Dimensions of employee satisfaction: A state university example

Fatma Küskü
İstanbul Technical University, Faculty of Management, Spor Cd., No 2, 80680, Maçka, İstanbul, Turkey

Abstract
The main purpose of this research is to explore the satisfaction level of the academic staff of state universities. In this research, a state university in Istanbul, one of the oldest and most institutionalised among state universities of Turkey, was selected as an example. 191 academic staff members answered an original questionnaire. According to the results of the research, although satisfaction levels in different dimensions are not high, Professional Satisfaction and Institutional Job Satisfaction are the dimensions that most participants are satisfied with, followed by Colleague Competition Level Satisfaction and Colleague Relations Satisfaction. Since these factors have positive effects on the general satisfaction levels of employees, the improvements therein will cause an increase on the general satisfaction levels of employees. This research discloses findings on employee satisfaction –an essential aspect in realising quality management understanding in state universities.

1. Introduction
Nowadays, new management patterns are arising as a result of social, economic and political changes and in recent years, the human factor has emerged as the focal point of changes taking place in organisations. Total Quality Management also seeks constant development by placing the human factor in the foreground. This approach maintaining that total quality can be attained with the co-operation of all the employees is being used to solve numerous problems in many industrial and service organisations in the world as well as in Turkey.

The Research Foundation of Istanbul Technical University supported this research financially. Thanks to Haluk Levent for his help and support in collecting data, and to Jale Alguadis and Feyza Kantur for their valuable help in editing this article. The helpful comments from three anonymous reviewers on an earlier draft of this article were appreciated.
Implementing Total Quality Management in organisations is only possible when the satisfaction of all parties participating in the production process is maximised. This is referred to as “customer satisfaction” in Total Quality Management. Attaining customer satisfaction, especially ‘internal customer (employee) satisfaction’ which has become widespread with total quality (see Sitkin et al., 1994), can be accomplished with holders of successive processes responding to each other’s expectations and desires in a customer-provider relationship.

The satisfaction level of employees is a concept reflecting the degree to which the individual's needs and desires are met and the extent to which this is perceived by the other employees. Although different researchers have different definitions of employee satisfaction, it is usually perceived as “the scope of the work and all the positive attitudes regarding the work environment” (Staples and Higgins, 1998) and can only be attained if the parties regard one another as customers they have to satisfy.

Especially in recent years, the fact that the level of satisfaction is as important for the employee as it is for the organisation is an issue often emphasised in studies on management and organisational behaviour. Finding significant and important relations between absenteeism (Dwyer and Ganster, 1991), employee turnover (Jenkins, 1993) and organisational loyalty (Witt and Beokermen, 1991) in some studies conducted in this area has led to a better understanding of the increasing importance of employee satisfaction. Moreover, employee satisfaction has been emphasised to such a degree that a relation between employee satisfaction and life satisfaction has been queried in many studies (Chacko, 1983; Tait et al., 1989; Judge and Watanabe, 1993; Howard and Frink, 1996). With the understanding of the importance of employee satisfaction, numerous top managers have encouraged their organisations to make endeavours in this direction.

This research has been conducted to explore the satisfaction level of the academic staff who make up only one party of the production process in state universities (non-profit organisations with many responsibilities) and to see the differences of personal and situational factors on satisfaction.

Although Total Quality Management is most often implemented in profit-making industrial and service organisations, since the beginning of 1990s, there has also been a growing interest in quality management in higher education all over the world (e.g., Coate, 1993; Cowles and Gilbreath, 1993; Williams 1993; Kanji and Tambi, 1999; Herguner and Reeves, 2000; Mergen et al., 2000). Yet, quality in education appeared in

---

1 Although from the Total Quality Management aspect, the internal customers to be satisfied in higher education institutions are the students, administrators, academic staff and administrative staff; only the academic staff was included in this study in order to limit the study. Further research is to be done to study other parties.
the agenda in Turkey only in the late 1990s (e.g., Cafoğlu, 1996; Saatçioğlu, 1996; Basık, 1997).

In Turkey, higher education underwent a serious revision process in the 1990s. One of the most obvious characteristics of this change was the establishment of numerous new universities. While some of these were new state universities in various cities throughout the country, an increasing number of private universities were also established in big cities. This rapid increase may be reflecting an important structural modification: university education is now being considered more as a profit-making tool rather than a social responsibility, and universities are gradually being considered as institutions functioning according to market conditions. The consequence of this tendency has been competition in higher education and the grouping and classification of universities according to certain quality criteria. This classification process has, in turn, led to efforts towards the implementation of quality management in higher education institutions in Turkey as well as in other countries (see Brennan and Shah, 2000).

No doubt, the evaluation of higher education institutions has many dimensions such as the quality of the education provided, the quality, the continuity and the quantity of scientific research, the awareness of social responsibility and the ability to fulfil this responsibility (Küskü and Levent, 1998). However, it is also obvious that institutions can only progress based on the views, attitudes and perceptions of their human resources (Luthans and Stajkovic, 1999). Therefore, just as it is with other organisations, concentrating on employees -one of the most valuable resources of universities- and carrying out studies related to their satisfaction have become essential.

Some researchers have studied different dimensions of employee satisfaction among academic staff in different cultures since the beginning of the 1970's. For instance, Flowers and Hughes (1973) developed the notion of relationship between employee satisfaction and environmental factors, particularly in accounting for reasons that employees stay in their jobs. Pearson and Seiler (1983) concentrated on the academics’ levels of satisfaction.

2 There may be the same trend in other settings. According to the results of a study (Gumport, 2000), over the past 25 years the dominant legitimating idea of public higher education has changed from higher education as a social institution, an organized activity that maintains, reproduces, or adapts itself to implement values that have been widely held and firmly structured by society, to higher education as an industry, producing a wide range of goods and services in a competitive marketplace.

3 Some universities have started to make some endeavours to increase the quality of the education in their universities in Turkey. For instance, as a result of these efforts Sabancı University (http://sabanciuniv.edu.tr/tarihce_genel.html) has been accepted for membership in European Foundation Quality, and Sakarya University (http://www.sau.edu.tr/iso9002.html) obtained ISO 9002. Furthermore some universities strive to maintain a high standard of education by international standards (e.g., several departments of METU (http://www.metu.edu.tr/about/geninfo/rhp) and Boğaziçi University (http://www.boun.edu.tr) have been evaluated by some international accreditation boards.
Fatma KÜSKÜ

satisfaction with the environment in which they work and found out that academics were generally more satisfied than dissatisfied with their work environment, but that there were high levels of dissatisfaction with compensation-related elements of the job (e.g., fringe benefits, pay, performance criteria). According to Moses’s (1986) research, academic staff were dissatisfied with the undervaluing of teaching performance in the criteria for being promoted. Further, Manger and Eikeland (1990) examined factors that influence academics’ intentions to leave the university, and found out that, although salary and economic resources did not appear to influence intentions to stay or go, general employee satisfaction and relations with colleagues were the strong predictors of intention to leave. More recently, Lacy and Sheehan (1997) investigated the impact of context elements, including working climate and atmosphere, on general levels of job satisfaction across eight nations (Australia, Germany, Hong Kong, Israel, Mexico, Sweden, UK, USA), and found out that university atmosphere, sense of community, and relationship with colleagues are the greatest predictors of job satisfaction. Tang and Talpade (1999) focused on the sex differences in employee satisfaction in a university in the USA and found out some significant differences between males and females in that males tended to have higher satisfaction with pay than females, whereas females tended to have higher satisfaction with their colleagues than males.

