



## **Accounting and Task Application Students' Learning Styles in Distance Education**

**Kazım Kahraman**

*Kocaeli University, Kocaeli Vocational School, Kocaeli, Turkey, kazim\_kahraman@hotmail.com*

**Mustafa Of**

*Kocaeli University, Kocaeli Vocational School, Kocaeli, Turkey  
mustafaof@gmail.com*

**Yusuf Tola\***

*Kocaeli University, Kocaeli Vocational School, Kocaeli, Turkey  
ytola@kocaeli.edu.tr*

### **Abstract**

Distance education could be expressed that less a philosophy and more a method of education. Students can study in their own time, at the place of their choice (out of school or not), and without face-to-face contact with a teacher. Technology is a main and most effective element of distance education.

This study reports on a case study conducted in a vocational high school investigating the opinions held by students, with respect to technology and its application to education. Based on data gathered from distance education students in an accounting and task application program. Q-methodology was used to identify opinions, shared among students, on issues they considered important about the application of technology to course instruction. The finding showed that the identification of participant opinion profiles based on the similarities and differences by which they sort the statements in the Q-sample.

**Keywords:** Teaching, Education, distance education, accounting and task application program.

### **Introduction**

The research literature dealing with student attitudes toward technology and web-based computer- distance learning is growing in last years. Zhang (1999) states that some studies report the actual uses of Internet technologies in combination with other technologies in effective distance learning (Bergen, Kingston, 1999; Neal, Ramsay, Preece, 2007 & Stubbs, Burnham, 1990). Stubbs and Burnham (1990) focused that students' attitudes toward distance education are as important a metric as students' achievements in determining the effectiveness of distance education. In this paper, the main point of the authors for distance education are that online courses and distance education provide greater flexibility and student convenience, interaction with the teachers, better grades and a more positive learning experience. Neal at al. (2007) stated that the collaborative learning environment seems to better manipulate students individually in the learning process. They explained the negative way of this learning way as reduction in face-to-face interaction, an increased time at student workload and much costs to the student.

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\*Corresponding author. Tel: +90 542 244 1772; Fax: +90 262 349 39 97



*Positive aspects of the application of technology to distance education:* we can abstract the positive ways of this special educational application from the literature (Guernsey, 1999; Richards and Ridley, 1999; Hiltz, 1998; Koch, 1998, Bee, 1999 & Jaffee, 2001) as below;

- Limitations on Interactivity: need to be with a “live person”
- Technological Problems: Students new to this way of particular technology
- Increased Workload: it takes much time to learn new software
- Lack of administrative and technical support: course resource materials
- Costs: equipment, online phone charges

*Negative aspects of the application of technology to distance education:* a short form of the negative aspects of the system resulted from the literature (Richards and Ridley, 1999; Koch, 1998, Bee, 1999; Jaffee, 2001; Barbrow, Jeong and Parks, 1999; Foell and Fritz, 2005 & Mastrian and Mc Gonigle, 2007) is as below;

- Limitations on Interactivity: need to be with a “live person”
- Technological Problems: Students new to a particular technology
- Increased Workload: it takes much time to learn new software
- Lack of administrative and technical support: course resource materials
- Costs: equipment, online phone charges

## Methods

Sixt-four from accounting and tax distance education program of Kocaeli vocational school participated voluntarily (26 males and 38 females, 40.6% and 59.4%, respectively. All students received the same Q-set developed by Valenta and Wigger (1997) having 23 statements (Appendix A). Q-methodology is used to make clear commonly shared opinions regarding a specific topic (Valenta and Wigger, 1997). The quantitative methods of Q use factor analytic data-reduction and emphasizes the subjective opinion of a population, not how many in the population share the opinion. The instructions for the Q- instrument were given to the participants to read and follow. By-person factor analysis, Valenta and Wigger (1997) identified three opinion types (factors) that represented three different views regarding the use of distance education; Factor 1: Time and Structure in Learning  
Factor 2: Social Interaction in Learning  
Factor 3: Convenience in Learning

## Findings

The analyze of the identification of students’ opinions based on the similarities and differences by which they sort the statements in the Q-sample is categorized. It was identified three opinion types among our participants that represented three different views regarding the use of web-based instruction. Almost all of the participants were accounted for in the three factors. Table 1 summarizes the rankings among statements for each factor, as generated by the statistical software (SPSS). The classification of participant viewpoints results from the examination of that factor’s statements, after ranking ordering the statements from +3 to –3 (Valenta and Wigger, 1997). The three factors were titled: (1) Time and Structure in Learning; (2) Social Interaction in Learning; and (3) Convenience in Learning.

**Table 1.** Students’ points for factors

Statements	Factors*		
	Time and Structure	Social Interaction	Convenience
1. Less sense of self-assessment in comparisons to others.	-1	0	-3
2. Fewer subtleties in teaching; instructor observation, speech and immediate feedback.	-1	3	0
3. Fewer opportunities to meet new people; social	1	-1	0



interaction.			
4. Less enrichment from other perspectives.	0	3	-1
5. Less informal learning; side comments by teacher and students.	0	-1	1
6. Less discussion with participants.	0	2	0
7. Sometimes hard to find quiet time at home or school.	-3	0	-1
8. Sometimes computer time hard to get at home.	-3	1	0
9. Provides flexible time management.	2	-1	3
10. Potential interference with work obligations.	1	3	3
11. Saves travel time.	-1	-1	3
12. Can work at home when I want.	3	2	2
13. Trouble getting access to Internet at home.	-2	-2	1
14. Requires basic skills in computer troubleshooting.	1	-1	-1
15. Must pay home phone line costs.	-2	-3	-2
16. Access to Internet only through work.	-2	1	-3
17. No set class time.	0	0	-1
18. Requires self-discipline.	3	-3	0
19. Requires active learning and initiative.	2	-2	-1
20. You'll sure learn to use the Internet.	-1	1	-2
21. Can learn at my own pace.	2	0	2
22. Saves commuting cost.	0	0	-2
23. Can work in your bathrobe.	1	-2	-1

\* Item rankings: -3 = most unimportant; 0 = ambivalent; +3 = most important

### Time and Structure in Learning

Web-based education provides flexible time management. It is important to the students that they can work at home when they want to. According to the students, self-discipline and active learning are important. On the other hand, having access to the Internet only through work, paying home phone bills, attaining quiet computer time at home and find quiet time at home or school are unimportant subjects for our students.

