CULTURE AND COMMUNICATION IN ACADEMIA: THE VIEWS OF FACULTY MEMBERS

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Abstract – *The purpose of this study is to assess the interrelationships among factors negatively affecting the communication process among faculty members. Specifically, structural equation modelling was used to test the interrelationships among nine factors, namely: lack of motivation, alliances, lack of common goals, scientific discourse, individualism, inadequate exchange of scientific knowledge, administrative issues, introvert characteristics of the department and departmental atmosphere and their impact on poor communication among faculty members. The sample for the study consisted of 480 faculty members including professors, associate professors and assistant professors employed in seven state universities in Turkey. The data were gathered by utilising the Inventory of Communication Analysis in Academic Context (ICAAC) and analysed by using LISREL. Overall, the model explained 74% of the total variance in poor communication, and fit indices suggested a good fit of the data. The results and implications are discussed.*

Introduction

Financial cutbacks, decreasing public spending, new accountability measures, enrolment uncertainties, calls for a 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 reorganisation of these institutions across the world (Altbach, 1995; Jacob & Hellström, 2003). 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 (Barnett, 1993; Kerr, 1994; Altbach, 1995; Adams, 1998; Tapper & Palfreyman, 1998; Edwards, 1999; Marginson, 2000; Jacob & Hellström, 2003). The effects and acceleration of change in higher education vary in nature, provenance and intensity, but all impact on academic staff and their perception about their worklife and the workplace (Adams, 1998) in which communication takes place.

In addition, quality in research, teaching and service, which are the basic tasks of a university, mainly relate to the quality of administrative processes, academic

staff and related aspects of their worklife and workplace, technical infrastructure, and so on. Among other organisational processes and themes that may be related to these changes and quality issues, organisational communication deserves more attention because of its central position in the organisational action, control, coordination and survival of organisations.

Organisational communication can be defined as a process through which an organisation's members express their collective inclination to coordinate beliefs, behaviours, and attitudes, 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, and reinforcing or changing the attitudes and behaviours of others (Book et al., 1980). Communication also requires a common purpose and a common understanding of the goals which an enterprise aims to achieve. Thus, communication is the process most central to the success or failure of an organisation.

Hunt, Tourish & Hargie (2000) stated that, as with most organisations, universities as educational establishments engage in a wide variety of communications to realise their basic tasks – teaching, research, and service. However, universities have some distinguishing features which make their communication process more complex compared to business organisations. These distinguishing features can be categorised as goal ambiguity or multiplicity, complexity of goals and mission, administrative structure, academic profession (Birnbaum, 1988), and structural and cultural configuration (Birnbaum, 1988; Alvesson, 1993; Becher, 1994; Baldridge et al., 2000; Trowler & Knight, 2000; Ylijoki, 2000; Hearn & Anderson, 2002; Gizir & Simsek, 2005).

In addition, Millett (1968) proposed that the structure of the university may facilitate or impede communication. Structure impedes communication when it is not clearly related to the technological process and desired output of higher education. Also, structure hampers communication when it is not clearly defined in terms of functions to be performed by the differentiated parts of the enterprise. On the other hand, structure can facilitate communication when it is clearly defined and related to the technology and outputs of higher education.

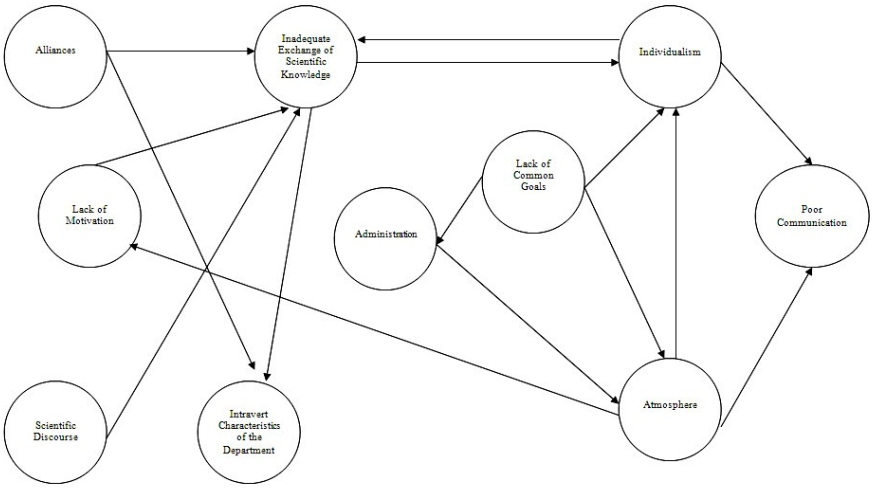
Moreover, universities are labour intensive, that is, the staff of a higher education institution is a significant component having a major role to play in achieving the objectives of the institution (Rowley, 1996). Specifically, faculty members have a special status as part of an academic department and they cannot be just passive recipients of management communication. In other words, faculty members are the vital part of the entire university communication network. However, there is a dearth of research which specifically investigates communication among faculty members.