The results of this study will broaden findings of the previous researches mentioned above on the issue of employee satisfaction - an essential aspect in realising total quality - and thus an important step will have been taken towards adopting quality management understanding in state universities.

This study consists of two main sections. The first section analyses the different dimensions of employee satisfaction according to findings obtained from reviewing the relevant literature, while the second section presents the findings and results of a study carried out to expose the effects of these dimensions on general satisfaction in a Turkish state university.

2. Dimensions of employee satisfaction

In many studies, employee satisfaction is regarded as a function of the harmony between rewards given by the work environment and the desire of the individual for these rewards (Scarpello and Vandenberg 1992: 125). However, it is quite difficult to show this relation empirically. How can the employee satisfaction level in an organisation be measured? There are numerous views on the subject. The most often used and emphasised method in studies on the subject is to measure the different dimensions of satisfaction separately and then to use these to determine a general satisfaction level (see Rice et al., 1991). And here the question
“What are the dimensions that make up general employee satisfaction?” arises.

In the literature various scales have been developed to measure the different dimensions of employee satisfaction. The Minnesota Satisfaction Questionnaire prepared by Weis et al. (1967), the Job Descriptive Index developed by Smith et al. (1969) and the Job Diagnostic Survey by Hackman and Oldham (1975) can be mentioned among the most often used. These scales have later been used in studies either exactly as they are or by decreasing the number of items they contain or adapting some of the items to the subject of the study (e.g. Doran et al., 1991; Scarpello and Vandenberg, 1992; Jenkins, 1993; Tang and Talpade, 1999).

A number of researchers working in different disciplines have used these basic scales mentioned above to group the satisfaction dimensions related to the objectives of their research subjects in different ways. The most often emphasised satisfaction dimensions in studies are explained in this section.

*Management Satisfaction:* Many studies dealing with employee satisfaction emphasise the importance of superiors on general satisfaction, especially because of their role in the employee’s performance and career (e.g. Wall and Payne, 1973; Hackman and Oldham, 1975; Scarpello and Vandenberg, 1992; Wright and Bonett, 1992; Jenkins, 1993; Judge, 1993). In these studies, many dimensions of satisfaction with higher management have been investigated such as understanding of employees’ problems and needs, considering employees’ suggestions when taking decisions, showing the necessary concern for employees’ problems, and being accessible by the employees. Nonetheless, these studies have mainly dealt with first-degree superiors in whom the superior-subordinate relationship is much more intensive. As it is rather difficult to determine the effect of the higher management group on employees, their effect on general satisfaction has often been a dimension that has been neglected. However, being satisfied with higher management is an important dimension of job satisfaction and work environment satisfaction. Therefore, both higher management and the department management, which directly affect the employee, should be analysed in studies directed to determine employee satisfaction level.

*Colleague Satisfaction:* People share the work environment with others doing the same or similar kind of work. The success and interest shown by other employees in their own work usually strongly affect the satisfaction that people feel in their work environment. As well as thoughts about colleagues’ qualifications, knowledge and skill, the friendship and co-operation among those working in the same institution, which are the subdimensions of colleague satisfaction, have often been emphasised by researchers (e.g. Wall and Payne, 1973; Manger and Eikeland, 1990; Scarpello and Vandenberg, 1992; Wright and Bonett,
Colleague satisfaction should be dealt with as an element used to determine general employee satisfaction both from the point of view of competition and co-operation at work.

Other Work Group/Groups Satisfaction: Employees can be successful in their own jobs only if they can make the work environment more productive with the help of other employees who work in the same organisation but have different jobs and by giving support to the various jobs done. The internal customer concept emphasised by total quality management also concentrates on the extent and importance of the effect that people who work in the same environment but do different jobs have on one another. Other work group/groups’ satisfaction should be analysed as a dimension of satisfaction since the strong bonds among employees doing different jobs is of major importance for people working in the same organisation to be successful in their respective jobs. Being cooperative, having initiative in every aspect of the work, having work dedication, having the capacity to develop suggestions related to the work, and being honest may be used as subdimensions of other work group/groups’ satisfaction.

Job Satisfaction: In some studies, job satisfaction and employee satisfaction have been used as interchangeable terms (e.g. Hackman and Oldham, 1975; Chacko, 1983; Eichar et al., 1991; Mathieu and Farr, 1991; Witt and Nye, 1992; Lacy and Sheehan, 1997). But in many other studies, on the assumption that job satisfaction shows only satisfaction with the work itself, it has been stressed as an important dimension of employee satisfaction and also debated extensively (e.g. Wall and Payne, 1973; Mathieu, 1991; Wright and Bonett, 1992; Jenkins, 1993).

Physical Environment Satisfaction: No matter how motivated and efficient people are in their jobs, various physical characteristics of the environment they work in seriously affect the success and productivity they would like to attain. Therefore, the conditions of the physical environment (e.g. library conditions, laboratory and computer facilities, work area, canteen conditions) are also often emphasised in studies dealing with employee satisfaction (e.g. Wall and Payne, 1973; Chacko, 1983, Pearson and Seiler, 1983; Scarpello and Vandenberg, 1992).

Salary and Other Material Benefits Satisfaction: Salary and other material benefits satisfaction appear as an important dimension of satisfaction in almost all studies exploring employee satisfaction (e.g. Wall and Payne, 1973; Hackman and Oldham, 1975; Chacko, 1983; McFarlin and Rice, 1992; Witt and Nye, 1992; Jenkins, 1993; Judge, 1993; Tang and Talpade, 1999). However, the point that must be kept in mind here is the relationship between satisfaction and people’s financial needs because many consider that financial pressure seriously influences
employee behaviour and attitude and thereby the general satisfaction level (Brett et al., 1995, p. 261).

The section hereafter presents the findings obtained from the analyses of the dimensions thought to have an effect on general employee satisfaction in an organisation.

3. Scope and method of the research

3.1. Choice of organisation

Although this research was mainly conducted to expose the problems of those working in state universities in general, only one state university in Istanbul, one of the oldest and most institutionalised among state universities, was selected as an example. Since the conditions and work environment of state universities founded before 1980s in Turkey are nearly the same, the data obtained from the academic staff working at this institution may help make generalisations encompassing academic staff working at other state universities. Moreover, as this study will contain the academic staff's evaluations and perceptions of the work environment, it may act as a guide for precautions to be taken and management strategies to be designed to increase efficiency and effectiveness in the university.

