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JOB SATISFACTION OF TECHNOLOGY AND DESIGN EDUCATION TEACHERS IN TURKEY (ANKARA CASE)

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ABSTRACT

This paper studies whether job satisfaction levels of technology and design teachers will have an influence on both the organizational success and societal development. The basic aims of the study are to identify the job satisfaction levels of technology and design teachers in primary schools in Ankara and to suggest ways to improve job satisfaction. The study is a descriptive research. Job satisfaction measurement tool was administered to eighty one technology and design teachers. Technology and design teachers are found to have least job satisfaction score in regard to their profession. Attempts to improve job satisfaction may focus on the dimension of job itself. “Regarded as important and being respected” may contribute to satisfaction.

Keywords: Job Satisfaction, Technology and Design Education, Technology and Design.

INTRODUCTION

Regardless of their types, organizations are composed of people in any structure to achieve a common goal. However, the achievement of this common goal, specifically producing desirable goods or services, is dependent on effective and productive work of the members. Job satisfaction plays crucial role in members’ effective and productive work. For instance, Byars and Rue (2000: 12) support the idea of minimizing employee turnover and unemployment benefit cost by practicing sound human relations and creating a work atmosphere that promotes job satisfaction.

Locke describes job satisfaction as positive affect of employees towards their job or job situations (Gupta and Sharma, 2009: 17). Job satisfaction is affected by individual and organizational factors. Individual factors include personal characteristics, expectations from job and job setting. Such expectations of workers firstly relate to their personality. People look for jobs based on their educational background, social status and

relationships, and also perform their jobs depending on such factors. The major individual factors influencing job satisfaction are age, gender, years of work experience, intelligence, educational level, sociocultral qualities, personality, level of occupation, and occupational differences (Erdoğan, 1999: 234).

Organizational factors which affect job satisfaction are the quality of job, its content, its social and economical benefits (specifically wage, promotional opportunity, proper reward system), and working conditions (Erdoğan, 1999: 242; Balcı, 1985:13-18). These factors may be arranged by employers to increase job satisfaction of workers. Erdoğan (1999:242) also argues that being a part of successful group, interpersonal relationships and job security have all positive effects on job satisfaction. Similarly, Fraser (1987: 29) emphasizes Ling's claim on six types of goal that must be achieved before job satisfaction can be attained. These, he claims, are money, prestige and status, security, approval, a sence of belonging, and creativeness.

Spector (1997: 3) indicates the common job satisfaction factors as; appreciation, communication, coworkers, fringe benefits, job conditions, nature of the work itself, organization itself, organization's policies and procedures, pay, personel growth, promotion opportunities, recognition, security, supervision. Aamodt (2007: 342) argues that the harmony of employee with the job and organization is highly important if the employee's value, interest, personality, lifestyle and skills match with the organization, coworkers and supervisor then job satisfaction is a conclusion. Beside, needs/ supplies fit is also important. Needs/ supplies fit is the extent to which the rewards, salary and benefits received by employees are perceived to be consistent with their efforts and performance (Aamod, 2007: 342).

Lower levels of job satisfaction in organizations that adopt the importance of human factor, indicate that these organizations have problems in functioning. On the other hand, higher levels of job satisfaction signal that the organization is managed properly (Özer, Bayrak, Kaya, 1995: 2). According to some ideas, job satisfaction is a direct "cause" of specific work behaviours, while others see it as a "consequence" (Hall, 2003: 285).

Several studies deal with the concept of job satisfaction and the problem of lack of job satisfaction. Research findings suggest that there are differences between dissatisfied workers in developed countries and those in underdeveloped countries in terms of the reasons of the lack of job satisfaction. For instance, the factor of wage is not a source for job satisfaction for developed country workers, whereas it is still crucial for workers in underdeveloped countries, including Turkey and is one of the foremost factors that cause lack of job satisfaction (İncir, 1990:2). Gupta and Sharma (2009: 24) in their study suggestests that creation of opportunites to interact and to enhance mutual interests in improvement of working conditions, so that employees feel comfortable and can work conveniently which, in turn, will improve their job satisfaction level.

Today, teachers are expected to deal with various societal problems and to prepare individuals for a technologically changing society. However, they try to realize these expectations working under inappropriate conditions and they are not given opportunities to improve themselves as well as their wages are lower compared to many other countries (Akçamete, Kaner ve Sucuoğlu, 2001: 1). Technology and design education teachers also regard their wage as very low. They also state that their wage is not enough to meet basic needs (Tor, Aytaç, Seyhan, 2002:4).

