerarşik sistem ve yapılara, temel işlevleri

gerçekleştiren çalışanlara sahiptir. Bunun yanısıra üniversiteler kendilerine özgü bazı farklı örgütsel süreçlere de sahiptirler.

Amaç belirsizliği, amaçların karmaşıklığı ve çeşitliliği, diğer örgütlerle karşılaştırıldığında üniversitelerin ayıredici özelliklerindendir. Üniversiler öğretim elemanı, öğrenci, yöneticiler, diğer çalışanlar ve çeşitli kurulları bünyesinde barındırır. Sözü edilen her bir grup kendi içinde ve birbirleriyle farklı amaçlara sahiptirler (Patterson, 2001).

Yönetimsel yapıları üniversilerin diğer en önemli ayırt edici özelliğidir. Diğer örgütlerde çalışanlar örgütün temel amaçları doğrultusunda üretimsel etkinliklerde bulunurken, yöneticiler örgütün verimliliğini artırmak amacıyla bu etkinliklerin eşgüdümü, çalışanlar arasında iletişim ve karar verme gibi temel ve birincil öneme sahip yönetimsel sorumlulukları yerine getirirler. Profesyonel örgütler olarak üniversiteler de ise örgütün temel amacı olan öğretim, araştırma ve hizmet, akademik ve karar verme özgürlük ve özerkliğe sahip olan öğretim elemanları tarafından gerçekleştirilirken, yöneticiler profesyoneller tarafından sürdürülen bu etkinliklerin yönlendirilmesinden, yani ikincil etkinliklerden sorumludurlar (Etzioni, 2000). Ayrıca öğretim elemanlarının yönetimsel süreçlerde yer alması onları hem çalışan hem yönetici konumuna getirmektedir.

Akademisyenlik üniversitelerin diğer ayırt edici özelliğidir. Akademisyenler mesleklerine ait ayırt edici değerler, kurallar ve tutumlara sahip olmalarının yanısıra disiplinlerine özgü terminoloji, araştırma yöntemleri, öğretme yöntemlerine sahiptirler. Mesleklerinin gereği birbirlerinden büyük oranda bağımsız çalışan akademisyenler akademik özgürlük ve özerklik sahibidirler ve yapmakta oldukları işle ilgili süreçlerde etkin şekilde söz sahibidirler (McAleer ve McHugh, 1994; Clark, 1983a; 1987).

Üniversite Bölümleri

Üniversitelerin alt birimleri işlerini yapmak için kullandıkları beceriler ve düşünce yapılarının niteliklerine göre gruplandırılır ve alanlarının bu şekilde gruplandırılması üniversitelerin temel görevleri olan öğretim ve bilimsel araştırma etkinliklerini kolaylaştırmanın yanısıra yönetimsel süreçlerde de kolaylıklar sağlar (Trow, 1977).

Bu gruplandırmaların en geniş yapıda olanları genellikle "fakülte" olarak bilinirken, en dar yapıda gruplandırılanlar genellikle bir disiplinin bütün olarak veya temel bir meslekteki uzmanlığın içerildiği "bölüm" adıyla bilinirler (Clark, 1983; Millet, 1968). Literatürde, bölüm, belli bir uzmanlık alanında öğretim ve bilimsel araştırmadan sorumlu olan bilim adamlarının oluşturduğu topluluğu barındıran üniteler veya temel yapı taşları olarak tanımlanır (Gizir, 2002; Andersen, 1977; Trow, 1977). Her bir bölüm kendine ait sınırlar içersinde diğer bölümlerle yarı özerk ve gevşek eşgüdümlü olarak işlevlerini sürdürürler. Kendilerine özgü amaçlar, kavramlar, yöntemler, etkileşim biçimleri, temel değer ve inançlara sahip sosyal gruplar olarak tanımlanan disiplinler yükseköğretim kurumlarının can damarlarıdır (Becher, 1994; Gaff ve Wilson, 1988).