3.2. Data collection

The subjective standpoint commonly used in research dealing especially with social sciences rather than objective criteria was used to collect data in this study. This was done because determining the level of satisfaction the employees derive from the environment they work in and finding out the elements affecting this satisfaction is possible only when they are based on the employees’ ideas, perceptions and attitudes.

Since there are some cultural differences and the conditions and the work environment of state universities are not the same as those in other countries, an original questionnaire was used for this research. In order to collect data more easily, the questionnaire was developed in Turkish following the detailed information gathered reviewing the relevant literature and interviewing some of the staff. It was then pretested among people working in a faculty (Management) of the institution. It was finalised after making some changes to facilitate understanding.

There may be some differences between old universities and new universities. For example, old universities can make longer-range plans compared to the new ones. In addition new universities are concerned with building their image, which is consistent with their new statutes (see Kanji and Tambi, 1999). Because of these reasons, the conditions of the old state universities founded before 1980s and of the young state universities founded after 1980s are not the same, especially with regard to their academic staff and work environments. Therefore, the generalization from this research can be made only for the state universities founded before 1980s in Turkey.
3.3. Sample plan

The whole population, i.e. all the academic staff working in the faculties of that university, was included in the scope of the research. The objective was to attain a high level of relevance and reliability. The number of the academic staff in the mentioned institution was 1415. However, only 202 of the questionnaires were answered and since some had missing data, they were not included in the sample. Only 191 questionnaires were used in the analyses. According to these figures, the rate of reply was 14.28 percent and the sample proportion was 13.50 percent.

3.4. Scales used in the research

Scales commonly used in this type of research were used to determine both the general satisfaction level and the satisfaction dimensions that affect this satisfaction level. The items in the scale were developed according to the 10-point Likert scale (1: Strongly Disagree, 10: Strongly Agree). The scales were used after being pretested for content relevance and reliability. The items of the scales are in Appendix A and the way they were developed is explained below:

General Satisfaction: The main objective of this research is to determine the employee satisfaction level. In addition to satisfaction dimensions developed through the use of the relevant literature, a scale was developed to determine the general satisfaction level. Thus, it would be possible to expose in what way and to what extent satisfaction dimensions influence general satisfaction level.

In numerous researches, general satisfaction is included in the analysis as only one item. However, since a scale consisting of one item creates some reliability problems (Nunnally, 1978; Churchill, 1979; Sethi and King, 1991), measuring general satisfaction level in this research through a scale consisting of more than one item was considered to be more significant.

According to many studies, as the level of satisfaction derived from the work environment and other job related conditions increases, employee loyalty and the level of identification with the organisation increase (Witt and Boekermen, 1991; Mathieu and Farr, 1991; Becker and Billings, 1993; Riggs and Knight, 1994). Although there are studies in which such effects were not determined (Curry et al., 1986), it is possible to assume that there are important correlations between the general satisfaction level of employees and organisational loyalty to facilitate studies dealing with satisfaction. Therefore, when developing a scale aiming at determining the general employee satisfaction level, using items that will include their organisational loyalty becomes unavoidable. With this assumption in mind, a ‘General Satisfaction’ scale consisting of 9 items, including organizational loyalty was developed. Five of the items
of the scale were adapted to this research from the research of Jenkins (1993), the ninth item was inspired by the studies of Eichar and colleagues (1991) and Witt and Nye (1992) and the remaining items were original.

**Management Satisfaction (University and Faculty Management Satisfaction):** The importance of the higher management group is undeniable in giving support and facilitating the work of employees even in higher education institutions where especially the academic staff is quite independent in the work they do. Therefore, two different scales were developed in this study to query the effect of the top administration both of the university (the rectorate) and of the faculties on general satisfaction.

A scale consisting of 5 items was used to determine the degree of university management satisfaction. The second item in the scale was inspired by the studies of Scandura and Graen (1984).

A scale with more items (8) was developed to determine faculty administration satisfaction since they have a more direct effect on the staff. The second and third items were inspired by the studies of Scandura and Graen (1984) just like in the scale concerning the university management.

**Colleague (Other Academic Staff) Satisfaction:** For the academic staff, other academic members have been designated as ‘colleagues’, and the expectations, opinions and attitudes of the staff concerning this group have been queried. The scale contains 10 items to determine the ideas, opinions and attitudes of the staff concerning their colleagues in the same group, doing the same kind of work. The fourth and fifth items in the scale have been adapted from the study of Turban and Jones (1988) while the others are original items developed to suit the higher education system in Turkey.

**Other Work Group Satisfaction:** Other work group/groups’ satisfaction is important for the success of people working in the same organisation due to the close link between the groups. The satisfaction that the academic staff derives from the administrative staff (clerks and service personnel) was included in the scope of this research and 10 items were developed with this objective in mind. The second, third and fourth items in the scale were inspired from the study of Beehr and colleagues (1994) and the ninth from that of Judge and Watanabe (1993).

The scales or the items used in the scales, which were used or adapted from other researches, were translated into Turkish by a Turkish professional translator and by a bilingual Turkish management lecturer. In order to maintain translation equivalence, a second professional translator back translated them into English. The author and the bilingual Turkish lecturer resolved a few discrepancies between the original items and their back-translation (See, Sekaran, 1983).
Job Satisfaction: A scale consisting of 8 items was developed to determine the degree of satisfaction employees derive from their job in the organisation, from their responsibilities and duties.

Physical Environment (Organisational Conditions) Satisfaction: A scale consisting of 14 items was developed to determine the level of satisfaction employees derive from the various aspects of the physical environment - work environment, toilets, laboratories, libraries, canteens - in the institution.

Salary Satisfaction: Since salary and other material aspects are not a prerogative of the state institution itself but of the economic and political policies of the Turkish State, this dimension of satisfaction may be excluded from satisfaction studies concerning higher education institutions. However, salaries paid to employees are a factor that facilitates the job that the academic staff are doing and therefore, have the effect of increasing general organisational satisfaction. Therefore, this study aims at measuring opinion about salary as a dimension of satisfaction with a scale of 3 items.

4. Independent variables used in the research

Various personal (demographic and socio-economic) variables were determined to expose some significant relationships with the satisfaction dimensions being tested. The frequent emphasis on the importance of personal and situational elements on satisfaction (Scarpello and Vandenberg, 1992; Tang and Talpade, 1999) points out that especially in attitude assessment studies, this type of variables cannot be neglected. Some variables used in this study and their significance are given below:

Age and Seniority: One of the regular findings in job literature is the positive relation between age and satisfaction. Older employees are said to have a high level of organisational satisfaction compared to younger ones (Eichar et al., 1991; Judge and Watanabe, 1993; Beehr et al., 1994). According to the initial debates concerning age and employee satisfaction, young people have higher expectations from their jobs; however, most often they cannot find opportunities to satisfy these expectations and are, therefore, disillusioned. The natural result of this disillusion is dissatisfaction with the work environment. Similar relations can be expected concerning the seniority of employees. Therefore, employees’ seniority in position and seniority in organisation were included in the study alongside age.

