



The Empirical Analysis of Student Perceptions on Logistics and Purchasing Management Courses in Higher Vocational Schools: Turkey Case

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Abstract

Logistic is one of the fastest developing subjects in higher education. The developments in this subject show that Logistic is on the way to become a discipline all by itself as a crucial area of both professional and technical education (associate degree) and undergraduate and postgraduate education. This research has been done on second grade students studying in logistics program of a public professional academy in education periods 2009-2010 and 2010-2011. In the research, opinions of the students regarding Logistics Management and Purchasing Management have been evaluated. Research findings show; that the concepts of Logistics and Purchasing in perception level are problematic even for second grade, that the students find it difficult to understand the terminology used in subjects regarding international processes and legal statutes especially in lessons, that the instructors teaching these lessons are not at a sufficient level of logistics education and preparedness.

Keywords: Logistics Education; Logistics Class; Purchase Management Course; University Student; Higher Education; Turkey.

1. Introduction

In many countries, "Logistics Education", like "Logistics Management", still continues to be areas open to development and improvement. This situation also affects the compensation of human resource needs which is increasing rapidly in logistics sector. Because the concept of Logistics has been perceived as a military term all around the world, as a result, it has been observed that the need of human resources in the sector has been mainly compensated by personnel who resigned/retired from military organizations. Until a few years ago in Turkey, "logistics education" has not found place in the curriculum of secondary education and associate degree in higher education. On the side of undergraduate degree in higher education, "logistic" has been approached in Marketing and Production Management disciplines of "Business Administration" department in School of Economics and Administrative Sciences, generally together with physical distribution. However in post graduate and doctorate levels, the subject is observed to incline towards logistics management and international logistics management. Overall, it appears that the subject of logistics has gained a significant increase in every level of education during the recent years.

These developments and changes regarding logistics education has caused many different lessons to take place even in the same educational level. Especially in vocational high schools, the increase in logistic programs draw attention. In parallel to this, according to the sectorial needs (Transportation, Storage, Distribution, Logistic Operation Management, Green Logistics, e-logistics, etc.), it is observed that higher education institutions incline towards different lesson and subject contents. On the other side of these rapid changes and developments in logistics education, there are the students taking logistics training. Personal perception of students regarding the concept and lessons of logistics will

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surely be one of the important inputs in improvement of logistics education. In this sense, a conceptual frame is presented below regarding logistics education in Turkey and subsequently, an area research regarding the perception of logistics lessons by students studying in the logistics program of a public university.

2. Conceptual Frame

2.1. The Brief Overview on the Development Process of Logistics Education in Turkey

Logistics is a young sector in Turkey, and it has made progress in recent years. Turkey being advantageously positioned between Middle East, Turkic Nations and Europe, serves as a transfer center between these regions; which is why many authorities claim it will, or already has become a logistics base. Local companies not only compete among themselves, but also compete with international companies. [1] In this section, general frame about logistics education in secondary education and higher education In Turkey is given.

2.2. Logistics Education in Secondary Education

Opening of logistics departments and producing graduates in logistics branch high schools and universities has been a new and developing subject in the last period. Almost none of the studies of Ministry of National Education and Higher Education Institution have been realized in high school and university levels until 2000s. After year 2000, for the purpose of enhancing the logistics knowledge in secondary education, there has been important efforts regarding opening of logistics departments in logistics high schools and vocational high schools. [2] Today, there is a shortage of instructors in logistics area in high schools which form the basis of secondary education. Many vocational lessons with logistics content are lectured by accounting and drafting instructors. To change this situation, there is the need to implement programs for "training the instructors" oriented with the measures of Ministry of National Education.

2.3. Logistics Education in Higher Education

There are two essential extents of logistics education in the sense of higher education. First one is the vocational high schools at the level of associate degree and "Logistics Management" programs in undergraduate and postgraduate levels that train "Logistics Technicians" to compensate the rapidly increasing need for personnel in the market. Foundation vocational high schools and foundation universities cover an important part of the education in associate degree. In the classifications within the scope of restructuring vocational high schools according to European Union norms, which is started by Higher Education Institution (HEI) in 2009, the logistics associate degree programs have taken place under "Management and Organization Department" with the code 345 ISCED (International Standard Classification of Education)[3]. On the other hand, 53 standard higher vocational programs have been developed in scope of IKMEP (Developing Human Resources by Vocational Education) project, which is also funded by European Union, but logistics have not taken place in these [4].