Örgütsel Kültür ve Üniversiteler

Üniversitelerin disiplinler temelindeki bu yapılandırılması aynı zamanda bu kurumların birçok farklı kültürü de bünyesinde barındırdığına işaret eder. Her bir disiplin farklı sosyal ve kültürel özelliklerini belirleyen kurallar, değerler, iletişim stilleri, yaşam biçimleri, pedagojik ve etik kodlarının bulunmasının yanısıra düşünce sistemlerinin farklılıklarından kaynaklanan kendilerine özgü ortak teminoloji, araştırma yöntem ve tekniklerine sahiptirler (Hearn ve Anderson, 2002; Trowler ve Knight, 2000; Ylijoki, 2000; Becher, 1994; Huber, 1992; Moses, 1990; Clark, 1983). Bunun birlikte, Toma (1997) öğretim elemanlarının disiplinlere ait kültürlerin yanısıra, mesleki, örgüt ve toplumsal kültürlerden de etkilendiklerini belirtir.

İLETİŞİM

Bir örgütün etkinlikleri, kontrolü ve eşgüdümünde önemli role sahip olan iletişim örgüt içerisinde düşünce, kurallar, değerler, davranışlar ve amaç ortaklığı oluşturarak örgüt üyelerinin örgütün genel düzenine uymasının sağlar. Birnbaum (1988) iletişim olmaksızın örgütlerin herhangi bir insan topluluğundan farkı kalmayacağını belirtmektedir. İletişim süreci bir örgütün varlığını kendi kendine sona erdirmesine kadar devam eden kesintisiz bir süreç olduğu için etkililiği periyodik olarak değerlendirilmelidir (Gizir, 2002; Millet, 1968).

Örgüt-içi İletişim Perspektifleri

İletişim konusunda araştırmalar yapan bilim insanları, herbiri iletişim süreci için farklı kavram ve ilişkilendirmeleri ön plana çıkaran farklı perpektiflere sahiptirler. Krone, Jablin ve Putnam (1989) çeşitli perspektifleri mekanistik, psikolojik, yorumlayıcı-sembolik, ve sistem-etkileşim perspektifleri olarak dört grupta toplamıştır.

Mekanistik perspektif, iletişimde bulunanları birbirine bağlayan kanallara önem verirken, psikolojik perspektif kişilerin karakter, tutum ve davranışlarının iletişimlerini nasıl etkilediği üzerinde durur. Yorumlayıcı-sembolik perspektif ise örgüt-içi iletişimin, örgütlerin oluşturulması ve sürdürülmesi konusunda belirli bir kapasiteye sahip olan eşgüdümlenmiş davranış örüntülerinden oluştuğunu ileri sürerken, sistem-etkileşim perspektifi ise yorumlayıcı-sembolik perspektifin aksine temel araştırma alanı olarak sisteme dışarıdan etki eden faktörlere odaklanır.

İletişim ve Üniversite

Diğer örgütlerde olduğu gibi, üniversilerde de etkili iletişim yaşamsal bir öneme sahiptir. Daha önce değinildiği gibi üniversitelerin karmaşık bir yapıya sahip olması bu kurumlardaki iletişim sürecini de karmaşık hale getirir.

Yükseköğretim kurumlarının temel hedeflerine ulaşmasında en belirgin rolü oynayan öğretim elemanları bu kurumlardaki iletişim süreçlerinin en temel aktörleridir (Rowley, 1996). Öğretim elemanları iletişim süreçlerinde pasif bir alıcı olmaktan çok bu sürecin en aktif elemanlarıdır. Öğretim elemanlarının yanısıra öğrenciler, yöneticiler, diğer personel ve mezunlar da üniversitelerin temel unsurlarıdır. Üniversitelerin bu kadar farklı kesimleri bünyesinde barındırması doğal olarak iletişim süreçlerini de karmaşık hale getirmektedir.

Üniversitelerin böylesi karmaşık bir yapıya sahip olması, işlevlerini kaliteli şekilde yerine getirmesi için iletişim süreçlerinin değerlendirilmesinin önemini bir kat daha artırmaktadır. Ayrıca, bir üniversitedeki iletişim sürecinin değerlendirilmesi, aynı zamanda o üniversitenin verimliliği konusunda da ipucu verir (Millet, 1968). Ancak, üniversiteler farklı ve karmaşık bir yapıya sahip oldukları için, bu kurumlar içerisinde etkili bir iletişim ortamı oluşturmak ve bunun sürekliliğini sağlamak oldukça zordur.