Negative conditions decrease both teachers' professional attempts and job satisfaction. Continous negative conditions cause many of the teachers not to go to work regularly and eventually lead to leave the the job altogether (Akçamete, Kaner ve Sucuoğlu, 2001: 2).

Significance of the Study

Technology and design education teachers who significantly contribute to train technologically able individuals are employees realizing many aims of the schools. The findings of a research dealing with the job satisfaction levels of these teachers can contribute to the development of the schools they work in. Furthermore, this study was conducted when technology and design course was introduced into the curriculum and a new instructional program was developed. Therefore, the findings of the study may guide the arrangements to meet the needs of the teachers.

Aim

The basic aims of the study are to identify the job satisfaction levels of technology and design education teachers working in primary schools of Ankara city center and to suggest ways to improve their job satisfaction. In parallel to these aims, the study tries to answer the following questions:

1. What are the mean scores of technology and design education teachers in such factors as management and interpersonal relationships, school setting job, and total job satisfaction?
2. Are these mean scores related to gender, age, educational level and experience of teachers?
3. Which factors are given significance by teachers in job satisfaction?

METHOD

The study is a descriptive research using scanning model. The data were collected through a measurement tool to determine the job satisfaction levels of the participants.

The data collection tool is made up of three sections. The first section, including four items, addresses personal information. The second one, which contains fifty- seven items, deals with job satisfaction. The last part requests the respondents to order the factors affecting job satisfaction. Items in the second section are responded through a five-scale; including “completely agree”, “quite agree”, “somewhat agree”, “quite disagree”, and “completely disagree”. Factor analysis showed that final version of the second section should include twenty-nine items. It was found that the tool has three dimensions: relationships between administrators and collegues, school setting, and job. Measure of sampling adequecy of job satisfaction tool was found as 0.77 and determined as adequate. The rate of the first dimension to account for variance is 0.36. These rates are 0.17 and 0.64 for the second and third dimensions, respectively. The reliability of the tool was found to be 0.95.

The data obtained were analysed by means of SPSS 10.0 package program. Personal information of the sample is given in terms of frequency and percentages. The data on the job satisfaction are interpreted based on three dimensions stated above and on total mean scores obtained from each three dimension. T-tests and variance analysis were employed to determine the potential effects of gender, age, educational level and professional experience of teachers on their mean scores.

The scale was administered to eighty-one technology and design education teachers working in 35 different primary schools in Ankara. Personal information of the sample is given in Table 1.

Table 1: Data on Personal Information of the Sample

Variable		N	%
Gender	Female	55	67.9
	Male	26	32.1
	Total	81	100
Age	22-27	37	45,7
	28-33	34	42.0
	34-39	10	12.3
	Total	81	100
Educational Level	Two-Year University Education	13	16.0
	Four-Year University Education	45	55.6
	Graduate Study	23	28.4
	Total	81	100
Professional Experience	1-10 years	65	80.2
	11 years or more	16	19.8
	Total	81	100

Table 1shows that the two-thirds of the sample is women (67.9 %) and one-third is men (32.1%). In terms of age, the sample is classified into three age groups: 22-27 age group (45.7 %); 28-33 age group (42 %) and 34-39 age group (12.3 %). In regard to the educational background, the graduates of higher education form the largest group (55.6 %). Nearly one–third of the sample has graduate education (28.4 %). 16% of the sample has two-year university education. Professional experience of the sample is as follows: 1-10 years of experience (%80.2), and two years or more (19.8%).

FINDINGS AND DISCUSSION

This section provides data on job satisfaction levels of the sample and related discussion of the data.

1. Job Satisfaction Levels of Technology and Design Education Teachers

Teacher's mean scores on three dimensions (relationships between administrators and collegues; school setting; job) and total mean scores are determined. Table 2 provides mean score on each dimension and total mean score on job satisfaction as well as standard deviations for scores.

On the dimension of relationships, the satisfaction level of the sample was measured in regard to relationships with administrators and with other teachers in the school. This dimension includes the following points: distribution of additional course fee, equity, moving condition because of work, proper treatment in terms of skills, fulfillment of teachers' requests by administrators, cooperation and trust among teachers, friendship in school, administrators' attitude towards teachers, teachers' views and suggestions, administrators' kindly behavior, support by administrators, meeting educational needs, social gatherings, social interaction with other teachers.