Research problem

Against this background, this study collectively suggests the value of assessing interrelationships among factors negatively affecting the communication process and their impacts on poor communication among faculty members in Turkish state universities by testing a hypothetical structural model (see Figure 1) drawn from the findings of a qualitative case study conducted by Gizir & Simsek (2005) and also the related literature.

In their studies, Gizir & Simsek (2005) aimed at investigating the most common communication problems and the ways of solving these problems according to the views of faculty members at the Middle East Technical University (METU). The results of their study indicated many factors that influenced, both positively and negatively, the communication process in an academic context. Factors influencing negatively communication within and between departments were named 'inhibitors', including 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 constraints, size of the department, age profile of faculty, only personal contact, introvert characteristics of the department, inadequate collaboration in scientific work, upper administrative staff and communication, marginalisation, formal mediums, and general size of the campus. Gizir & Simsek (2005) also proposed that the number

FIGURE 1: Hypothetical structural model of poor communication among faculty members



of inhibitors are greater than the number of enablers, and that this situation may be a sign of some problematic areas in the communication process in an academic context.

Gizir & Simsek (2005) also pointed out that some factors were stressed more frequently than others by the faculty members interviewed and appeared to have a greater negative influence on the communication process in an academic context than 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'.

The present study employs a hypothetical structural model which takes into consideration the interrelationships among these factors[1] (as well as the related literature) and reviews their impact on poor communication.

Methodology

Sample

The sample of the study consisted of 480 faculty members employed in seven state universities representing seven regions of Turkey. The sample selection process involved several consecutive steps. In the first step, seven state universities representing seven regions of Turkey were identified by using a criterion sampling strategy. Among the 53 state universities in Turkey, the selected universities have the oldest history, have more faculties and more faculty members, and more students compared to other public universities in the same regions (Council of Higher Education, 2004a, 2004b). The aim was to include the largest university in each region in order to enhance the representative power of the sample.

After identifying the faculties which were the most common and familiar ones in sampled universities in order to distribute the sample equally in the best way, a sample of faculty members was selected from these faculties by utilising a stratified random sampling procedure. Finally, the names of the faculty members from each stratum were drawn randomly and 1,000 faculty members were selected to form the sample.

Data were obtained by mail and out of 1,000 faculty members, 480 returned the surveys, representing a 48% return rate. Out of the 480 faculty members, 128 were from the faculties of Science (26.7%), 90 were from Education (18.8%), 102 were from Economics and Political Sciences (21.3%), and 160 were from Engineering (33.3%).

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

Instrument

The Inventory of Communication Analysis in Academic Context (ICAAC) was used in this study in order to assess the potential factors affecting negatively the communication process and poor communication among faculty members in the academic context. Responses were measured on a 5-point Likert scale with anchors labelled from 'certainly disagree' to 'certainly agree'. The ICAAC was developed mainly by Gizir & Gizir (2005), and a validity and reliability study was conducted by the same researchers. Results of the confirmatory factor analysis highlighted ten factors from this 36-item inventory: 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 also showed that internal consistency coefficients of the factors as estimated by Cronbach Alpha were satisfactory, ranging .67 to .88 .

Data analysis

In the present study, LISREL 8.30 for Windows (Jöreskog & Sörbom, 1999) with SIMPLIS command language was used to analyse the data. The maximum likelihood estimation method was used in all the LISREL analyses. For the model data fit assessment, 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), Relative Fit Index (RFI), Root-Mean-Square Error of Approximation (RMSEA), and Standardised Root Mean Squared Residual (SRMR) were used in the study (Schumacker & Lomax, 1996). The expected values for a good model data fit interpretation are possible if the GFI, AGFI, CFI, NFI, NNFI, IFI, and RFI index values are above .90.; and RMSEA and SRMR index values are below .05.. In addition, the significance of the paths among latent variables was considered with respect to the *t*-test results and non-significant paths were deleted in a subsequent process of 'model-trimming' (Byrne, 2001). For the purpose of revising or improving the model data fit, modification indexes were also taken into account. Then, direct, indirect and total effects were examined.