İlgili alanyazın incelendiğinde iletişim ve eğitim konularında ayrı ayrı birçok çalışma olmasına rağmen yükseköğretim kurumlarında iletişim konusuna yönelik çalışma sayısı oldukça sınırlıdır. Varolan çalışmalar genellikle liderlik ve iletişim stilleri, yöneten ve yönetilenler arasındaki iletişim ve geribildirim ve kullanılan kanallar üzerine yoğunlaşmaktadır.

Bir Model Önerisi: Akademik Ortamda İletişim Süreci

Akademik ortamda iletişim sürecini etkileyen faktörler genel olarak olumlu ve olumsuz etkilemeleri açısından ikiye ayrılabilirler. Bu faktörlerden iletişim sürecini olumlu etkileyenler disiplinlerarası çalışmalar, çift ve yandal programlar, seminerler, sempozyumlar, fiziksel çevre, informel atmosfer, formel iletişim kanalları, ortak amaçlar, sosyal akitiviteler ve disiplin kültürü olarak belirlenmiştir (Gizir, 1999).

Akademik ortamda iletişim sürecini olumsuz olarak etkileyen faktörler ise motivasyon eksikliği, gruplaşma, bilimsel bilginin yetersiz paylaşımı, yönetimsel sorunlar, bölüm atmosferi, eleştiri, bölümün içedönük yapısı, bireysellik, ortak amaç eksikliği, disiplin kültürü ve yabancılaşmadır (Gizir ve Şimşek, 2005; Gizir, 1999). Gizir (2002) bu iletişimi olumsuz etkileyen bu faktörlerin üniversitelerin disiplinler temelinde yapılanması, örgütsel ve yönetimsel yapıları ve akademisyenlik mesleğinin bazı özelliklerinden kaynaklandığını ve dolayısıyla sonuçların diğer örgütlerden farklılıklar gösterdiklerini belirtmiştir.

Gizir (1999), bu çalışması sonucunda akademik ortamda iletişim sürecini etkileyen olumsuz faktörlerin biribirileriyle olan ilişkilenmelerini ortaya koyan bir model geliştirmiştir. Bu çalışmada, Gizir (1999) tarafından oluşturulan bu modelde yer alan ve çalışma sonuçlarında en sıklıkla üzerinde durulan faktörler ve ilişkilenmelerinin yer aldığı model test edilmeye çalışılmıştır. Bu modelde daha önce sözü edilen faktörler ve yetersiz iletişim arasında bazı dolaylı ve doğrudan ilişkilerin varlığı öngörülmüştür.

Araştırmanın Amacı

Bu çalışma, Türkiye'deki devlet üniversitelerinde görev yapmakta olan öğretim üyeleri arasındaki iletişim sürecini olumsuz etkileyen faktörlerin kendi aralarında ve yetersiz iletişim ile ilişkilenmelerini inceleyerek, bu ilişkileri en uygun şekilde yansıttığı düşünülen yapısal bir modeli test etmeyi amaçlamaktadır.

Yöntem

Örneklem

Araştırmanın örneklemini Türkiye'deki 53 devlet üniversitesi arasından kuruluş tarihi, sahip olduğu fakülte, öğretim üyesi ve öğrenci sayısının çokluğu gibi ölçütler temel alınarak ülkenin her bir bölgesini temsilen seçilen yedi devlet üniversitesinde görevli 480 öğretim üyesi oluşturmaktadır.

Örneklemin seçilmesi sürecinde, Türkiye'deki üniversitelerin sahip oldukları fakülteler ve bu fakültelerdeki bölümlerin farklılıklar göstermeleri nedeniyle, örnekleme dahil edilen yedi üniversitedeki ortak fakülteler belirlenmiş ve bu fakültelerde görev yapan öğretim üyesi sayısı ve ilgili bilgiler Yüksek Öğretim Kurumu'ndan elde edilmiştir (HEC, 2004b). Bu bilgilere dayanılarak her bir üniversite, fakülte ve bölümdeki öğretim üyesi sayısı ve ünvanları dikkate alınarak oran hesaplaması yapılmış ve bu oranlara dayanılarak seçkisiz örnekleme yoluyla 1000 öğretim üyesi örnekleme dahil edilmiştir. 1000 öğretim üyesinden 496 tanesi ölçeği doldurmuş bunlardan 16'sının geçersiz olması sonucunda örneklemde 480 kişi kalmıştır (geri dönüş oranı % 48).

