

# **The Comparison of Vocational Colleges Located Both in City Center and In a Town in Erzurum Region in Terms of Teaching Process**

**M. Dursun KAYA**

Atatürk University,  
Vocational College of Erzurum,  
Erzurum/Turkey  
dursun@atauni.edu.tr

**Y.Ziya AYIK**

Atatürk University,  
Vocational College of Erzurum,  
Erzurum/Turkey  
ziyaayik@atauni.edu.tr

**A.Samet HAŞILOĞLU**

Atatürk University,  
Faculty of Enginnering, Department of Computer Engineering  
Erzurum/Turkey  
asamet@atauni.edu.tr

**Reşat KARCIOĞLU**

Atatürk University,  
Faculty of Economics and Administrative Sciences,  
Erzurum/Turkey  
rkarci@atauni.edu.tr

**Abstract:** At each academic somestry, by means of the questionnaires applied to the students, the effectiveness and quality of teaching-learning carried out high education are determined and it is determined that how efficient a lesson is taught. By means of the answers given for questionnaires by students, their real ideal or thoughts about lessons are determined and, besides their contributions of the lecturers who carry out the lesson., the thoughts of administers contribute to the teaching and training in that somestry. In this respect, the data of questionnaire applied to the students of vocational college in campus and that of in the town were obtained. 30 questions are asked in questionnaire. The answer given for these questions were applied as factor analysis in SPSS programme, and the organization and planning of the lesson were evaluated as in various factors such as learning from the lesson of the students and lesson, examination and evaluation, and relationshipof training and teaching, the skills of communication, clearness and planning of the lesson. In addition, the ansver given by two different vocational college students were analysed, and the distriction between them was found and the results obtained were interpreted as regards lecturer's prophile and two different vocational college students.

**Keywords:** Assessment form of teaching process, factor analysis, the students of vocational college

## **Introduction**

One of the methods determining the quality and efficiency of teaching-learning carried out higher education is to determine how to lesson is performed effectively by means of answers for questionnaires given to students at the end of each academic semester. The ideas indicating friendly thoughts of the students about the lessons they received

by means of this method are one of the guiding elements about lectures in the decisions of the managers as well as contributing to the development of teaching-learning methods and lessons which were given by lecturers (Pamuk, 2005, Simmons, 1996, Noonan & Wold, 1983, Soerjaningsih et al., 2001).

Various types of questionnaires as to evaluation of teaching process can be held. For instance, as questionnaires about the lecturer will be prepared, the questionnaires oriented to the students used in this study can also be prepared. In the questionnaires carried out with the aim of assessment of teaching process, there are thirty questions. In the result of a similar study made by (Braskamp & Ory, 1994, Centra, 1993) although they found six different results, in our study, we planned to investigate whether how many of different factors were found by practicing the same evaluation form for two different vocational colleges (Centra et al., 1993, Yamamoto, 1963, Coats, 1972). In this respect, with the application of a questionnaire where thirty questions take the place in teaching process evaluation form, in our study we obtained two new variables for Vocational Colleges of Aşkale and four new variable for Vocational Colleges of Erzurum.

The most important agent in preference of factor analysis technique, in the direction of thriftiness principle, is that a context reticulated from a number of solid variables turned into a context reticulated from a small number of abstract variables and that it make comprehension and the explanation easy. In other words, factor analysis is multi-variety statistics which aims the discover and finding out new variables which are significant concept by bringing a great number of variables together (Büyüköztürk, 2008, Kalaycı, 2006, Tatlıdil, 1992).

## **Material and Method**

Evaluation form of teaching process was applied to the students attending to education in Vocational Colleges of Aşkale and Vocational Colleges of Erzurum of Atatürk University. Factor analysis was applied to data set consisting of the responds given for evaluation form of teaching process by students attending to different departments of these both vocational colleges by using SPSS statistical packet program. In the result of the analysis applied to Vocational College of Erzurum, four different factors were obtained while that of applied to Vocational Colleges of Aşkale was obtained two different factors.

Factor analysis provides the interpretation of the structure of variance-covariance of variables sets by means of linear components of variables by explaining with a small number factors. For this reason, correlation matrix was first obtained. Of initial eigen values counted for Vocational College of Erzurum, four factors which are over one were found out. While four factors obtained for Vocational College of Erzurum explain 61.72% of total variance, it is observed that two factors obtained for Vocational College of Aşkale explain 66.56% of total variance (Tab. 2 and 3).