Regarding undergraduate programs, the logistics subject has been given place before in "Production Management" course in business administration departments; on the basis of "Choosing Site of Establishment", "Transportation" and "Distribution" problems. Also, in-plant material activity, storage and supply management subjects have been studied. The subjects given place in production management are studied more extensively in "Numerical Approaches" lessons. On the other hand, in "Marketing" lessons, "distribution" subject is presented on the basis of aspects of distribution to domestic and international markets. Studied subjects are; relations with members of distribution channels, retail management, packaging and wrapping [5] [11].

3. Aim of Research

In this day which globalization is accelerating, logistics education has become an important area in our country. Logistics skills of managers are also arise from qualified logistics education [6]. On the other hand rapid changes in practice and further developments of research in logistics challenge educators to further upgrade their courses [7]. An effective logistics education is seen to be an essential condition for training qualified manpower in Turkey, which wants to join the European Union. In addition to this, in our country the logistics education, under the social sciences area, is one of the most neglected subjects to this day. As a natural result of this, it is observed that the nation-wide required standard cannot be reached regarding the vocational education in logistics area, which is one of the most contributing areas in development of foreign trades in Turkey [8]. It is very important for both instructors and students to interact both ways and offer solutions for improvement regarding the development of logistics education. The problem of this research is to gain importance in determining student opinions and finding areas open to improvement by student's view in logistics educations.

The aim of this study is to determine by the student's view the sufficiency of logistics programs in vocational high schools and Logistics Management and Purchasing Management courses lectured in these programs. Also, another purpose of the research is to develop a student's view of solution into suggestions by students.

4. Research Method

The research is in the screening model. The data belonging to the research have been collected from domestic and foreign sources related to literature screening by questionnaire technique, these data have been systematized and an "Activity Report" [9] format for students has been prepared. Also, demographic information of the students and three point likert scale has been used to evaluate the preparedness of instructors lecturing these lessons. In preparation of the activity report and Likert scale, correction of statements in questions and formats, which have been advised by three other instructors lecturing logistics lessons in other universities, has been ensured.

The population of the research are the higher vocational schools students who studying logistics programs in public universities in Turkey. The sample is the logistics program second grade students in a public vocational high school which studied during 2009-2010 and 2010-2011 academic years in İzmir province. The reason for taking the second grade students as the sample is that these students are able to present opinions regarding the logistics education in the university and specifically the two lessons subject to the research, because of their two year experience in logistics lessons.

In the research, Definitive Statistics And Classification Type Scale has been used [10]. As the research medium, the "Activity Report", which has been given to students has been used. Activity Report, is a form of report, which has been prepared by students which involves lesson-related applications and subjects which are included in annual education plan of Logistics Management and Purchase Management Lessons. In literature scan, common subjects with logistic lessons apart from the given ones, and relevance of these with the researched lessons, are requested to be reflected on the activity reports.

5. Findings

At the findings section, firstly, level of acknowledgement of some basic concepts which are used in logistic management and purchase management lessons have been explored, then, in the second part, findings about sufficiency and preparation behaviors of lecturers and students have been given.

5.1. Findings About Logistic Education Levels of Lecturers

Logistic education and occupational experience of a total of six lecturers, who conduct Logistics Management and Purchase management lessons in the logistics program of the occupational high school where the research for the last two years has been performed are given in Table 1. According to these data, a major partition of lecturers, have not received graduate or undergraduate education in logistics field (Including Logistics Management and Business Administration, Marketing). Only, 1 personnel has graduate education. On the other hand, it has been understood that, majority of lecturers have sector experience of more than 10 years.