**Table 2.** Classification of issues from the time and structure important

<b>Important</b>	
Can work at home when I want.	3
Requires self-discipline.	3
Can learn at my own pace.	2
Provides flexible time management.	2
Requires active learning and initiative.	2
<b>No-load</b>	
Less enrichment from other perspectives.	0
Less informal learning; side comments by teacher and students.	0
Less discussion with participants.	0
No set class time.	0
Saves commuting cost.	0
<b>Unimportant</b>	
Sometimes hard to find quiet time at home or school.	-3
Sometimes computer time hard to get at home.	-3
Trouble getting access to Internet at home.	-2
Must pay home phone line costs.	-2
Access to Internet only through work.	-2



The statements in the table 2 were sorted on a continuum of –3 most unimportant to +3 most important. The numbers in the right column following each statement is the factor score for that item within this viewpoint of the students.

### **Social Interaction in Learning**

Most important to the Social Interaction group was the potential for less participant discussion and fewer subtleties in teaching. Also, the other important statements were less enrichment from other perspectives and potential interference with work.

Unimportant to this group were being able to work in their bathrobe and learning to use the Internet. They were not concerned about having trouble accessing the Internet from home, paying home phone bills, or their need to be self-disciplined in learning. For this group expressed in a neutral way to statements such as being able to learn at one's own pace and having less of a sense of self-assessment in comparison to others.

**Table 3.** Classification of issues from social interaction important

<b>Important</b>	
Less enrichment from other perspectives	3
Potential interference with work obligations.	3
Fewer subtleties in teaching; instructor observation, speech and immediate feedback.	3
Less discussion with participants.	2
Can work at home when I want.	2
<b>No-load</b>	
Less sense of self-assessment in comparisons to others.	0
Sometimes hard to find quiet time at home or school.	0
Can learn at my own pace.	0
No set class time	0
Saves commuting cost.	0
<b>Unimportant</b>	
Must pay home phone line costs.	-3
Requires self-discipline.	-3
Requires active learning and initiative.	-3
Trouble getting access to Internet at home.	-2
Can work in your bathrobe.	-2

The statements in the table 3 were sorted on a continuum of –3 most unimportant to +3 most important. The numbers in the right column following each statement is the factor score for that item within this viewpoint of the students.

### **Convenience in Learning**

Most important to the Convenience group was that web-based education lets them work at home when they want to and save travel time. It provides flexible time management and learn at their own pace. Least important to this group were self-assessment in comparisons to others and access to Internet only through work. Also unimportant were issues such learning to use the Internet and paying home phone line costs. Neutral reactions were fewer subtleties in teaching as instructor observation, speech and immediate feedback, less discussion with participants, computer time hard to get at home and requiring self-discipline.



**Table 4.** Classification of issues from the convenience important

<b>Important</b>	
Provides flexible time management.	3
Saves travel time.	3
Potential interference with work obligations.	3
Can work at home when I want.	2
Can learn at my own pace.	2
<b>No-load</b>	
Fewer subtleties in teaching; instructor observation, speech and immediate feedback.	0
Fewer opportunities to meet new people; social interaction.	0
Less discussion with participants.	0
Sometimes computer time hard to get at home.	0
Requires self-discipline.	0
<b>Unimportant</b>	
Less sense of self-assessment in comparisons to others.	-3
Access to Internet only through work.	-3
You'll sure learn to use the Internet.	-2
Must pay home phone line costs.	-2
Saves commuting cost.	-2

The statements in the table 4 were sorted on a continuum of –3 most unimportant to +3 most important. The numbers in the right column following each statement is the factor score for that item within this viewpoint of the students.

## Results

In this study, three opinion types were identified: Students who identified with issues of Time and Structure in Learning, Social Interaction and convenience in Learning. These opinions can be used to aid educators in reaching the effectiveness of their online courses. Also, this study is qualitative and confined to Kocaeli University of a vocational high school. The three opinion types identified via this study. All three groups of students, representing the three opinion types, shared a belief in the importance of being able to work at home.

In our distance education system, the students access to course materials, discussion forums, virtual groups and chat, testing, grades, and electronic communication. There is a movement in both education and business to harness the power of the World Wide Web to disseminate information. Researchers must become invested in understanding the interactions of students and computing.

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## Appendix A

### Q-sample statements

1. Less sense of self-assessment in comparisons to others.
2. Fewer subtleties in teaching; instructor observation, speech and immediate feedback.
3. Fewer opportunities to meet new people; social interaction.
4. Less enrichment from other perspectives.
5. Less informal learning; side comments by teacher and students.
6. Less discussion with participants.
7. Sometimes hard to find quiet time at home or work.
8. Sometimes computer time hard to get at home.
9. Provides flexible time management.
10. Potential interference with work obligations.
11. Saves travel time.
12. Can work at home when I want.
13. Trouble getting access to Internet at home.
14. Requires basic skills in computer troubleshooting.
15. Must pay home phone line costs.
16. Access to Internet only through work.
17. No set class time.
18. Requires self-discipline.
19. Requires active learning and initiative.
20. You'll sure learn to use the Internet.
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