Araç

Üniversitelerde iletişim sürecini etkileyen etkenlerin değerlendirilmesi amacıyla geliştirilmek istenen Akademik Ortam İletişim Analizi Envanteri'nin (AOİAE) alt yapısını, Gizir (1999) tarafından öğretim üyeleri arasındaki iletişim sürecinde yaşanılan problemleri bu kişilerin kendi bakış açılarından belirlemek amacıyla yapılan nitel çalışma ve bu çalışmada elde edilen nitel veriler oluşturmaktadır. Envanteri oluşturmak amacıyla ilgili alanyazın taramasının yanısıra Gizir'in çalışması ve elde ettiği nitel veriler detaylı olarak incelenerek iletişim süreci ve bu süreçle olumsuz ilişkilendiği varsayılan etkenlerle birlikte toplam 10 boyut belirlenmiştir. Daha sonra bu 10 boyutla ilgili olduğu düşünülen nitel veriler envanter maddesi şeklinde yazılmış ve taslak envanter toplam 42 öğretim üyesinden uzman görüşü alınarak son haline getirilmiştir. Envanter örnekleme uygulandıktan sonra yapı geçerliğini belirlemek amacıyla doğrulayıcı faktör analizi yönteminden yararlanılmıştır. Bazı maddelerin birden fazla faktöre birden yüklenmeleri ve bazılarının ise faktör yüklerinin düşük olması nedeniyle toplam 17 madde envanterden çıkarılmıştır. Analizler sonucunda adı geçen envantere ait 36 maddenin 10 faktöre ayrıldığı belirlenmiştir. Elde edilen sonuçlar AOİAE'nin yapı geçerliğinin bulunduğuna işaret etmektedir. Ayrıca maddelerin faktör yükleri de yeterli düzeyde bulunmuştur. AOİAE'nin alt boyutları dikkate alındığında elde

edilen Cronbach Alpha değerleri .67 ile .88 arasında değişmektedir. Bu değerler, AOİAE'nin güvenirliliğin yüksek ve tatminkar düzeyde olduğunu göstermektedir.

Verilerin Toplanması

Son hali verilen envanter araştırmanın amacının detaylı olarak belirtildiği bir mektupla birlikte örnekleme dahil edilen 1000 öğretim üyesine posta yolu ile gönderilmiş ve geri dönen 496 ölçme aracının 480'i analize dahil edilmiştir.

BULGULAR VE SONUÇ

Bu çalışma için toplanan veriler doğrulayıcı faktör analizi ve yapısal eşitlik modeli kullanılarak analiz edilmiştir.

Örneklem grubu üzerinde yapılan analiz sonucunda dokuz faktörün *yetersiz iletişim* ve kendi aralarında doğrudan ve dolaylı olarak ilişkilendikleri belirlenmiştir. Bireysellik ve bölüm atmosferi, yetersiz iletişim ile doğrudan ilişkilenirken, diğer yedi faktör dolaylı olarak ilişkilenmiştir.

Bireysellik ve yetersiz iletişim arasındaki doğrudan ilişki Gizir'in (1999) çalışmasındaki bulgularla paralellik göstermektedir. Gizir (1999) çalışmasında akademisyenler arasındaki iletişimi etkileyen en önemli faktörlerden birisi olan bireyselliğin aynı zamanda bilimsel bilginin yetersiz paylaşımına neden olduğunu bulmuştur. Araştırmacı ayrıca bölümün büyüklüğü, rekabet, motivasyon eksikliği ve ortak amaç eksikliğinin ise bireyselliğe neden olduğunu belirtmiştir. Bireysellik kişinin kendi ilgi ve ihtiyaçlarının grubun ilgi ve ihtiyaçlarından önce gelmesi, kişinin diğerlerinden bağımsız kararlar alma ve bunları uygulama durumu olarak tanımlanmıştır. Bu çalışmada kullanılan envanterde yetersiz iletişimi ölçtüğü varsayılan maddeler akademisyenler arasında duyarsızlık, akademisyenlerin birbirileriyle iletişim kurmaya ihtiyaç duymadıkları ve iletişim kurmak için çok çaba harcanması gerektiğine vurguda bulunmaktadır. Bu maddeler incelendiğinde

ve bireyselliğin tanımı dikkate alındığında akademisyenler arasında iletişimin yetersiz olduğu ve bunun bireysellikten kaynaklanıyor olabileceği ileri sürülebilir.