Table 1. Logistic Education Level and Occupational Experience of Lecturers

Variable	Parameters	n	Frequency(f)	Percentage (%)
Academical Training	Undergraduate	6	2	33,33
	Graduate	6	1	16,66
Seminar and Course Attendance	Participated in 1 Week Seminar or Course	6	-	0
	Participated in 1 Month Seminar or Course	6	1	16,66
	Participated in Seminar or Courses for more than 1 Month	6	5	83,33
Logistic Sector and Application Experience	1 -5 Years	6	1	16,66
	6-10 Years		1	16,66
	11-15 Years		3	50,00
	15 Years and More		1	16,66

5.2. Findings About Acknowledgement Level of Terms Related with Logistics Management and Purchase Management

According to Table 2, 81% of the students do not know the concepts of logistics thoroughly. About 16% of the students, have not acknowledged the concept of logistics. It can also be seen that 3 students have understood the concept of logistics wrong. Even if these ratios are not very high, it can be assumed that there's a problem of basic concepts at the second grade level.

Table 2. Level of Acknowledgement of Logistics Concept

Level of Acknowledgement	Frequency (f)	Percent (%)
Acknowledged	91	81,25
Partially Acknowledged	19	16,96
Non- Acknowledged	3	2,67
Total	112	100.0

Level of acknowledgement of purchase concept is lower than the concept of logistics. (78%, Table 3). The attention-catching thing here is, there is an insufficiency at the second grade level, involving the level of acknowledgement of both logistics and purchase concepts.

Table 3. Level of Acknowledgement of Purchase Concept

Level of Acknowledgement	Frequency (f)	Percent (%)
Acknowledged	88	78,57
Partially Acknowledged	13	11,60
Non- Acknowledged	11	9.82
Total	112	100.0

When we look at the level of acknowledgement of the terminology related with Logistics and Purchase Management education, it can be seen that 19% of the students has acknowledged the terminology. This percentage is very low. It can assess from the activity reports of the students that, technical terms in logistic lessons are rather hard. This issue point of the necessity that, study books and other lecture materials about the lesson shall be re-inspected and updated in terms of language.

Table 4. Level of Acknowledgement of the Terminology Related with Logistics Management and Purchase Management

Level of Acknowledgement	Frequency (f)	Percent (%)
Acknowledged	19	16,96
Partially Acknowledged	66	58,92
Non- Acknowledged	27	24,10
Total	112	100.0

According to the data on Table 5, the leading one of non-clear subjects in Logistics Management education is Integrated Logistics Support System with a percentage of 36. This subject is followed by restructure with 27% and Relationship between Logistics and Other Disciplines with 19%.

Table 5. Distribution of Non-Clear Subjects About Logistics Management

Subject	Frequency (f)	Percent (%)
Relationship between Logistics and Other Disciplines	7	19,44
Principles of Logistics	2	5,55
Structure of Logistic Organization	4	11,11
Integrated Logistics Support System	13	36,11
Logistic Restructure	10	27,77
Total	36	100.0

Distribution of non-clear subjects about Purchase management is given in Table 6. Abroad Purchase Operations is the leading subject with 26%. International delivery and insurance operations (21%) and Purchases with Letter of Credit

(19%) are among the non-clear subject. Additionally, students have pointed out that, non-clear subjects about purchase are related with public regulations.

Table 6. Distribution of Non-Clear Subjects about Purchase Management

Subject	Frequency (f)	Percent (%)
Tables and Economic Codes used in Budget	7	12,28
Abroad Purchase Operations	15	26,31
Purchases with Letter of Credit	11	19,29
Local Purchase Operations	4	7,01
Principles of Using Public Resources	2	3,50
Inspection and Control Operations	6	10,52
International Delivery and Insurance Operations	12	21,05
Total	57	100.0

5.3. Findings About Level of Information, Lecturing Ability and Presence of the Lecturer

In this section, findings about level of information, lecture-giving ability and preparation status of the lecturer, as well as preparations of the students are given.

When Table 6 is analyzed clearly, 64% of the students find the level of information of the lecturers sufficient. In other words, 36% of the students do not find their lecturer's level of information sufficient. Students, generally (85%) find lecture-giving features of their lecturers efficient. 43% of the students believe that, their lecturers come to lesson without insufficient preparation. Lecturer's lack of information can be understood when compared to logistics education level of the lecturers which are given in Table 1.