Results

Descriptive statistics for the latent variables

The means, standard deviations and correlations of the latent variables used in the structural equation model are presented in Table 1.

TABLE 1: Means, standard deviations and correlations among latent variables

	PC	IND	IESK	LM	ALL	AI	LCG	SD	ICD	DA
PC	–									
IND	.552**	–								
IESK	.547**	.623**	–							
LM	.453**	.556**	.541**	–						
ALL	.113*	.277**	.221**	.149**	–					
AI	.541**	.508**	.494**	.507**	.172**	–				
LCG	.574**	.590**	.568**	.541**	.182**	.739**	–			
SD	.466**	.523**	.539**	.543**	.309**	.615**	.672**	–		
ICD	.430**	.458**	.501**	.468**	.156**	.546**	.609**	.612**	–	
DA	.607**	.500**	.501**	.433**	.110*	.671**	.680**	.584**	.534**	–
Mean	11.55	12.50	6.28	9.80	9.31	18.22	9.52	9.67	7.13	12.54
SD	4.20	3.29	2.10	2.78	2.64	5.41	3.31	2.86	2.02	4.75
α	0.81	0.68	0.76	0.67	0.69	0.85	0.85	0.75	0.80	0.88

Note: Correlations: *$p < .05$; **$p < .01$. PC: Poor Communication; IND: Individualism; IESK: Inadequate Exchange of Scientific Knowledge; LM: Lack of Motivation; ALL: Alliances; AI: Administrative Issues; LCG: Lack of Common Goals; SD: Scientific Discourse; ICD: Introvert Characteristics of the Department; DA: Departmental Atmosphere.

The Structural Equation Model

Structural equation modelling was used to test the hypothesised interrelationships among 'lack of motivation', 'alliances', 'lack of common goals', 'scientific discourse', 'individualism', 'inadequate exchange of scientific knowledge', 'administrative issues', 'introvert characteristics of the department', 'departmental atmosphere' and their impact on 'poor communication'.

Two steps were used to determine the interrelationships among latent variables and their impact on poor communication. Firstly, the hypothetical model of the poor communication among faculty members presented in Figure 1 was estimated. Although this initial model indicated approximately a good fit to the data except AGFI and RFI (see Table 2), three paths between latent variables were 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 ($\gamma = 0.17$, $t = 1.87$). So, these three paths were deleted from the estimated structural model.

Secondly, as a result of inspecting the modification indexes, two new paths were added into this structural 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 structural model, as evidenced by the decrease in χ^2 and increases in other fit indexes, were obtained when the alterations proposed by the modification indices were considered. Consequently, as shown in Table 2, the goodness-of-fit indices calculated for the model provided a very good fit to the data. The model fit statistics were as follows: $\chi^2(555) = 828.11$, $p < .05$; $\chi^2/df = 1.49$; 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 interrelationships among the latent variables. Moreover, the structural model had path coefficients all of which were statistically significant and theoretically sound.

TABLE 2: Chi-square and goodness-of-fit statistics for the initial and the modified model

Indexes	**Hypothetical Model**	**Modified Model**
χ^2/df	1.66	1.49
RMSEA	.037	.032
SRMR	.046	.041
GFI	.90	.91
AGFI	.88	.90
CFI	.95	.97
NFI	.90	.91
NNFI	.95	.96
IFI	.96	.97
RFI	.89	.90

Table 3 presents standardised Lambda-*x* and Lambda-*y* estimates, *t*-values, and squared multiple correlations for the modified model. As can be seen from Table 3, 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.