Table 2: Mean Scores on Job Satisfaction Dimensions of The Sample (Job Satisfaction Level)

Dimension	Aritmetical Mean	Standard Deviation
Relationship between Administrators and collegues	57.69	18.66
School Setting	29.54	6.94
Job	14.00	3.78
Total	102.95	25.89

As seen in Table 2, mean score on the first dimension is 57.69 which refers to "quite agree" response. The higher score for this dimension is 80, and the lowest score is 16. As it can be seen from Figure 1, job satisfaction of the teachers for human relations dimension is "quite agree".

80-67.3	Completely agree
67.2-54.5	**Quite agree**
54.4-41.7	Somewhat agree
41.6-28.9	Quite disagree
28.8-16	Completely disagree

Figure 1: Administrator and human relations

It is also found that more than half (66.7%) of the sample report that they are treated based on their skills. Also more than half of them (58%) state that administrators realize their desires. However, 42 % of the sample report that there are no social gatherings in school and that they do not have any social contact with other teachers. On the other hand, more than one-thirds of the participants (33.4%) think that their work is not evaluated fairly. Finally near one-thirds of them (29.7%) think that allocation of course fee is not fair.

Therefore, such concerns negatively affect their satisfaction in regard to relationships with administrators and other teachers in the school.

The dimension of school setting questions the teacher's working conditions: importance given to their profession, working conditions, promotion opportunities, health care security, environment of the school, individual development opportunities.

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As seen in Table 2, teachers' mean score for the dimension of school setting is 29.54. It refers to the response of "quite agree".

40-33.7	Completely agree
33.6-27.3	**Quite agree**
27.2-20.9	Somewhat agree
20.8-14.5	Quite disagree
14.4-8	Completely disagree

Figure 2: School Setting

In regard to school setting, 48,1% of the sample state that they could not get promotion although they fulfill all their tasks.They also report that personnel is given importance in the school (69.1%). Majority of the sample think that the environment of the school is positive (71.6%). The dimension of job satisfaction deals with increase in economical status, retirement opportunities, social facilitates, necessary knowledge for the job.

As seen in Table 2, the mean score of the participants in regard to the dimension of job is 14.00. The highest possible score for this dimension is 25, the lowest score is 5 in this dimension. Therefore, the mean score of the participants refers to "somewhat agree" option in this dimension (Figure 3).

25-21.1	Completely agree
21-17.1	Quite agree
17-13.1	**Somewhat agree**
13-9.1	Quite disagree
9-5	Completely disagree

Figure 3: Job

The mean scores of the subjects are lower for the third dimension, job satisfaction. The mean scores on this dimension equal to the response of "somewhat agree". There are some reasons for this. Particularly the sample has negative views on their economical status and insufficient social offerings (75.3 % and 71.6 %, respectively). Moreover, over half of the teachers (59.2%) state that they are not pleased about retirement opportunities. These reasons about work dimension must be considered.

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As seen in figure 4, total mean job satisfaction score for the sample is 102,95 which refers to the response of "quite agree". The maximum score for job satisfaction measurement tool is 145, the lowest score is 29. As seen in Figure 4, total job satisfaction of the teachers is found to be "quite agree".

145-121.1	Completely agree
121.7 -98.7	**Quite agree**
98.6-75..5	Somewhat agree
75.4-52.3	Quite disagree
52.2-29	Completely disagree

Figure 4: Total Job Satisfaction

2. Job Satisfaction Based on Teachers' Personal Characteristics

This section deals with the effects of teachers' personal characteristies on their job satisfaction. In order to present such effects, each dimension of job satisfaction and all dimensions are analysed based on the personal characteristics of the teachers.

Effects of Gender on Teachers' Job Satisfaction

Table 3: Mean Scores and T Test Results on The Effects of Gender on Job Satisfaction

Dimension	Gender	N	$\overline{X}$	S	Sd	T	P	Significance
Relationships with administrators and with other teachers	Female	55	62.76	14.92	79	3.40	0.00*	<0.01
	Male	26	46.96	21.38				
School setting	Female	55	30.70	5.76	79	1.97	0.06	>0.05
	Male	26	27.07	8.54				
Job	Female	55	14.98	3.79	79	4.06	0.00*	<0.01
	Male	26	11.92	2.81				
Total	Female	55	110.36	22.93	79	4.10	0.00*	<0.01
	Male	26	87.26	25.15				

As seen in Table 3, the gender of the subjects leads to differences in mean scores of the dimensions of job satisfaction and in total mean scores. Female subjects have higher mean scores on the dimensions, and their mean total score is higher. T-test is conducted to determine if the difference of total scores for each dimension and in total are significant. Only in mean scores for the dimension of school setting, there is no statistically significant difference between male and female teachers.