Table 7. Findings About Level of Information, Lecturing Ability and Presence of the Lecturer

	Student Opinion	Frequency (f)	Percent (%)
Level of Information	Sufficient	72	64,28
	Partially Sufficient	31	16,96
	Insufficient	9	27,67
	Total	112	100.0
Lecture giving	Clear	96	85,71
	Partially Clear	9	8,03
	Not Clear	7	6,25
	Total	112	100.0
Presence	Prepared	64	57,14
	Partially Prepared	26	23,21
	Not Prepared	22	19,64
	Total	112	100.0

Activity Statuses of students in and out of school about the lesson is given in Table 8. According to this, only half of the students (49%) study their sheets and books before they come to the lessons. The rate of reading documents about Logistics and Purchase Management out of the Lesson is 18,75%. Nearly, the same percent of students, research visual and written materials about logistics and purchase over the Web (%19). About 7% of the students, visit related institutions and companies. Activity status of the students who keep track of technological changes and perform group studies about Logistics and Purchase, is relatively low (%1-%2). On the other hand, it has been understood that the students do not follow the state of the regulations about this lesson.

Table 8. in-School and Outer-School Activity States of Students Involving the Lessons

Activity	n	Frequency (f)	Percent (%)
Pre-Lecture Lecture Book and Studying Sheets	112	55	49,10
Document Reading About Extra-Lecture Logistics and Purchase	112	21	18,75
Reading Visual and Written Materials about the Lecture on the Internet	112	22	19,64
Visiting related Institutions and Companies	112	8	7,14
Performing Group Studies About the Lesson	112	2	1,78
Following Related Technologies about Logistics and Purchase Management	112	3	2,67
Following the Legal Regulations About Logistics and Purchasing	112	1	0,08

6. Conclusion

Logistics is one of the rising trends of license higher education in Turkey, as it is in the rest of the World. The mission of satisfying skilled employee requirement in order to operate logistics management and applications in the globalizing world, belongs to Universities. Together with that, it is an undoubtedly important fact that, the logistics education which is given in the upper education, can be maintained in high quality standards which may compete with the rest of the World. Another important fact of Logistics education in terms of Turkey is the leading position of the logistics sector which contributes on the development of Turkey's foreign trade.

In this research, occupational high schools have been taken as a basis and it is aimed to provide a student focused perspective including Logistics Management and Purchase Management lessons. The results of the research which has been listed below are believed to constitute to universities, which conduct similar graduate and undergraduate programs.

- Major partition of lecturers, have not received graduate or undergraduate education in logistics field (Including Logistics Management and Business Administration, Marketing) and they have sector experience of more than 10 years.
- There is an insufficiency at the second grade level, involving the level of acknowledgement of both logistics and purchase concepts in logistics programs in higher vocational schools.
- Student perceptions related with technical terminology is very low. This issue point of the necessity that, study books and other lecture materials about the lesson shall be re-inspected and updated in terms of language.
- The leading one of non-clear subjects in Logistics Management education is Integrated Logistics Support System. This subject is followed by restructure and Relationship Between Logistics and Other Disciplines.
- Distribution of non-clear subjects about Purchase management; Abroad Purchase Operations is the leading subject. International delivery and insurance operations and Purchases with Letter of Credit are among the non-clear subject.
- Majority of students do not find their lecturer's level of information sufficient. Students, generally find lecture-giving features of their lecturers efficient. Half of the students believe that, their lecturers come to lesson without insufficient preparation.
- Only half of the students study their sheets and books before they come to the lessons. The rate of reading documents about Logistics and Purchase Management out of the Lesson is low. Also low percent of students, also research visual and written materials about logistics and purchase over the Web.
- Students rate visiting related logistics institutions and companies is also very low. Activity status of the students who keep track of technological changes and perform group studies about Logistics and Purchase, is relatively low (%1-%2). On the other hand, it has been understood that the students do not follow the state of the regulations about this lesson.

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