TABLE 3: Standardised 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			
Communication only related to academic issues	0.57	9.83	0.32
Limited personal communication	0.59	10.05	0.34
Giving extra effort for communicating with others	0.59	10.23	0.35
No need to communicate with each other	0.68	11.09	0.46
Insensitivity among faculty members	0.82	11.99	0.66
Individualism			
Inadequate participation in social activities	0.65	6.28	0.42
Individualism in scientific studies	0.56	6.15	0.32
Individualism among faculty members due to competition	0.45	5.66	0.20
Focusing only on personal work and activities	0.69	6.33	0.47
Inadequate exchange of scientific knowledge			
Inadequate exchange of scientific knowledge	0.80	6.38	0.64
Not informed about others' scientific activities	0.71	6.43	0.51
Lack of motivation			
Inadequate reward system for motivation	0.44	8.24	0.20
Low involvement in scientific activities	0.72	11.79	0.51
Low motivation for conducting research	0.73	11.86	0.53
Alliances			
Alliances with respect to gender	0.58	11.52	0.34
Alliances with respect to title	0.68	13.19	0.46
Alliances with respect to service year	0.70	13.59	0.49
Administrative issues			
Unclear organizational structure	0.71	13.14	0.51
Lack of administrative control over communication	0.56	10.71	0.31
Top-down and one-way communication structure	0.77	13.47	0.60
Alliances in the administrative staff	0.72	12.86	0.52

Inadequate social activities organized by administrators	0.61	11.70	0.37
Double standards	0.78	13.22	0.60
Lack of common goals			
Lack of common scientific goals	0.76	18.58	0.57
Lack of common goals for the future	0.83	21.90	0.69
Lack of common solutions to departmental issues	0.89	24.10	0.79
Scientific discourse			
Taking scientific discourse as personal	0.64	14.85	0.41
Scientific discourse through gossip	0.79	19.74	0.63
Avoid discussing issues because of interpersonal relations	0.67	15.76	0.45
Introvert characteristics of the department			
Inadequate scientific communication with other departments	0.86	13.24	0.74
Only personal contact with other departments	0.77	13.52	0.60
Departmental atmosphere			
Artificial, cold and boring climate in the department	0.85	14.16	0.72
Lack of sense of cohesiveness among faculty	0.84	14.14	0.70
Feeling oneself as a part of the department	0.55	10.40	0.30
Feeling of safety within the department	0.63	11.63	0.40
Feeling close to other faculty members in department	0.65	11.83	0.42

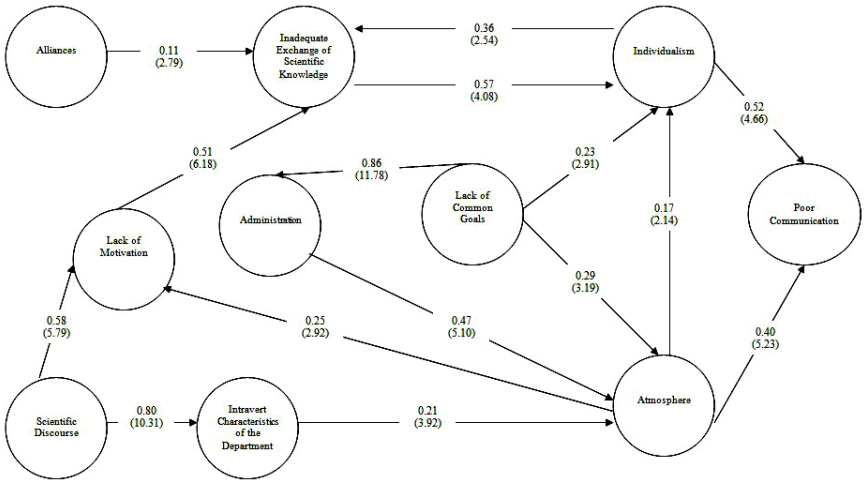
Direct relationships

Figure 2 displays LISREL estimates of the parameters in the structural model in which the coefficients were in standardised values and *t*-values. As can be seen from Figure 2, which displays the structural model of the factors for poor communication among faculty members, the standardised path coefficients changed between 0.11 and 0.86 in the fitted model. Cohen (1992; cited in Schoon, Sacker & Bartley, 2003) interpreted the absolute magnitudes of path coefficients or the effect sizes of the parameter estimates, determining that standardised 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. With respect to these criteria, significant interrelationships among the nine latent variables which explain 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); while 'departmental atmosphere' to 'poor communication' indicated almost as large an 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. In addition, the fitted model identified positive and direct relationships among the other latent variables as explained in Figure 2.

FIGURE 2: Structural model of poor communication among faculty members



As shown in Figure 2, three 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). Eighty-six percent of the total variance of 'individualism' was predicted by the factors mentioned in the structural model.