Gender: Although the relation between gender and job satisfaction has been the focal point of many studies, it has not, so far, been really clarified (Witt and Nye, 1992). While significant differences were found in some studies in the relation between gender and general satisfaction level (Forgionne and Peters, 1982; Pavesic and Brymer, 1990; Lacy and
Sheehan, 1997; Staples and Higgins, 1998; Tang and Talpade, 1999), others have not been able to determine important and significant differences (Smith and Plant, 1982). This implies that the effects of gender on satisfaction are liable to change according to the organisation being studied, the work done and the work environment.

*Academic Position in Institution:* Since higher-level jobs tend to be more complex and have better working conditions, pay, supervision, autonomy, and responsibility, the level at which an individual works within the organisation might also exert some influence on the satisfaction of employees. Therefore, most researchers have found out that employee satisfaction increases as the level of the job increases within an organisation hierarchy (e.g. Howard and Frink, 1996; Robie et al., 1998). However, some researchers have found negligible associations between employee satisfaction and job level (e.g. Bretz et al., 1994). And also it has been reported that employee satisfaction decreases as job level increases (e.g. Mosholder et al., 1981).

The academic position held could have significant effects on employee satisfaction. Since those who have become professors are less apprehensive while doing their work and are able to create a relatively more independent working environment for themselves, their satisfaction level is likely to be higher than that of the other academic staff. On the other hand, those with lower academic positions feel the pressure of both YÖK (Board of Higher Education) and the criteria that the universities themselves have set in the competitive atmosphere of today's world, and therefore, their satisfaction level tends to be lower than that of professors. Therefore, academic position in the institution has been included in the study as an important variable.

*Administrative Responsibility:* Since it is more likely that administrative employees might be informed of or involved in planning and implementing the changes within the organisation (Howard and Frink, 1996), it was assumed that having administrative responsibilities in the organisation would lead to higher satisfaction with the organisation compared to those without administrative responsibilities. Thus, having administrative responsibilities was also subjected to analysis.

*Experience in Other Organisations:* Previous satisfaction might predict current satisfaction (Howard and Frink, 1996). Therefore, assuming that the satisfaction level of those who have worked in other organisations and have joined this organisation after some negative experiences would be relatively higher, the study also investigates the employees' prior experience.

*Intention to Leave:* Many studies (e.g. Manger and Eikeland, 1990; Jenkins, 1993; Brett et al., 1995) have brought up the fact that there is a negative relation between the various dimensions of employee satisfaction, personnel turnover and intention to leave. In other words, as
the employee satisfaction level rises, employee's intention to leave reduces and as a result employee turnover is less. Furthermore, some studies emphasise the indirect relation between satisfaction and employee turnover rate (Jenkins, 1993; Brett et al., 1995). According to the negative relation between intention to leave and employee satisfaction, those who are not satisfied with the organisation they work in are more likely to change their jobs. In other words, intention to leave comes up as a result of dissatisfaction or a low satisfaction level. Therefore, the study queried whether the academic staff was intending to leave, and also whether those who did “were actively looking for a job” and “for what kind of organisation they were intending to leave their present jobs”.

The above were included as independent variables in the statistical analyses with the assumption that they could influence the different satisfaction dimensions of the academic staff working in the institution.

5. Findings of the study

5.1. General characteristics of the research participants

Appendix B contains findings concerning independent variables, which have causal effects on satisfaction level.

191 academic members of a state university participated in this study analysing Employee Satisfaction in State Universities. The average age of participants was 37.5 and approximately two thirds (62.3%) were men. Most of the participants were those working as Research Assistants (44.0%), followed by Professors (23.6%) and Associate Professors (18.8%). A significant number of the participants (17.3%) had various administrative responsibilities – Dean (Head of Faculty) / Assistant Dean, Head of School / Assistant Head of School, Head of Department - in addition to their academic ones.

Almost half (44.4%) of the participants had previously worked in another organisation. More than half (51.2%) had worked in the ‘private sector’, and a significant number (29.8%) in a university at home or abroad. Most of those who had previously worked in a ‘private sector’ enterprise declared the “desire to pursue an academic career” as their most important reason for leaving their previous jobs.

More than one third (35.6%) of the participants indicated that they intended to leave the institution in the near future. But only 22.1 % of those intending to leave indicated that they were actively looking for a new job. While half (50.9%) of those intending to leave indicated that they wanted to continue in a ‘private sector organisation’, almost half (45.5%) said they would like to transfer to a ‘private university’.
5.2. Explanatory statistics related to scales

Factor analysis was done for each scale developed on the assumption that they affect employee satisfaction (Stewart, 1981; Sethi and King, 1991). The aim of factor analysis is to provide more significant and summarised data based on the relations between items. Following factor analyses, the variables (items) in each sub-factor were subjected to content analysis and the sub-satisfaction dimensions were labelled.

Since all the scales used were developed through the use of the relevant literature, their ‘content relevance’ is considered to be appropriate (Gerbing and Anderson, 1988; Bagozzi et al., 1991; Ahire et al., 1996). Explanatory statistics concerning the scales are given in Table 1.

When factor analysis is applied according to the basic components method, ‘Satisfaction derived from University and Faculty Management’ dimensions present two different sub-factors. After the items in each sub-factor were examined from the content point of view and interpreted in the light of findings in ‘employee satisfaction’ literature, the first factors were labelled Trust in University/ Faculty Management and the second factors Relations with University/ Faculty Management.

The dimension used to demonstrate ‘Other Academic Staff (Colleague) Satisfaction’ consists of three sub-factors. As a result of examination, these were labelled Colleague Qualifications Satisfaction, Colleague Relations Satisfaction and Colleague Competition Level Satisfaction.

‘Job Satisfaction’ consists of two sub-factors, namely Professional Satisfaction and Job Satisfaction.

‘Physical Environment/ Organisational Conditions Satisfaction’ consists of five sub-factors namely, Computer and Laboratory Conditions Satisfaction, Library Conditions Satisfaction, Canteen Conditions Satisfaction, Work Environment Satisfaction and Satisfied with Cleanliness of Premises.

Other Work Group Satisfaction, Salary and Material Benefits Satisfaction and General Satisfaction consist of only one factor each.