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Both in the dimensions of interpersonal relationships and job, and in total mean scores, there are statistically significant differences among mean scores. Female teachers have higher mean scores on the dimensions of relationships with administrators and with other teachers, and on the dimension of job. Furthermore, on the total mean score of job satisfaction they have higher scores in contrast to male teachers.

Effects of Age on Teachers' Job Satisfaction

Table 4 provides the variance analysis results of t-tests concerning the effects of age on the job satisfaction.

Table 4: Mean Scores and Varience Results on the Effects of Age on Job Satisfaction

Dimension	Age Group	N	$\overline{X}$	S	F	P	Significance	Difference
Relationship with administrators and with other teachers	22-27	37	50.78	21.96	5.15	0.00*	P<0.01	Between 28-33 age group and 22-27 age group
	28-33	34	63.53	11.65				
	34-39	10	63.40	17.55				
School setting	22-27	37	28.30	7.89	1.55	0.22	P>0.05	_
	28-33	34	31.18	5.45				
	34-39	10	28.80	7.35				
Job	22-27	37	13.05	2.79	4.05	0.02*	P<0.05	Between 28-33 age group and 22-27 age group
	28-33	34	15.35	4.25				
	34-39	10	12.90	4.20				
Total	22-27	37	93.62	27.90	5.08	0.00*	P<0.01	Between28-33age group and 22-27 age group
	28-33	34	112.09	19.80				
	34-39	10	106.40	26.89				

Table 4 indicates that three age groups have different mean scores for three dimensions and different total mean scores. In all three dimensions and in total job satisfaction, 28-33 age group has higher mean score. It is found that mean scores for the dimensions of interpersonal relationships and job, and also total mean score are statistically significant only between 28-33 age group and 22-27 age group. The mean scores of the school setting dimension are not statistically significant as a result of age distinctions. Therefore, it can be argued that job satisfaction increases between 28 and 33 ages and remain at the same level later. However, job satisfaction levels of the younger subjects (22-27 age group) are relatively lower.

Effects of Educational Level on Job Satisfaction

Table 5 shows the mean scores and the results of variance analysis concerning the effects of educational levels of teachers on their job satisfaction.

Table 5: Mean Scores and Results of Variance Analysis Concerning the Effects of Educational Level on Job Satisfaction

Dimension	Educational Level	N	$\bar{X}$	S	F	P	Significance	Difference
Relationship with administrators and with other teachers	Two Year University Education	13	65.69	6.33	3.72	0.03*	P<0.05	Two Year University Education - Graduate Studies
	Four Year University Education	45	59.44	16.09				
	Graduate Studies	23	49.74	24.84				
School setting	2Year University Education	13	31.23	1.96	0.47	0.63	P>0.05	_
	Four Year University Education	45	29.33	6.16				
	Graduate Studies	23	29.00	9.75				
Job	Two Year University Education	13	12.92	3.68	1.17	0.32	P>0.05	_
	Four Year University Education	45	13.87	3.66				
	Graduate Studies	23	14.87	4.03				
Total	Two Year University Education	13	111.00	8.26	1.62	0.21	P>0.05	_
	Four Year University Education	45	104.33	24.17				
	Graduate Studies	23	95.70	33.70				

As seen in Table 5, the mean scores of teachers with two-year higher education are higher in two dimensions (relationships with administrators and with other teachers, and job) and in total job satisfaction in contrast to the other educational level groups. However, the mean scores of all groups are very close to one another.

Findings in Table 5 show that only in the first dimension, the educational level of the sample leads to a statistically significant difference in mean scores. Specifically, the mean scores of teachers with two-year higher education are higher than those of teachers with graduate education. In another words, as education level rises, job satisfaction level decreases in this dimension.

Effects of Experience on Job Satisfaction

Table 6 presents the mean scores and results of t-test in regard to the effects of experience on teachers' job satisfaction levels.

As indicated in Table 6, the mean scores of the technology and design education teachers' on three dimensions are very close to one another regardless of their experience level.

T-test for unrelated groups was conducted to see whether or not there is statistically significant difference between the mean scores of the teachers with 1- 10 years experience and those with 11 years or more experience on the dimensions of relationships with administrators and with other teachers, school setting and job as well as total job satisfaction.