The 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' was 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 structural 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 ($\gamma = 0.58$), but the path coefficient from 'departmental atmosphere' to 'lack of motivation' specified almost a moderate effect size ($\beta = 0.25$). The total variance explained by the latent variables was 62% for 'lack of motivation' in the structural model.

In a similar vein, the path coefficient from 'administrative issues' to 'departmental atmosphere' indicated a large effect size ($\beta = 0.47$), whereas the path coefficient from 'lack of common goals' to 'departmental atmosphere' gave a moderate effect size ($\gamma = 0.29$). The path coefficient from 'introvert characteristics of the department' to 'departmental atmosphere' signified almost a medium effect size ($\beta = 0.21$) in the model. Moreover, the latent variables explained 78% of the total variance of 'departmental atmosphere' in the structural model.

The other two greatest effects in the fitted model were the path coefficient from 'scientific discourse' to 'introvert characteristics of the department' ($\gamma = 0.80$), and the path coefficient from 'lack of common goals' to 'administrative issues' ($\gamma = 0.86$). The explained total variances by latent variables were 64% for the former and 74% for the latter. When the directions of the relationships were considered, it was observed that all the relationships among latent variables were positive in the structural model.

Indirect relationships

As can be seen from Table 4, when the indirect relationships were considered, the results of the present study indicated that there are positive and significant indirect relationships between all the nine latent variables and 'poor communication' in the model. Specifically, the exogenous variable of 'lack of common goals' has the greatest indirect and significant influence on 'poor communication' ($\gamma = 0.54$) and 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' ($\beta = 0.37$) mediated by 'individualism'. In addition, 'administrative issues', 'lack of motivation' and 'scientific discourse' have almost moderate indirect relationships with 'poor communication' ($\beta = 0.26$; $\beta = 0.19$; and $\gamma = 0.21$, respectively).

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 ($\beta = 0.16$; $\beta = 0.14$; $\beta = 0.12$; and $\gamma = 0.04$, respectively).

TABLE 4: Standardised indirect relationships among latent variables in the fitted model

	Latent Variables								
	LCG	**SD**	**ALL**	**IND**	**IESK**	**LM**	**AI**	**ICD**	**DA**
PC	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)
IND	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)
IESK	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)
LM	0.17 (2.87)	0.04 (2.37)	---	---	---	---	0.11 (2.60)	0.05 (2.37)	---
DA	0.40 (4.95)	0.17 (3.90)	---	---	---	---	---	---	---

Note: *t*-values are shown in parenthesis in the table. PC: Poor Communication; LCG: Lack of Common Goals; SD: Scientific Discourse; ALL: Alliances; IND: Individualism; IESK: Inadequate Exchange of Scientific Knowledge; LM: Lack of Motivation; AI: Administrative Issues; ICD: Introvert Characteristics of the Department; DA: Departmental Atmosphere.

In addition, the structural model identified significant indirect relationships among 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 ranging between 0.07 and 0.37.

Similarly, all nine aforementioned latent variables also have indirect impact on 'inadequate exchange of scientific knowledge', again with various magnitudes ranging from 0.03 to 0.42. However, the path coefficients from 'individualism' and 'alliances' to 'inadequate exchange of scientific knowledge' were considered 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' was approximately moderate ($\gamma = 0.17$), while the indirect influences

of 'administrative issues' (β = 0.11), '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) also had strong indirect relationships with 'departmental atmosphere'.

Total effects

As shown in Table 5, 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' had the greatest total effects on 'poor communication'.

TABLE 5: Standardised total effects among latent variables in the fitted model

	Latent Variables								
	LCG	**SD**	**ALL**	**IND**	**IESK**	**LM**	**AI**	**ICD**	**DA**
PC	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)
IND	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)
IESK	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)
LM	0.17 (2.87)	0.62 (6.72)	---	---	---	---	0.11 (2.60)	0.05 (2.37)	0.25 (2.92)
AI	0.86 (11.78)	---	---	---	---	---	---	---	---
ICD	---	0.80 (10.31)	---	---	---	---	---	---	---
DA	0.69 (9.74)	0.17 (3.90)	---	---	---	---	0.47 (5.10)	0.21 (3.92)	---

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

Moreover, 'administrative issues', 'lack of motivation' and 'scientific discourse' had moderate total effects on 'poor communication' ($\beta = 0.26$; $\beta = 0.19$; and $\gamma = 0.21$, respectively), whereas the total effects of 'introvert characteristics of the department' and 'alliances on poor communication' were considered to be small ($\beta = 0.12$; and $\gamma = 0.04$, respectively). The total effects among the other independent and dependent latent variables can also be seen in Table 5.