6 The results of the analysis can be obtained from the researcher if desired.
Table 1
Explanatory Statistics Related to Scales

<table>
<thead>
<tr>
<th>Satisfaction Dimensions</th>
<th>Number of items</th>
<th>Number of factors</th>
<th>KMO</th>
<th>Variance Explained</th>
<th>Alphad</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Satisfaction</td>
<td>9</td>
<td>1</td>
<td>0.866</td>
<td>48.5</td>
<td>0.857</td>
</tr>
<tr>
<td>University Management Satisfaction</td>
<td>5</td>
<td>2</td>
<td>0.705</td>
<td>71.1</td>
<td>0.750</td>
</tr>
<tr>
<td>Trust in University Management</td>
<td>3</td>
<td></td>
<td>0.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relations with University Management</td>
<td>2</td>
<td></td>
<td>0.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Management Satisfaction</td>
<td>8</td>
<td>2</td>
<td>0.870</td>
<td>68.2</td>
<td>0.880</td>
</tr>
<tr>
<td>Trust in Faculty Management</td>
<td>5</td>
<td></td>
<td>0.844</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relations with Faculty Management</td>
<td>3</td>
<td></td>
<td>0.765</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleague Satisfaction</td>
<td>10</td>
<td>3</td>
<td>0.725</td>
<td>56.8</td>
<td>0.751</td>
</tr>
<tr>
<td>Colleague Qualifications Satisfaction</td>
<td>6</td>
<td></td>
<td>0.698</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleague Relations Satisfaction</td>
<td>2</td>
<td></td>
<td>0.806</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleague Competition Level Satisfaction</td>
<td>2</td>
<td></td>
<td>0.470</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Work Group Satisfaction</td>
<td>10</td>
<td>1</td>
<td>0.907</td>
<td>61.8</td>
<td>0.930</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>8</td>
<td>2</td>
<td>0.404</td>
<td>56.7</td>
<td>0.744</td>
</tr>
<tr>
<td>Professional Satisfaction</td>
<td>5</td>
<td></td>
<td>0.769</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Job Satisfaction</td>
<td>3</td>
<td></td>
<td>0.640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Environment/ Organisational Conditions Satisfaction</td>
<td>14</td>
<td>5</td>
<td>0.660</td>
<td>63.6</td>
<td>0.735</td>
</tr>
<tr>
<td>Computer/Laboratory Conditions Satisfaction</td>
<td>4</td>
<td></td>
<td>0.725</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Conditions Satisfaction</td>
<td>3</td>
<td></td>
<td>0.611</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canteen Conditions Satisfaction</td>
<td>3</td>
<td></td>
<td>0.651</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work environment Satisfaction</td>
<td>2</td>
<td></td>
<td>0.526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premises Cleanliness Satisfaction</td>
<td>2</td>
<td></td>
<td>0.407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salary Satisfaction</td>
<td>3</td>
<td>1</td>
<td>0.598</td>
<td>61.9</td>
<td>0.650</td>
</tr>
</tbody>
</table>

a All items were prepared with 10-point Likert Scale (1: Strongly Disagree, 10: Strongly Agree).
b (KMO) Kaiser-Meyer-Olkin measure of sampling adequacy for factor analysis.
c Variance Explained.
d The Alpha Coefficient of Cronbach was used for reliability of the scales.

The Cronbach Alpha Coefficient, often used in this kind of studies, was used to determine the reliability of the scales. All of the general scale reliability coefficients were over 70% (Table 1). And all of the reliability coefficients for the sub-factors, except for two, were found to be over 50%. As this study can be considered a pioneer-explanatory study in this area in Turkey, the fact that the reliability of some sub-factors is between 50% and 70% is considered statistically adequate (Nunnally, 1998; Peterson, 1994). The reliability coefficients for only Colleague Competition Level Satisfaction which is the third sub-factor of ‘Colleague/Other Academic Staff Satisfaction’ and Satisfied with Cleanliness of Premises, the fifth sub-factor of ‘Physical Conditions Satisfaction’ were found to be below the specified limit (47.0% and 40.7%
respectively). Therefore, one must be careful while commenting on these two factors.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for factor analysis of the determined scales were found to be within acceptable limits (Table 1) except for the ‘Job Satisfaction’ scale (0.404) (Stewart, 1981; Black and Porter, 1996).

The variance percentages of all scales developed were found to be over 55% (Table 1). This shows that only a small percentage of the total variance of the developed scales can be explained by other variables.

5.3. Effects of the independent variables on satisfaction

The t test conducted has shown that the opinions of the academic staff working in the institution do not reflect serious differences according to gender. A statistically significant relation is found only between Salary Satisfaction level and gender. According to this finding, women’s salary satisfaction level is slightly lower than that of men’s.

There are no statistically significant relations between the age of the academic staff and satisfaction dimensions in this research. However, as the age of employees declines, it is observed that they are less satisfied with only Relations with Faculty Management and Institutional Job Satisfaction. Therefore, their ‘General Satisfaction’ level is found to be lower. This can be suggestive of the high expectations of young academics compared to older ones.

Views on certain satisfaction aspects are observed to differ according to the academic staff’s academic position in the institution. According to the least significance test, which was made after analysis of variance, the Other Work Group (Administrative Staff) Satisfaction level of Research Assistants is lower than that of Professors.

There are no significant relations between the seniority of the staff and satisfaction aspects. However, according to the one-way variance analyses, there are some statistically significant relations between seniority and some aspects of satisfaction. For instance, the Colleague Qualifications Satisfaction level of those with a 6-10 year institutional seniority is less and lower than those with more seniority. This may be interpreted as a result of the fact that people who have not been long with the institution have not had the chance to really know their colleagues, and

---

7 t test is used to accurately describe the shape of the sampling distribution for means to compare two groups (Runyon et al., 1996).
8 \( t = -2.47, p=0.014 \); mean for women = 6.48, mean for men = 6.19.
9 Mean for age less than 30 = 6.88, mean for age 30-39 = 6.95, mean for age 40-49 = 7.57, mean for age 50-59 = 7.51, mean for age 60 and more = 8.35.
10 Analysis is used as a test of means for two or more groups (Runyon et al., 1996).
11 \( F=2.67, p=0.106 \); mean for professors = 5.93, mean for research assistants = 5.64.
that senior members generally know the people in their professions and therefore are more satisfied with their colleagues in their own institutions, whereas it may show that the expectation level of those who have an average seniority is higher. Similar to this relation, people with more seniority trust the Faculty Management more\textsuperscript{12}, their Other Group Satisfaction level is higher\textsuperscript{13}, and so is their Institutional Job Satisfaction level\textsuperscript{14} and as a result, they are more satisfied with the institution compared to employees with less seniority\textsuperscript{15}.

Those who have a certain administrative responsibility within the institution are more satisfied with the Working Environment\textsuperscript{16}, have more Institutional Job Satisfaction\textsuperscript{17} and their General Satisfaction\textsuperscript{18} level is higher.

Those who have had previous experience in another organisation are less satisfied with the competition level of their colleagues\textsuperscript{19} and the cleanliness of the premises\textsuperscript{20}. However, the satisfaction level of those who have joined this institution after working in another organisation is higher with respect to Colleague Relations\textsuperscript{21}, Relations with Faculty Management\textsuperscript{22}, Working Environment\textsuperscript{23}, and Institutional Job\textsuperscript{24} and therefore, their general satisfaction\textsuperscript{25} is higher.