## **Findings and Discussions**

In our study, 2325 teaching process evaluation form questionnaires as to lessons and the lecturers who give these lessons were applied to the students attending to three different departments of Vocational College of Erzurum. 871 teaching process evaluation form questionnaires as to lessons and lecturers who give these lessons were applied to the students attending to two different departments of Vocational College of Aşkale. Thirty questions were asked in the questionnaire about the lessons and their references and with the aim of determining the quality of teaching-learning (Tab. 1).

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Q1	The purpose of this course is presented by the lecturer at the beginning of semester
Q2	The lecturer is telling the course in whole heartedly
Q3	The list of the preference is given at the start of the semester
Q4	Educational tools and objects are used in the lesson
Q5	The subjects planned at the beginning of the semester are being given
Q6	Before lesson, the objective of the course is explained by lecturer
Q7	I am being directed to investigate in this lesson
Q8	My active participation in this lesson is provided
Q9	I acquired promising knowledge in this course
Q10	The lecturer is using lesson's duration for the purpose of the lesson
Q11	I think this knowledge will be useful for me
Q12	The lecturer is performing the course successfully
Q13	The lecturer is giving lesson by using various methods
Q14	The lecturer can draw student's attentions towards the lesson
Q15	The lecturer admire positive behaviors of the students
Q16	The lecturer can use body language effectively during the lesson
Q17	The lecturer has been using clear understandable language
Q18	The lecturer can give answers to the questions of the students
Q19	The lecturer has been behaving to everybody equally
Q20	The lecturer has been criticizing the errors of the students without breaking their honors
Q21	The lecturer has been accepting the criticize with a positively manner
Q22	The lecturer can communicate a healthy relations with his/her students during lesson
Q23	The examination questions of this course have included all the subjects told before
Q24	The examination questions of this course have been asked clearly and understandably
Q25	The examination questions of this course have a teaching quality
Q26	I have been receiving the mark I have expected from this lesson's examinations
Q27	The lecturer has been evaluating the activities such as homework, project, etc. about the lesson
Q28	The lecturer has been giving the mark impartially
Q29	The examination questions of this lesson can distinguish the literate from illiterate
Q30	The lecturer can provide me the opportunity to examine my own examination paper

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**Table 1:** Teaching process evaluation form

The study, the factors were determined according to principal component methods, and the most important basic component number according to Caizer criterion is four for Vocational College of Erzurum and two for Vocational College of Aşkale. The variances of basic component are bigger than 1. By accepting that factor number will be as much as basic component number, four factors for Vocational College of Erzurum and two factors for Vocational College of Aşkale were obtained. The most important stage as regards the research of factor analysis is to name the factors obtained and to mean them.

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14,757	49,190	49,190	5,264	17,547	17,547
2	1,532	5,105	54,295	5,088	16,959	34,507
3	1,193	3,977	58,271	4,565	15,215	49,722
4	1,035	3,451	61,723	3,600	12,001	61,723
5	,909	3,030	64,752			
6	,746	2,488	67,240			
7	,688	2,292	69,532			
8	,591	1,970	71,502			
9	,573	1,912	73,414			
10	,547	1,824	75,238			
11	,524	1,748	76,985			
12	,499	1,664	78,649			
13	,489	1,632	80,281			
14	,477	1,590	81,870			
15	,439	1,462	83,332			
16	,432	1,439	84,771			
17	,416	1,386	86,158			
18	,400	1,332	87,490			
19	,394	1,313	88,803			
20	,393	1,309	90,112			
21	,358	1,193	91,305			
22	,348	1,162	92,466			
23	,328	1,094	93,560			
24	,316	1,053	94,614			
25	,297	,989	95,603			
26	,289	,963	96,566			
27	,278	,925	97,491			
28	,270	,900	98,391			
29	,247	,825	99,215			
30	,235	,785	100,000			

**Table 2:** Total variance counted for Vocational College of Erzurum

Four different factors obtained for Vocational College of Erzurum are named as “the method of making lesson of lecturer and organizing of it”, “the relationship of student-the lecturer”, “transparency of the lecturer against students and equal behavior communication skills with them” and “the references used in the lesson and planning of the course” respectively (Tab. 4). Two factors obtained for Vocational College of Aşkale are respectively “type of performing of the lesson and the references used in the lesson”, and “communicating with the students by the lecturers and behaving equally”.