Bu çalışma sonucunda bireselliğin yanısıra bölüm atmosferi ile yetersiz iletişim arasında doğrudan bir ilişkinin varlığı ortaya çıkmıştır. Gizir (1999) çalışmasında, akademisyenlerin bölümlerindeki atmosferin yeterli bir iletişim için uygun olmadığını ve bölümlerindeki atmosferi soğuk, sıkıcı ve suni olarak nitelendirdiklerini belirtmiştir. Araştırmacı ayrıca, akademisyenlerce belirtilen yabancılaşma, bireysellik, rekabet, aidiyet duygusunun olmaması gibi iletişimi olumsuz etkileyen diğer faktörler dikkate alındığında böyle bir atmosferin varlığının kabul edilebilir bir sonuç olduğunu belirtmiştir.

Aidiyet ve güven duygusu, takım ruhu ve bütünlük gibi kavramlar örgüt iklimleri için en temel kavramlardır (Pelton ve ark., 1994). Bu çalışmada kullanılan envanterde bölüm atmosferini ölçtüğü varsayılan maddeler akademisyenlerin aidiyet duygusu ve kendilerini güvende hissetmediklerine vurguda bulunmaktadır. Bu bilgiler ışığıda akademisyenlerin içinde bulundukları atmosferin yetersiz iletişime yol açabileceği ileri sürülebillir.

Bu çalışmanın diğer bir bulgusu ise ortak amaç eksikliği ile yetersiz iletişim arasındaki dolaylı ilişkidir. Bu dolaylı ilişki bireysellik faktörü aracılığıyla gerçekleşmektedir. Diğer bir deyişle ortak amaç eksikliği bireyselliğe, bireysellik ise yetersiz iletişime neden olmaktadır. Ortak amaç eksikliği ile bireysellik arasındaki doğrudan ilişki Gizir (1999)'in çalışması sonucunda elde ettiği bulguları destekler niteliktedir. Gizir (1999) ortak amaç eksikliğinin bireyselliğe neden olduğunu belirtmiş ve akademisyenlerin ortak amaçlara sahip olmamaları nedeniyle bireylerin kendi kişisel amaçlarını gerçekleştirmeye yöneldiklerinden söz etmiştir.

Ortak amaçlar örgütlerin varlığı, bütünlüğü ve verimliliği için en temel unsurdur ve örgütteki bireylere aidiyet duygusu verir ve onları motive eder (Patterson, 2001). Tijesvold ve McNeilly (1988) ortak amaçların örgütteki bütünlüğü sağladığını ve

bunun kişilerin düşüncelerini açıklıkla ifade etmeleri, kişilerin örgütteki diğer kişilerin düşüncelerine önem vermeleri ve düşünce birliği oluşturulmasına yol açtığından söz ederler. Ancak üniversiteler, diğer örgütlerden farklı bir yapılanmaya ve farklı özellikler taşıyan çalışanlara sahiptirler (Rowland, 2002; Clark, 2000; Baldridge et al. 2000; Bolman and Deal, 1991; Birnbaum, 1988). Bu farklılığın nedenlerinden biri üniversitelerin disiplinler temelinde yapılanması ve her disiplinin kendi doğasına uygun amaçlara sahip olmasıdır. Diğer neden ise farklı bilgiler temelinde çalışan akademisyenlerin doğal olarak faklı amaçlara sahip olmasıdır (Clark, 1983b). Bu durum üniversitelerde ortak amaç belirlemeyi zorlaştırmaktadır. Bu bilgiler ışığında üniversitelerde akademisyenlerin ortak amaçlara sahip olmamalarının onları bireselliğe ittiği, bireyselliğin ise yetersiz iletişime neden olduğu ileri sürülebilir.

Bu çalışmanın diğer bulgusu ortak amaç eksikliğinin bölüm atmosferi aracılığıyla yetersiz iletişimle olan ilişkisidir. Daha önce belirtildiği gibi ortak amaçlar bir örgütün üyeleri arasında bütünlük sağlar ve açık bir iletişime imkan verirler. Çalışmada kullanılan envanterde bölüm atmosferini ölçtüğü sayılan maddelerde böyle bir bütünlüğün bulunmadığı vurgulanmaktadır. Dolayısyla ortak amaç eksikliğinin örgüt atmosferininde temel kavramlarından olan bütünlüğü zedelediği ve bunun yetersiz iletişime neden olduğu ileri sürülebilir.