The results of t-test show that the professional experience of the teachers does not influence the mean scores in any dimension. Also, it is seen that there are no significant differences between total job satisfaction mean scores. Thus, the total mean scores are not affected by their professional experience either.

Table 6:Mean Scores and Results of T-Test concerning The Effects of Experience on Job Satisfaction

Dimension	Experience	N	$\overline{X}$	S	Sd	T	P	Significance
Relationship with administrators and with other teachers	1-10 years	65	58.31	18.98	79	0.60	0.55	>0.05
	11years and more	16	55.19	17.68				
School setting	1-10 years	65	29.85	6.95	79	0.79	0.43	>0.05
	11years and more	16	28.31	7.00				
Job	1-10 years	65	13.92	3.70	79	0.37	0.71	>0.05
	11years and more	16	14.31	4.21				
Total	1-10 years	65	103.74	25.56	79	0.55	0.58	>0.05
	11years and more	16	99.75	27.86				

3. Teachers' Evaluation of Factors Influencing Job Satisfaction

The third section of data collection tool asked the subjects to evaluate the job satisfaction- related factors (one point to the most important factor and nine points to least important factor). Therefore, the factors influential on job satisfaction were identified based on their scoring.

Table 7 presents the job satisfaction influencing factors ranking from the most important to the least important based on the scoring of the participants.

Table 7: The Order of Factors Influencing Job Satisfaction

Order	Factor	Score
1	Regarded as being important, being respected	256
2	Working conditions	321
3	Wage / Rewards	343
4	Motivation	380
5	Communication	403
6	Opportunities to improve yourself	416
7	Secure job	441
8	Social activities	526
9	Institution	543

As seen in Table 7, "regarded as being important/ be respected" is concerned as the most important factor that contributes to job satisfaction. It is followed by "working conditions" and "wage/ rewards". However, the factor of "institution" is not seen as a significant factor for job satisfaction. "Social activities" and "secure job" are not given so much importance as well.

The findings clearly indicate that technology and design education teachers desire to be respected and regarded as being important. Wage and rewards also affects job satisfaction.

CONCLUSION AND RECOMMENDATIONS

The section includes the conclusions of the study and the suggestions to improve job satisfaction.

Conclusion

- Job satisfaction of technology and design education teachers is organized into three dimensions: relationships with administrators and with other teachers; school setting and job. The job satisfaction levels of the teachers on two dimensions (relationships with administrators and with other teachers, and school setting) and total job satisfaction is found to be at the level of "quite agree". It is at the level of "somewhat agree" in job dimension.
- The reasons for lower levels of job satisfaction on the third dimension seem to be related to the economical facts, social facility opportunities and retirement.
- It is found that such variables as gender, age, educational level, experience do not affect all dimensions of satisfaction but they are influential in some aspects of job satisfaction.
- Gender appears to lead to differences in relationships with administrators and with other teachers and in job dimension as well as in total job satisfaction. Specifically, female teachers have higher levels of job satisfaction in contrast to male teachers.
- Similarly, age seems to have effects on relationships with administrators and with other teachers and injob dimension as well as in total job satisfaction. More specifically, the teachers in the 28-33 age group have have higher levels of job satisfaction than those in the 22-27 age group. It may be a result of the fact that younger teachers have some different professional expectations.
- The educational level of the subjects leads to differences only in interpersonal relationships dimension of job satisfaction. In other words, teachers with two-year higher education have higher levels of job satisfaction in contrast to those with graduate education.
- The experience of the subjects, on the other hand, does not affect their mean scores on three dimensions as well as on total job satisfaction.
- In regard to importance of job satisfaction related factors, the following order of the related factors is found: (1) "regarded as being important/ be respected", (2) "Working conditions", (3) "wage/rewards", (4) "motivation", (5) "comunication", (6) "opportunities to personal improvement", (7) "secure job", (8) "social activities", (9) "institution". This order may indicate which factors should be focused to improve job satisfaction.

Recommendations

- Attempts should be made to improve job satisfaction levels of technology and design education teachers. Such attempts should address income, retirement and improvement of social facilities issues.
- Findings on the effects of age, gender, education level on job satisfaction should be taken into consideration. Therefore, attempts should be made to improve the job satisfaction of male and younger (especially 22-27 age group) technology and design education teachers.
- Improvement of the teachers' significance, being respected, working conditions and income/ rewards may positively contribute to their job satisfaction.

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