Discussion and major conclusions

The results provide evidence that the proposed model representing the interrelationships among nine factors, namely, 'lack of motivation', 'alliances', 'lack of common goals', 'scientific discourse', 'individualism', 'inadequate exchange of scientific knowledge', 'administrative issues', 'introvert characteristics of the department', 'departmental atmosphere' and their impact on 'poor communication' was significant.

Specifically, the results indicated that there were direct relationships between 'individualism' and 'poor communication', and between the 'departmental atmosphere' and 'poor communication', while other relationships between each of the seven remaining factors and 'poor communication' were indirect.

The strongest direct relationship was found between 'individualism' and 'poor communication'. 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; the feeling that faculty members do not need to communicate with each other; and the requirement of giving extra effort for communicating with other faculty members. In the interviews with faculty members by Gizir & Simsek (2005), high individualism was one of the most frequently mentioned factors influencing the communication process within a department and 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, a promotion system based on publication and other criteria, lack of common goals were stated as the main causes of this inadequate exchange. In addition, they agreed that although there were some differences in reported causes of this, high individualism was one of the most common issues regarding work-related communication within the department. In their study, it was also claimed that individualism in scientific activities is reflected in informal relations.

Furthermore, Clark (1983) related individualism to the nature of academic work. He pointed out that the favourite doctrines of faculty members, freedom of research, teaching and learning, were heavily individualistic. Clark said that each person was to judge and choose for him or herself, so this idea seems to be atomistic. He believed that individualism remains a value that some faculty members sense they share, while showing respect for the choices and actions of others. He also mentioned that values do not produce similar behaviours to be integrated, in other words, faculty members acted differently according to their individual judgment and dictate, while they are also aware of moral bases for such actions, share attachment to the premises, exchange respect, and grant authority accordingly. So, individualism seems to be a flexible pattern, though one that has an elective affinity for the increasingly variegated nature of academic work, that is, it may be used to legitimate and rationalise such variety, while at the same time operating as a shared perspective.

Another direct relationship was found between 'departmental atmosphere' and 'poor communication'. A lack of conflict and the presence of team spirit and cooperation are distinguishing characteristics of cohesive climates, and members of 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 pro-social behaviours within work settings such as self-disclosure, the willing acceptance of others, empathy, and enhanced levels of trust (Pelton, Strutton & Rawwas, 1994). In such climates, open communication including instructions, scientific discourse, complaints, suggestions, 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 by the items used 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 within an atmosphere in which faculty members, who are individually oriented, do not have a feeling of belonging but rather a feeling of insecurity.

The results of this study also indicated that lack of common goals had the strongest indirect impact on poor communication. The results showed that lack of common goals influenced individualism, and, in turn, individualism affected poor communication. The finding related to the relationship between 'lack of common goals' and 'individualism' is consistent with the reports of Gizir & Simsek (2005) who found that high individualism was mainly caused by lack of common goals in an academic context. In their study, the relationship between high individualism and lack of common goals was explained by faculty members interviewed as a situation in which there were no common goals, everyone had their own individual

goals, and they tried to achieve these goals by themselves. Interviewees also suggested that the communication process was impeded by the fact that faculty members did not agree on some basic issues and common goals due to the chauvinism within and among departments.

In contrast to business organisations, which have a clear unity of mission, complexity of mission and multiplicity of goals are 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 (Clark, 1983; Patterson, 2001). Each group holds divergent, even opposing, views on university goals and priorities, both within and between the groups. For instance, administrators try to achieve 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 because individual, group, and institutional goals are so different, even conflicting, 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 & 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 (1983; cited in Patterson, 2001) claimed that although academics may share in common the fact that they work with and upon knowledge, they do not share common knowledge; in fact, 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, Clark states that the university is both discipline based and discipline diversified, because the crucial links for specialist groups are their identification with others working in the same specialised fields, either within or outside the academic system; loyalty to the employing university or institution frequently takes second place. He also views the 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.

In addition, it seems that the distinctive quality of academic institutions and systems is caused by their organisational structure and administrative processes, including a high degree of fragmented professionalism, and employees being a special kind of professional people characterised by a particularly high need for

autonomy (Birnbaum, 1988; Bolman & Deal, 1991; Baldridge et al., 2000; Clark, 2000; Rowland, 2002). This situation leads faculty members not to share common goals, but instead follow an individual path, which negatively affects the communication process.