Ortak amaç eksikliğinin yönetimsel sorunlar ve bölüm atmosferi aracılığıyla yetersiz iletişimle ilişkilenmesi çalışmanın diğer bir sonucudur. Ortak amaç eksikliğinin yönetimsel sorunlarla olan doğrudan ilişkisine yönelik bulgu Gizir'in (1999) çalışmasının bulgularını desteklemektedir. Gizir (1999), akademisyelerin yöneticilerden aralarındaki iletişimi daha güçlendireceğine inandıkları ortak amaçlar belirlemelerine yönelik beklentileri olduğundan söz etmiştir. Ayrıca araştırmacı akademisyenlerin ortak amaçların belirlenmesi için bir ortam ya da araç olan toplantıların eksikliğinden bahsettiklerini belirtmiştir. Yukarıda değinildiği gibi üniversitelerin yapısal özelliklerinden kaynaklanan ortak amaç eksikliği ya da amaç belirsizliğinin bazı yönetimsel sorunlara yol açması ve bunun ise bölüm

atmosferini olumsuz etkileyerek yetersiz iletişime neden olması kabul edilebilir bir sonuç olarak görülmektedir.

Bilimsel bilginin yetersiz paylaşımının bireysellik aracılığıyla yetersiz iletişim ile kurduğu dolaylı ilişki bu çalışmanın diğer bir bulgusudur. Bilimsel bilginin yetersiz paylaşımı ile bireysellik arasındaki karşılıklı bir ilişkinin varlığı ise diğer bulgudur. Benzer bir bulgudan bahseden Gizir (1999), bu ilişkinin akademisyenler arasındaki rekabet ve bireysellikten kaynaklandığını ileri sürmektedir. Ayrıca akademisyenler arasında bilimsel iletişimin sağlanabileceği ortak projeler, ortak çalışmalar, çift ve yandal lisans programları, seminer ve sempozyumların yetersizliğinin kişileri bireysel çalışmalara yöneltebileceğinden söz eder. Bu bilgiler ışığında bilimsel bilginin yetersiz paylaşımının bireyselliğe ve dolayısıyla akademisyenler arasında yetersiz iletişme neden olabileceği belirtilebilir.

Bu çalışmanın diğer bir bulgusu ise motivasyon eksikliğinin bilimsel bilginin yetersiz paylaşımı ve bireysellik üzerinden yetersiz iletişimle ilişkilenmesidir. Ayrıca bu çalışmada eleştiri ile yetersiz iletişimin motivasyon eksikliği, bilimsel bilginin yetersiz paylaşımı ve bireysellik aracılığıyla ilişkilendiği bulgusuna ulaşılmıştır.

Ayrıca gruplaşma ve yetersiz iletişim arasındaki dolaylı ilişkinin bilimsel bilginin yetersiz paylaşımı ve bireysellik üzerinden gerçekleşmesi ise çalışmanın diğer bir bulgusudur. Gruplaşma ve bilimsel bilginin yetersiz paylaşımı arasındaki doğrudan ilişkiye yönelik bulgu Gizir'in çalışması (1999) sonucunda elde ettiği bulgularla paralellik göstermektedir. Gizir (1999) akademisyenler arasında yaş, cinsiyet, hizmet yılı ve politik görüş temelli gruplaşmalar olduğundan ve bu gruplar içindeki akademisyeler arasında yoğun bir iletişim bulunmasına rağmen gruplar arasında yüzeysel bir iletişimin varlığından sözeder.

Çalışmada elde edilen diğer bir bulgu ise bölümün içedönük özelliğinin bölüm atmosferi aracılığıyla yetersiz iletişim ile ilişkilenmesidir. Üniversitelerdeki her bir bölümün kendine özgü farklı bir kültüre sahip olması, onların içedönük bir özelliğe

sahip olmaları sonucuna neden olabilir (Hearn & Anderson, 2002; Trowler & Knight, 2000; Ylijoki, 2000; Becher, 1994; Huber, 1992; Moses, 1990; Clark, 1983; Biglan 1973). Ancak akademisyenlerin diğer bölümlerdeki akademisyenlerle etkileşim içine girmemeleri bölümlerine yeni deneyimler ve farklı bakış açılarının girmesini, diğer bir deyişle bölümün yenilenmesini engelliyor olabilir. Bu durum bölümün atmosferini, dolayısıyla iletişimi olumsuz etkiliyor olabilir.