There are also statistically significant and important relations between the specified satisfaction dimensions and the participants’ intention to leave. Accordingly, those whose level of Trust in University Management\textsuperscript{26} and whose Trust in Faculty Management\textsuperscript{27} is low, and those whose satisfaction level concerning Relations with University

\begin{itemize}
  \item Mean for seniority 5 years and less = 5.61, mean for seniority more than 5 years = 6.23.
  \item Mean for seniority 5 years and less = 5.57, mean for seniority more than 5 years = 6.42.
  \item Mean for seniority 5 years and less = 5.11, mean for seniority more than 5 years = 6.17.
  \item Mean for seniority 5 years and less = 6.86, mean for seniority more than 5 years = 7.68.
  \item \(t=2.59, \ p=0.011\); mean for with administrative responsibility = 6.95, mean for without administrative responsibility = 6.16.
  \item \(t=3.17, \ p=0.002\); mean for with administrative responsibility = 6.48, mean for administrative responsibility without = 5.23.
  \item \(t=2.44, \ p=0.016\); mean for administrative responsibility within = 7.76, mean for administrative responsibility without = 7.05.
  \item \(t=-2.25, \ p=0.026\); mean for experienced = 6.94, mean for without experience = 7.31.
  \item \(t=-2.72, \ p=0.007\); mean for experienced = 5.57, mean for without experience = 6.18.
  \item \(t=3.11, \ p=0.002\)
  \item \(t=2.42, \ p=0.017\)
  \item \(t=2.59, \ p=0.011\)
  \item \(t=3.17, \ p=0.002\)
  \item \(t=2.44, \ p=0.016\)
  \item \(t=-3.38, \ p=0.001\); mean for consider leaving = 4.72, mean consider not leaving = 5.73.
  \item \(t=3.14, \ p=0.002\); mean for consider leaving = 5.16, mean consider not leaving = 6.30.
\end{itemize}
Management\textsuperscript{28} is low show a stronger desire to leave. Further, those who are not very happy with their Colleagues’ Competition Level\textsuperscript{29}, those who are not Professionally Satisfied\textsuperscript{30} and are not satisfied by Institutional Job\textsuperscript{31}, and whose general satisfaction level is therefore low\textsuperscript{32}, want to leave. There are similar relations between satisfaction dimensions and actively looking for a new job.

5.4. Effects of satisfaction dimensions on general satisfaction

The employees’ perception concerning general satisfaction is the result of the compound effect of all satisfaction dimensions. A multiple regression analysis was conducted to determine both this compound effect and the effects of each satisfaction dimension on general satisfaction (for details on the possibility of using factor scores as independent variables in multiple regression analyses, see Lastovicka and Thamodaran, 1991). Thus, attempts were made to determine the basic satisfaction factors that affect ‘general satisfaction’ as well as the degree and direction of it.

The stepwise regression method and the satisfaction scores given to sub-satisfaction factors were used as independent variables, and were added to the function with the general satisfaction level which is a dependent variable. The equation and definitions related to this method where the least square estimation was used are given below:

\[ Y_i = \alpha_0 + \sum \beta_i * X_i + \varepsilon \]

In this equation, \( Y_i \) denotes the General Satisfaction Score, \( X_i \) the Sub-Satisfaction Dimension (Factor) Score, \( \alpha_0 \) the Constant Coefficient, \( \beta_i \) the Coefficient showing the Degree of Importance, \( \varepsilon \) the Error Term.

In the equation given above, the intensity of the effects of sub-satisfaction factors, in other words, the standardised beta values which are the coefficients showing the importance of the sub-factors within the function have been labelled ‘Calculated Importance’. These coefficients show the degree of increase that will be achieved on general satisfaction if an improvement of one unit is realised. In other words, the higher this value is, the more the said sub-satisfaction’s relative importance is on general satisfaction.

Table 2 shows the ‘Calculated Importance’ (beta coefficients) values of factor dimensions found as a result of factor analyses and the average satisfaction degrees specified by employees for the items included in these dimensions. The satisfaction level calculated as the average of the scores

\[ t=2.24, p=0.027; \text{mean for consider leaving } = 4.19, \text{mean consider not leaving } = 5.14. \]

\[ t=2.65, p=0.009; \text{mean for consider leaving } = 6.70, \text{mean consider not leaving } = 7.60. \]

\[ t=2.17, p=0.031; \text{mean for consider leaving } = 7.92, \text{mean consider not leaving } = 8.58. \]

\[ t=4.49, p=0.000; \text{mean for consider leaving } = 4.70, \text{mean consider not leaving } = 5.86. \]

\[ t=8.22, p=0.000; \text{mean for consider leaving } = 6.06, \text{mean consider not leaving } = 7.08. \]
given to the items included in the scales were labelled ‘Indicated Importance’ as they directly affect general satisfaction.

According to the equations obtained considering the regression analysis ($R^2 = 0.609$, Standard Error = 0.619), Trust in University Management, the sub-dimensions of Colleague Satisfaction, and the sub-dimensions of Job Satisfaction are affecting the General Satisfaction.

When calculated importance values are analysed, it is perceived that Institutional Job Satisfaction (0.512) and Professional Satisfaction (0.339) are the two most important dimensions affecting general satisfaction. Other satisfaction dimensions which have important effects on General Satisfaction are Colleagues Competition Level Satisfaction (0.165), Colleagues Qualifications Satisfaction (0.139) and Trust in University Management (0.133). However, the Colleague Relations Satisfaction has a negative effect on General Satisfaction.

The specified relations show that improvements related to Professional Satisfaction and Institutional Job Satisfaction should be made to increase the general satisfaction level of academic staff.

6. Results and suggestions

Higher education in Turkey has entered a process of serious change since 1990. As a result of some political and economic decisions, the number of both state and private universities increased rapidly and so did competition in higher education. Increase in competition brought along efforts and attempts to improve the quality of education offered by the universities and to attain a privileged place among competitors. Therefore, nowadays, an important transformation can be observed in Turkish universities. This transformation may affect universities positively provided that appropriate strategies are adopted. This will in turn be possible by getting to know the existing human resources and finding out their feelings, opinions and attitudes.
### Table 2
Effects of Satisfaction Dimensions on General Satisfaction