The reciprocal relationship between 'individualism' and 'inadequate exchange of scientific knowledge' as one of the findings of this study seems to reflect the individualistic nature of academicians, professional fragmentation, departmental atmosphere, and lack of common goals among academicians as mentioned above.

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 for the unity of an organisation; they give a feeling of belonging 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 effective communication in which people express their views openly, consider the opinions of others, and combine ideas. Such communication patterns are mainly related to positive feelings and confidence in future collaboration (Tjosvold & McNeilly, 1988).

Based on this background and as a result of close inspection of the items used to measure departmental atmosphere in the present study, including 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 or a sense of wholeness in their departments because of an absence 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 an indirect relationship between 'lack of common goals' and 'poor communication' mediated by 'administrative issues', and then 'department atmosphere'. According to Birnbaum (1988), as colleges and universities become more diverse, fragmented and specialised, their missions do not become clearer, rather they multiply and become sources of conflict rather than integration. He claims that the problem is not that institutions cannot identify their goals, but 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).

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 goal ambiguity is one of the chief characteristics of academic organisations.

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

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

In conclusion, it can be stated that departmental atmosphere is one of the most influential of the factors considered, and it directly influences communication among faculty members. Similarly, another of the most influential factors was individualism, which was directly related to poor communication. Also, inadequate exchange of scientific knowledge appeared to be another influential factor. However, lack of common goals emerged as being more influential than other factors. This seems to be quite plausible when we take into account the distinguishing characteristics of universities as organisations, including multiplicity of goals, the nature of the academic profession, and structural and administrative configuration.

Regarding the composite approach to theory building proposed by Reynolds (1971), the study of Gizir & Simsek (2005) may be seen as an exploratory stage to provide guidance for procedures to be employed in the present study. In other words, the study of Gizir & Simsek (2005) was used as a preliminary study and provided some substantive categories and hypotheses for the present study. Then, this study tried to test the hypothetical model including interrelationships among the constructs. Thus, it might be claimed that the present study may be seen as an important step to building a theory. 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 over time. Furthermore, each factor and their relationships with poor communication represented in the fitted model may be studied separately.

Note

1. See Appendix I for the definitions of the factors. Among these factors, instead of 'high individualism' and 'criticism' which were used as the names of the factors in the study of Gizir & Simsek (2005), 'individualism' and 'scientific discourse' were used respectively in the present study because they were found to be more suitable to explain the phenomena.

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APPENDIX I

Definitions of the Factors

In this study, the factors negatively affecting the communication process among faculty members were defined as follows:

- *Administrative Issues* refer to issues which negatively affect the communication process caused by administrative and organisational structure, administrative processes, and the administrators of the universities. When compared with business organisations, universities exhibit some critical distinguishing characteristics that affect all organisational processes. Birnbaum (1988) categorises these distinguishing characteristics of universities as goal ambiguity or multiplicity and complexity of goals and mission, administrative structure and academic profession.

- *Alliances* 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 & Simsek, 2005).

- *Departmental Atmosphere* 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 organisational life include members' loyalty and commitment, their morale and satisfaction, their quality of effort or involvement, and their sense of belonging (Peterson & Spencer, 2000; Gizir & Simsek, 2005).

- *Inadequate Exchange of Scientific Knowledge* refers to faculty members not sharing adequately scientific knowledge and not having any information about the scientific activities and scientific contributions of their colleagues (Gizir & Simsek, 2005).

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

- *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 & Simsek, 2005).

- *Lack of Common Goals* refers to not sharing or having the same institutional goals for which organisations were established or created to achieve (Gizir & Simsek, 2005).

- *Lack of Motivation* refers to the faculty members not having much enthusiasm to conduct scientific research, to improve their intellectual qualities, and to teach the students (Gizir & Simsek, 2005).

- *Poor Communication* refers to the inadequacy in the process through which organisational members express their collective inclination to coordinate beliefs, behaviours, and attitudes in organisations (Kowalski, 2000).

- *Scientific Discourse* refers to a mean or a medium providing opportunity for faculty members to exchange scientific knowledge and experiences in order to improve their scientific works and other scientific activities (Gizir & Simsek, 2005).