Eleştiri ve yetersiz iletişim arasında bölümün içe dönük özelliği ve bölüm atmosferi aracılığıyla kurulan ilişki çalışmanın diğer bir bulgusudur. Çalışmada kullanılan envanterin eleştiri ile ilgili maddeleri incelendiğinde bölüm içerisinde akademisyenlerin bilimsel eleştirilerini kişisel agıladıkları, eleştirilerin genellikle dedikodu şeklinde yapıldığı ve akademisyenlerin kişisel ilişkilerinin bozulmasından korktukları için eleştiride bulunmadıkları söylenebilir. Bu durum bölümün içedönük olmasını ve bölümün atmosferini ve dolayısıyla iletişimi olumsuz etkiliyor olabilir.

Bölüm atmosferinin, yetersiz iletişim ile motivasyon eksikliği, bilimsel bilginin yetersiz paylaşımı ve bireysellik aracılığıyla ilişkilenmesi çalışmanın bulguları arasındadır. Ancak bölüm atmosferi ve yetersiz iletişim arasında zaten doğrudan bir ilişki olduğu için burada açıklamaya gerek duyulmamıştır. Buna karşın bölüm atmosferi ve motivasyon eksikliği arasındaki doğrudan ilişki açıklamaya değer görülmektedir. At-Twaijri ve Al-Khursani (1994) işbirliğine dayalı ilişkilerin öğretim üyelerinin motivasyonunu olumlu etkileyen faktörlerden birisi olduğunu belirtmiştir. Ayrıca, yükseköğretimde motivasyon konusu üzerine çalışan araştırmacılar işdoyumu ve iş verimliğinin motivasyon ile yakından ilişkili olduğunu belirtmektedirler (Johnsrud, 2002; Grbich, 1998; Johnsrud & Heck, 1998; Lacy & Sheehan, 1997; Pinto & Pulido, 1997; Rowley, 1996; At-Twaijri & Al-Khursani; 1994). Bu çalışmada kullanılan envanterde bölün atmosferini ölçtüğü varsayılan maddeler incelendiğinde, öğretim üyelerinin içinde bulundukları atmosferin onları motive edici olmadığı ve dolayısıyla işdoyumu sağlayamadığı ileri sürülebilir.

Diğer yandan bölüm atmosferi ve yetersiz iletişim arasında bireysellik aracılığıyla dolaylı bir ilişkinin varlığından söz edilebilir. Ancak bölüm atmosferinin yetersiz iletişim ile doğrudan ilişkisinin varlığı göz önüne alındığında bu ilişkinin açıklanması gerekli görülmemiştir. Ancak bu dolaylı ilişki bölüm atmosferi ve bireysellik arasındaki doğrudan ilişkinin varlığını göstermektedir. Bu bulgu, Gizir'in çalışma (1999) sonuçlarını destekler görünmektedir. Daha önce de bahsedildiği gibi, Gizir öğretim üyelerinin bölümlerindeki atmosferi verimli bir iletişimin sağlanamayacağı kadar soğuk, sıkıcı ve suni bulduklarından söz etmiştir. Bununla birlikte, daha önce de değinildiği gibi, Petton ve arkadaşları (1994) bütünlük kavramının örgüt atmosferinin en temel kavramlarından olduğundan ve takım ruhuna sahip ve işbirliği içinde olan örgüt elemanlarının örgütlerine ve iş arkadaşlarına karşı daha olumlu yaklaşımlar sergilediklerinden ve güven duygusunun oluştuğundan söz etmektedirler. Bu çalışmada kullanılan envanterde bölüm atmosferini ölçtüğü varsayılan maddeler öğretim elemanlarının bütünlük ve güven hissine sahip olmadıklarını ve kendilerini bölümün bir parçası gibi hissetmediklerini vurgulamaktadır. Böyle bir atmosfer içerisinde, öğretim üyelerinin diğerlerinin ihtiyaç ve ilgilerinden çok kendi ilgi ve ihitiyaçlarını ön plana almaları, bireysel ve diğerlerinden bağımsız kararlar vermeleri ve bunları uygulamaları kabul edilebilir görülmektedir.