<table>
<thead>
<tr>
<th>Variables (Satisfaction Dimensions)</th>
<th>CI</th>
<th>p</th>
<th>IS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University Management Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust in University Management</td>
<td>0.133</td>
<td>0.017</td>
<td>5.37</td>
</tr>
<tr>
<td>Relations with University Management</td>
<td>-</td>
<td>-</td>
<td>4.80</td>
</tr>
<tr>
<td><strong>Faculty Management Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust in Faculty Management</td>
<td>-</td>
<td>-</td>
<td>5.90</td>
</tr>
<tr>
<td>Relations with Faculty Management</td>
<td>-</td>
<td>-</td>
<td>5.83</td>
</tr>
<tr>
<td><strong>Colleague Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleague Qualifications Satisfaction</td>
<td>-0.128</td>
<td>0.016</td>
<td>4.92</td>
</tr>
<tr>
<td>Colleague Relations Satisfaction</td>
<td>0.139</td>
<td>0.014</td>
<td>6.84</td>
</tr>
<tr>
<td>Colleague Competition Level Satisfaction</td>
<td>0.165</td>
<td>0.002</td>
<td>7.28</td>
</tr>
<tr>
<td><strong>Other Work Group Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5.97</td>
</tr>
<tr>
<td><strong>Job satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Satisfaction</td>
<td>0.339</td>
<td>0.00</td>
<td>8.34</td>
</tr>
<tr>
<td>Institutional Job Satisfaction</td>
<td>0.512</td>
<td>0.00</td>
<td>5.45</td>
</tr>
<tr>
<td><strong>Physical Environment/Organisational Conditions Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer and Laboratory Conditions Satisfaction</td>
<td>-</td>
<td>-</td>
<td>4.48</td>
</tr>
<tr>
<td>Library Conditions Satisfaction</td>
<td>-</td>
<td>-</td>
<td>5.46</td>
</tr>
<tr>
<td>Canteen Conditions Satisfaction</td>
<td>-</td>
<td>-</td>
<td>5.54</td>
</tr>
<tr>
<td>Work environment Satisfaction</td>
<td>-</td>
<td>-</td>
<td>6.30</td>
</tr>
<tr>
<td>Premises Cleanliness Satisfaction</td>
<td>-</td>
<td>-</td>
<td>5.91</td>
</tr>
<tr>
<td><strong>Salary Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.62</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>0.039</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple R</td>
<td>0.781</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>0.609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.619</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>38.730</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a (CI) Calculated Importance (Standardised 9 coefficients)

b (p) Represents a level of significance of 5% for Calculated Importance.

c (IS) Indicated Importance: The average of the scores given to the items included in the scales.

The study conducted was based on the assumption that one of the most important elements that determine the quality of the products and services of an organisation, and its competitiveness is its employees. Therefore, the aim was to determine the level of satisfaction and the elements that affect this level for the academic staff of a state university.

According to the results of the research, each satisfaction dimension, which was believed to have an effect on satisfaction in university, could be explained with more than one sub-factor. The sub-factors determined as a
result of content analyses were: Trust in University Management, Relations with University Management, Trust in Faculty Management, Relations with Faculty Management, Colleague Qualifications Satisfaction, Colleague Relations Satisfaction, Colleague Competition Level Satisfaction, Other Work Group Satisfaction, Professional Satisfaction, Institutional Job Satisfaction, Computer and Laboratory Conditions Satisfaction, Library Conditions Satisfaction, Canteen Conditions Satisfaction, Work Environment Satisfaction, Premises Cleanliness Satisfaction, Salary Satisfaction.

Job Satisfaction is the dimension that most participants are satisfied with (8.34), followed by Colleague Competition Level Satisfaction (7.28) and Colleague Qualifications Satisfaction (6.84) (Table 2). The satisfaction level concerning all the sub-factors except the above is observed to be 5-6, which reflects ‘undecidedness’. From the satisfaction dimensions point of views, this situation makes clear that employees are not very satisfied, but at the same time, they do not have too many negative feelings, either. Therefore, this shows that improvements concerning these factors will have positive effects on the general satisfaction level of employees.

According to the degree of importance determined by regression analyses, although satisfaction levels of different dimensions are not high, it is observed that the two factors that most seriously affect general satisfaction are Job Satisfaction and Professional Satisfaction. Since these factors have positive effects on general satisfaction levels of employees, the improvements concerning these factors will cause increases on it. This means that, from the relative importance point of view, priority should be given to making improvements concerning these two factors.

Views on certain satisfaction aspects are observed to differ according to some organisational and situational variables as in many other studies.

This study has supported the findings (e.g. Howard and Frink, 1996; Robie et al., 1998) that some dimensions of employee satisfaction increase as the level of job increases within an organisation hierarchy. For instance, the Other Work Group (Administrative Staff) Satisfaction level of research assistants is lower than that of Professors. This result may be considered normal in the sample university conditions because those who are professors mostly communicate with the administrative staff through the research assistants who help them to facilitate some administrative and academic work such as the organisation of implementing the exams. Since the research assistants are transmitting some necessary information between two groups, most of the educational staff, especially professors, do not need to communicate with the administrative staff directly. The research assistants are needed to get involved and solve the problems with the administrative staff so this gives them an opportunity to know them more closely. Therefore, their satisfaction level may be lower than the professors’ in the same institution.
As parallel with this result, it was found out that those who have a certain administrative responsibility within the institution are more satisfied with the Working Environment, Institutional Job Satisfaction, and their General Satisfaction level is higher. These findings supported those of Howard and Frink (1996).

On the other hand, this research has presented that the opinions of the academic staff working in the institution do not reflect serious differences according to gender, age and seniority. There are only a few exceptions. For instance, a statistically significant relation is found only between Salary Satisfaction level and gender. According to this finding, women's salary satisfaction level is slightly lower than that of men's. This result seems to support the previous findings of the researches as well as that of Tang and Talpade (1999), who examined the sex differences in employee satisfaction in a university in the USA and found out that males tended to have higher satisfaction with pay than females.

Although one of the constant findings in job literature (Eichar et al., 1991; Judge and Watanabe, 1993; Beehr et al, 1994) is the positive relation between age and satisfaction, this research could not find statistically significant relations between the age of the academic staff and satisfaction dimensions. However, as the age of employees declines, it is observed that they are less satisfied with only Relations with Faculty Management and Institutional Job Satisfaction. Therefore, their General Satisfaction level is found to be lower. This can be suggestive of the higher expectations of young academics compared to older ones.

As with all studies, the design of the current study is subject to limitations. There are three basic limitations in the research: i) Period of research: A change of top administration had taken place a short time before the collection of the research data. Every change in administration naturally brings about some changes in the existing status and in some administrative strategies of the organisation. And usually, these changes are met with some resistance by the employees (Agocs, 1997). The fact that the field study of this research was done at such a period brings forth the risk that those who are not pleased by the changes and show resistance would reflect their opinions and attitudes in their replies to the questions of the study. Therefore, special attention should be paid while interpreting the findings of the analyses. ii) Sample: The fact that only 191 people replied and were included in the scope of the study although, at the time, the number of academic staff in the institution was 1415, necessitates caution when making generalisations based on the findings. iii) Making generalisations: At the beginning of the research, the intention was to make some generalisations for state universities based on this university example. However, although it was thought that this institution could reflect other state universities due to its long past and characteristics, when considering that numerous new universities were established after 1990 as
a result of various economic and political preferences, it would be incorrect to make generalisations using the findings of this study for all state universities because of the peculiarities of the characteristics and culture of each organisation. Therefore, the generalisations made from the findings would be more appropriate for the state universities established before the university boom of the early 1990s.