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18,637	62,123	62,123	10,537	35,125	35,125
2	1,331	4,435	66,559	9,430	31,434	66,559
3	,876	2,921	69,480			
4	,822	2,741	72,221			
5	,713	2,376	74,597			
6	,626	2,086	76,683			
7	,567	1,891	78,574			
8	,540	1,801	80,376			
9	,453	1,511	81,887			
10	,441	1,470	83,356			
11	,400	1,333	84,689			
12	,380	1,267	85,956			
13	,348	1,160	87,116			
14	,320	1,065	88,181			
15	,315	1,051	89,232			
16	,285	,950	90,182			
17	,279	,930	91,112			
18	,264	,880	91,992			
19	,251	,837	92,830			
20	,249	,828	93,658			
21	,235	,783	94,441			
22	,234	,778	95,220			
23	,215	,718	95,938			
24	,209	,695	96,633			
25	,191	,635	97,268			
26	,184	,613	97,881			
27	,174	,578	98,460			
28	,163	,543	99,003			
29	,160	,532	99,535			
30	,139	,465	100,000			

**Table 3:** Total variance counted for Vocational College of Aşkale

The factors obtained from factor analysis carried out orienting to the questions in (Tab. 1) and seen in (Tab. 2) when (Tab. 4) is examined for Vocational College of Erzurum, while the questions of Q14, Q16, Q22, Q13, Q8, Q15, Q12, Q21, Q18, and Q9 were in the factors “the relationship of student-the lecturer”, and the question of Q5, Q10, Q11, Q24, Q23, Q1, Q17, Q2, and Q25 were in the factor of “the performing method of the lesson by the lecturer”, and the question of Q28, Q29, Q26, Q30, Q19, Q20, and Q27 were in the factor of “method of transparency of the lecturer against the students and behaving equal and the skills of communicating with them”, the question of Q4, Q7, Q3, and Q6 were named as the factor called as “the references used in the lesson and planning of the course”. For Vocational College of Aşkale, the questions of Q9, Q6, Q5, Q3, Q12, Q11, Q8, Q4, Q2, Q1, Q10, Q7, Q14, Q13, Q15, Q16, Q18, and Q17 were in the factor of “the type of performing of the lesson and the references used in the lesson”, and the question of Q28, Q26, Q29, Q30, Q25, Q23, Q21, Q24, Q22, Q27, Q20, and Q19 were named as the factor of “communicating with students of the lecturer during lesson and behaving them equally”.

The variables which affect mostly the factor of “relationship of students-lecturer which is the first factor obtained from our study for Vocational College of Erzurum are questions such as “the lecturer can draw student’s attention towards the lesson”, “the lecture can use body language effectively during lesson” and “the lecturer can contact with a health communication with the students during lesson” respectively. The variables which affect mostly the second factor are questions, such as “the subjects planned at the beginning of the semester are being giving in the lesson”, “the lecturer use the duration of the lesson appropriately to the aim of lesson”, “the knowledge I learned from this lesson will be useful for me”. The variable which affects mostly the third factor is the question such as “the lecturer gives the mark impartially”, and the variable which affects mostly the fourth factor is the question of “the lecturer use tool and material of teaching at lesson”.

Vocational College of Erzurum

	Component			
	1	2	3	4
Q14	<b>,694</b>	,263	,214	,362
Q16	<b>,662</b>	,245	,214	,254
Q22	<b>,651</b>	,325	,406	,125
Q13	<b>,607</b>	,198	,203	,465
Q15	<b>,587</b>	,228	,402	,219
Q21	<b>,585</b>	,267	,482	,120
Q8	<b>,563</b>	,261	,187	,468
Q20	<b>,550</b>	,238	,488	,033
Q5	,152	<b>,703</b>	,206	,271
Q10	,270	<b>,650</b>	,239	,105
Q11	,239	<b>,598</b>	,150	,325
Q24	,214	<b>,554</b>	,489	,118
Q1	,169	<b>,552</b>	,156	,384
Q12	,539	<b>,549</b>	,220	,240
Q17	,481	<b>,548</b>	,303	,107
Q23	,204	<b>,542</b>	,499	,020
Q18	,509	<b>,528</b>	,297	,155
Q25	,237	<b>,512</b>	,474	,282
Q2	,445	<b>,508</b>	,193	,264
Q28	,270	,314	<b>,715</b>	,120
Q26	,194	,269	<b>,657</b>	,278
Q29	,172	,310	<b>,647</b>	,269
Q30	,237	,040	<b>,616</b>	,259
Q19	,402	,365	<b>,571</b>	,062
Q4	,058	,176	,145	<b>,748</b>
Q7	,423	,134	,220	<b>,658</b>
Q3	,195	,377	,164	<b>,608</b>
Q27	,262	,071	,500	<b>,512</b>
Q6	,351	,434	,191	<b>,478</b>
Q9	,417	,447	,161	<b>,457</b>