Özetle, bölüm atmosferi ve bireysellik, akademik ortamda iletişimi olumsuz etkileyen diğer faktörler arasında yetersiz iletişim ve diğer faktörler ile en sıklıkla ve doğrudan ilişkilenen faktörler olarak ortaya çıkmıştır. Bununla birlikte, bilimsel bilginin yetersiz paylaşımı diğer faktörlerden en sıklıkla etkilenen faktör olarak görülmektedir. Ortak amaç eksikliği ise diğer faktörler üzerinde en etkili faktör olarak ortaya çıkmaktadır. Üniversitelerin ayırt edici özellikleri dikkate alındığında bu sonuç kabul edilebilir görülmektedir.

Gizir ve Şimşek (2005) bireysellik, eleştiri, yabancılaşma, rekabet, formal iletişim kanallarının eksikliği ile ilişkili olarak yönetimsel sorunların varlığı gibi sonuçların şirket tipi örgütler üzerine yapılan çalışmalarla paralellik göstermediğinden söz ederler. Bu farklılığın üniversitelerin biribirinden farklı birçok alt-kültürden

oluşması ve öğretim üyelerinin diğer örgüt üyelerinden farklı özellikler taşımasından kaynaklandığı ileri sürülebilir. Ayrıca, Kowalski (2000) iletişim ve kültür arasında karşılıklı bir ilişkinin varlığına işaret eder. Kowalski, kültürün iletişim biçimini etkilediğini ve iletişimin de kültürün oluşturulması, sürdürülmesi ve değiştirilmesinde en önemli araç olduğunu belirtir. Her örgüt kültürünün o örgütün özelliklerini yasıttığı ve her örgütün kendine özgü farklı bir kültüre sahip olduğu dikkate alındığında iletişim süreçlerinin de o örgüte özgü farklı özellikler göstermesi kaçınılmaz görülmektedir. Dolayısıyla, akademik ortamda iletişim süreçlerinin üniversiteleri diğer örgütlerden farklı kılacak bazı özellikler taşıdığı ileri sürülebilir.

Bununla birlikte, daha önce de değinildiği gibi, bu çalışmada Gizir'in çalışması (1999) sonucunda sunduğu ve akademik ortamda iletişimi olumsuz etkileyen faktörler arasındaki ilişkilerin yer aldığı hipotetik bir model test edilmiş ve yeni bir model oluşturulmuştur. Analiz sonuçları bu iki model arasında bazı farklılık ve benzerliklerin varlığını ortaya koymuştur. Hipotetik modelde eleştiri ve bilimsel bilginin yetersiz paylaşımı arasında doğrudan bir ilişki öngörülmüşken, bu çalışma sonucuda oluşturulan modelde bu faktörler arasında motivatosyon eksikliği üzerinden dolaylı bir ilişki olduğu görülmektedir. Ayrıca, hipotetik modelde gruplaşma ile bölümün içe dönük özelliği ve bilimsel bilginin yetersiz paylaşımı ile yine bölümün içe dönük özelliği arasında doğrudan bir ilişki öngörülmüşken, bu çalışma sonucu oluşturulan modelde bu ilişkiler yer almamıştır. Buna karşın, bu çalışma sonucu oluşturulan modelde eleştiri ve motivasyon eksikliği ile eleştiri ve bölümün içe dönük yapısı arasında yeni iki ilişkinin varlığı gözlenmektedir.

Sonuç olarak, bu çalışmada nitel veri toplama yöntemleri arasında sıklıkla kullanılan görüşme tekniği aracılığıyla birinci elden test edilen veriler temel alınarak oluşturulan ve akademik ortamda iletişim süreçlerini olumsuz etkileyen etkenlerin kendi aralarında ve yetersiz iletişim ile ilişkilenmelerini ortaya koyan bir model daha geniş bir örneklem grubu ile test edilmeye çalışılmıştır. Ancak bu çalışma sonuçlarının bütün olarak ve/veya öngörülen ilişkilerin ayrı ayrı farklı zaman ve kültürlerde tekrar araştırılması akademik ortamda iletişim süreçlerinin

doğasına ilişkin bilimsel çalışmalara ışık tutacaktır. Ayrıca bu çalışma sonuçlarının akademik ortamda etkin bir iletişim ortamı oluştumak isteyen yöneticilere yararlı olacağı düşünülmektedir.

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