In spite of these limitations, this study has a notable strength. Its primary strength is that it had tapped a large literature on satisfaction across several disciplines, and had combined this with recent research on employee satisfaction. The approach of the study has both theoretical and empirical grounding, and provides a good starting point for future study.

In conclusion, it should not be forgotten that employees would be more productive as long as they are satisfied with their jobs and the environment they work in. Therefore, instruments other than economic ones become major factors encouraging productivity and efficiency in employees in institutions like universities where the economic satisfaction level is rather low in return for the work done and the efforts made. As a result, improvements concerning factors other than economic ones become very important.
Appendix A
Scales Used in the Study

General Satisfaction
1. I am generally satisfied working in this institution.
2. I think I belong to this institution.
3. On the whole, I think this institution is one of the best universities.
4. I am proud when speaking about the university I work in.
5. I advise other people to work in this institution.
6. I would rather work in another state university.
7. I would rather work in a private university.
8. I whole-heartedly think that my future is in this institution.
9. My family is happy that I work in this institution.

University Management (Administration) Satisfaction
1. I am very happy with those who have administrative positions at our university.
2. The administrators at our university do not understand our problems and needs.
3. Our university administrators generally do not consider our suggestions when taking decisions.
4. Our university administrators have the experience, knowledge and ability to help the ITU reach its goals and objectives.
5. We can easily reach the top administrators of the university when necessary.

Faculty Management (Administration) Satisfaction
1. I am generally satisfied with the administrators working in our faculty.
2. Administrators of our faculty do not understand our problems and needs.
3. Our faculty administrators generally do not consider our suggestions when taking decisions.
4. Our faculty administrators are generally hard to work with.
5. I believe that my work gets the attention it deserves from my faculty administrators.
6. Our faculty administrators do not show the necessary interest in our problems.
7. Our faculty administrators have the experience, knowledge and ability to help the faculty reach its goals and objectives.
8. We can easily reach the top administrators of the faculty when necessary.

Colleague Satisfaction
1. I am generally satisfied of my colleagues.
2. I believe that the friendship relations in our institution are better than those in other institutions.
3. The co-operation among those working in our department is not sufficient.
4. I believe that the co-operation among the academic staff in our department is adequate.
5. I do not believe that the academic staff in our department fulfils their responsibilities to the best of their ability.
6. I believe that the academic staff in our department devotes the adequate time to their academic responsibilities.
7. I do not think that the academic staff in our department devotes adequate time to develop themselves.
8. I do not believe that the knowledge and skill of the academic staff in our department is adequate for the work they do.
9. I do not believe that the academic staff in our department has the qualifications to compete with the staff of private universities.
10. I believe that the academic staff in our department has the qualifications to compete with the staff of other state universities.

Other Work Group (Administrative Staff consists of clerks and service personnel) Satisfaction

1. In general, I am satisfied with the administrative staff working in our faculty.
2. The administrative staff in our faculty is very co-operative.
3. The administrative staff in our faculty has initiative in every aspect of the work.
4. The administrative staff in our faculty has the necessary work dedication.
5. The administrative staff has the capacity to develop suggestions related to their jobs.
6. I trust the honesty of the administrative staff in our faculty.
7. I am satisfied with the interest shown by the faculty administrative staff in their work.
8. The administrative staff in our faculty has the necessary knowledge and capacity required by their jobs.
9. I believe that the administrative staff in our faculty are devoted to their work.
10. Our communication with the administrative staff in our faculty is very good.

Job Satisfaction

1. In general I like my work and what I do at ITU.
2. I like my job (profession) because it gives me the opportunity to learn new things all the time.
3. My skills and knowledge are adequate for my job.
4. Our responsibilities are well defined within the framework of the work we do.
5. I believe my job has a prestigious place in society.
6. I believe that the quality of the work I do at ITU is appreciated.
7. I do my work with zeal.
8. I believe I do my work well.
Physical Environment (Organisational Conditions) Satisfaction
1. The computer facilities in our faculty are adequate for our needs.
2. We can use the computers in our faculty whenever we want.
3. The laboratory facilities in our faculty are adequate for our needs.
4. We can use the laboratory facilities in our faculty whenever we want.
5. The periodicals and books in our faculty are adequate for us to pursue or work.
6. The library hours are adequate.
7. I think that the librarians have the knowledge and skills required to do their work.
8. The work environment in our faculty is safe.
9. Our work area in the faculties is adequate in size, comfort and provides the necessary work environment.
10. Our canteen is clean and neat.
11. The quality of the food in the canteen is good.
12. I think that those who work in the canteen have the necessary skills and meticulousness required.
13. I am satisfied with the temperature of the work environment in winter and summer.
14. Our faculty is always clean.

Salary Satisfaction
1. Generally speaking, I am satisfied with my salary and other material benefits at ITU.
2. I think that my salary is low in relation to the work I do.
3. My salary is adequate for the work I do.
Appendix B
General Characteristics of Participants

<table>
<thead>
<tr>
<th>General Characteristics</th>
<th>F</th>
<th>%</th>
<th>General Characteristics</th>
<th>Seniority in Position</th>
<th>Academic Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>%</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Professor</td>
<td>45</td>
<td>23.6</td>
<td></td>
<td>18.8</td>
<td>Min</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>36</td>
<td>18.8</td>
<td></td>
<td>5.8</td>
<td>Max</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>11</td>
<td>5.8</td>
<td></td>
<td>1.6</td>
<td>Median</td>
</tr>
<tr>
<td>Lecturer</td>
<td>3</td>
<td>1.6</td>
<td></td>
<td></td>
<td>Mod</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>84</td>
<td>44.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>12</td>
<td>6.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Responsibility</td>
<td>33</td>
<td>17.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without</td>
<td>158</td>
<td>82.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>9.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>33.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>18.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>39.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience in Another Organisation</td>
<td>With</td>
<td>84</td>
<td>44.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Without</td>
<td>107</td>
<td>56.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Institution A University at Home</td>
<td>12</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A University Abroad</td>
<td>13</td>
<td>15.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Sector Institution</td>
<td>43</td>
<td>51.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Institution</td>
<td>13</td>
<td>15.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to Leave Considering</td>
<td>68</td>
<td>35.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not considering</td>
<td>123</td>
<td>64.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looking for a Job Actively</td>
<td>15</td>
<td>22.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not actively</td>
<td>53</td>
<td>77.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution Intended State University</td>
<td>2</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private University</td>
<td>25</td>
<td>45.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Institution</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Sector Organisation</td>
<td>28</td>
<td>50.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
References


Çalışan memnuniyetinin boyutları: Bir devlet üniversitesi örneği