Vocational College of Aşkale

	Component	
	1	2
Q9	<b>,747</b>	,386
Q6	<b>,738</b>	,385
Q5	<b>,733</b>	,334
Q3	<b>,731</b>	,344
Q12	<b>,730</b>	,447
Q11	<b>,727</b>	,350
Q8	<b>,725</b>	,424
Q4	<b>,712</b>	,264
Q2	<b>,695</b>	,414
Q1	<b>,692</b>	,387
Q10	<b>,690</b>	,377
Q7	<b>,669</b>	,405
Q14	<b>,668</b>	,524
Q13	<b>,657</b>	,483
Q15	<b>,656</b>	,507
Q16	<b>,599</b>	,561
Q18	<b>,590</b>	,581
Q17	<b>,587</b>	,578
Q28	,325	<b>,776</b>
Q26	,307	<b>,764</b>
Q29	,352	<b>,743</b>
Q30	,279	<b>,719</b>
Q25	,467	<b>,708</b>
Q23	,395	<b>,705</b>
Q21	,442	<b>,693</b>
Q24	,434	<b>,692</b>
Q22	,463	<b>,688</b>
Q27	,444	<b>,681</b>
Q20	,439	<b>,653</b>
Q19	,510	<b>,613</b>

**Table 4.** Rotated component matrix

For Vocational College of Aşkale, the variables which affect mostly the factor of “type of performing of lesson and the references used in lesson” are the questions such as “I acquired promising knowledge in this lesson”, “the goals of the lesson are being explained by lecturer before lesson” and “the subjects planned at the beginning of the term are being given in this lesson”. The questions such as “the lecturer gives the mark impartially”, “I have been receiving the mark I expect from the examination of this lesson” and “the questions of this lesson can distinguish the literate from illiterate” were found as variables which affect the factor of “contact with communication with the students of the lecturer during lesson” and “behaving equally to them”.

## Conclusions

Thirty questions along with teaching process evaluation form orienting to the determination of the number and type of the ideas of the students about the lecturers were asked and these questions were included in factor analysis. In the result of factor analysis carried out, while four factors were obtained from the answers given by students of Vocational College of Erzurum, two factors were obtained from the answers given by the students of Vocational College of Aşkale to the same questions. While 17.55% of total changing for Vocational College of Erzurum indicates as first “the method of performing of the lesson by lecturer and organizing the lesson”, 35.13% of total changing for Vocational College of Aşkale indicates as the factor of “the type of lesson’s presentation and the references used in lesson”. It was found out that four factors explained 61.72% of total variance for Vocational College of Erzurum, and that two factors explained 66.56% of total variance for Vocational College of Aşkale.

When the number of factors was taken into consideration, the students of Vocational College of Erzurum assessed the lecturer with more factors than those of Vocational College of Aşkale. The students of Vocational College of Erzurum stated their ideas about the matters relating to administrative decisions orienting to make changing in the method of giving lesson by lecturers and personal features or effectiveness of their lesson presentation. The students of Vocational College of Aşkale named 30 questions as two factors, and they make some narrower comprehensive assessments about the decisions taken by some administrators so that they will be oriented to the lecturer.

While teaching process education form applied in the end of each academic year at Atatürk University is being applied, thanks to a good timing and by taking not only lecturers but also student’s into account, the process of teaching-learning belonging to that period will be assessed better. In case of mentioned suggestions application, some benefits such as assessment of lessons, rising the quality of teaching-learning, improvement of lecture himself/herself, the content of the lessons they gave, updating of some references and teaching method they applied for will be able to be provided.

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