



New Trends and Issues Proceedings on Humanities and Social Sciences



Issue 10 (2016) 9-18

Selected Paper of 4th World Conference on Psychology and Sociology (PSYSOC 2015) 26-28 November 2015
Rome, Italy

Estimation of Vocational Training School (IEK) students' contentment in relation to quality of their studies

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Suggested Citation:

Anastasiadou, S. D., Fotiadou, X.G. & Anastasiadis, L. (2016). Estimate and Analysis of Vocational Training School (IEK) students' contentment in relation to quality of their studies. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 10, pp 09-18. Available from: www.prosoc.eu

Selection and peer review under responsibility of Prof. Dr. Kobus Maree, University of Pretoria, South Africa
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Abstract

The current paper tries to capture the notion of service quality in post-secondary educational institutions. Determining students' needs, expectations, satisfaction, contentment, and loyalty provides great service to the post-secondary educational institutions, while it puts forward the option to distinguish the strengths and weaknesses of these institutions and determine the areas that ought to be improved. Students' contentment and satisfaction goes beyond teachers' evaluation, which is a short sighted perspective, and includes wider concepts of students' learning experience. In this context, knowing the degree of satisfaction is not enough. What is somewhat significant is to figure out the factors contributing to this satisfaction (BC College & Institute Student Outcomes, 2003). The current survey tries at revealing the causes leading to IEK students' satisfaction or obstructing it. The study was carried out at IEK of West Macedonia, Greece and the research instrument used was SEVQUAL scale. It brings to light service quality dimensions using SEVQUAL scale in the framework of tangibility, reliability, responsiveness, assurance and empathy. Furthermore, Correspondence Factorial Analysis was used for data analysis. Results relating to students' contentment and quality of studies were not encouraging. Finally, problems affecting the quality of studies came forward. The identification of these obstacles will be the basis for seeking for solution in the framework of continuous improvement in post-secondary education.

Keywords: expectations; satisfaction; contentment; loyalty provides;

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1. Introduction

Post-secondary educational plays a fundamental role in society development, national augmentation and economic progress.

The term quality referring to education has not been clearly defined. Although there are many made efforts to that direction. According to "gurus" of quality, quality is the conformance to requirement (Crosby, 1979) and defect avoidance in educational process (Crosby, 1979) quality is the fitness of educational outcomes and experience of use (Juran, 1980), quality is the expected degree of conformance to a standard (Deming, 1986), quality is the value addition in education (Feigenbaum, 1986).

According to more recent researchers quality is the degree of excellence (Peters & Waterman, 1882), quality is the degree of excellence of entire educational experience (Empore, 2002). In addition Parasuraman, Zeithaml & Berry (1988) quality is the meeting of exceeding a client's expectations regarding education. Parasuraman et al. (1988) related service quality dimensions such as tangibility, responsiveness, reliability, assurance and empathy with deep examination of the relationship between those dimension and students satisfaction. Bigné, Moliner, & Sánchez, (2003) confirmed that all five quality factors have a significant correlation with students' satisfaction. Bushra (2016) claimed that service quality basically refers to an assessment of how well a delivered service is conventional to the client's expectations. Parasuraman, Zeithaml & Berry (1985) proposed the SERVQUAL model that evaluates service quality, which is going to be described in detail in the next section. This model is highly recognized and is used by many researchers (Ham and Hayduk, 2003; Hishamuddin, Azleen, Rahida & Mohd, 2008; Kanakana, 2014; Đonlagić, & Fazlić, 2005; Sahney, Banwet, & Karunes, 2005). Đonlagić, & Fazlić (2005) claimed that SERVQUAL model can be used in assessing the quality in higher education institutions and they recognized a gap between students; expectations and perceptions and it can provide information in relation to the areas where improvements is indispensable with a view service quality to be enhanced.

Vaz & Mansori (2013) studied the tangibility, responsiveness, reliability, assurance and empathy factors' impact on students' contentment at private universities and colleges. Tangibility as well as empathy, responsiveness and assurance have a positive direct effect on students' contentment.

Hishamuddin et al. (2008) argued that service quality is improved when students satisfactions is increased. Ham and Hayduk (2003) claimed that there is service quality is strongly connected with students satisfaction. Hishamuddin et al. (2008) gave a deep examination of the relationship between those dimension and students satisfaction. In addition, Đonlagić, & Fazlić (2005) SERVQUAL model enables higher educations' institutions to evaluate students' satisfaction. This evaluation is a fundamental tool for institutional managers and leaders to discover problems and points for continues improvement.

Kanakana (2014) claimed that attention should be paid on tangibles, responsiveness, reliability and assurance. Hishamuddin et al. (2008) argued that service quality is improved when students satisfactions is increased. They claimed that service quality have a serious positive impact on students satisfaction. In addition they concluded that the most significance factors are empathy and assurance in service quality. Ham and Hayduk (2003) claimed also empathy plays an importance role as well as responsiveness. Leninkumar (2014) demonstrated that there is strong positive correlation students' perceived service quality and satisfaction.

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Thus, the present research seeks to study the relation of tangibility, responsiveness, reliability, assurance and empathy quality factors with IEK Greek students' satisfaction, using SEVQUAL model, (Parasuraman, Berry and Zeitham, 1988).

Nomenclature

AFC	Analyze Factorielle des Correspondances
IEK	Vocational Training School
COR	Correlation
CTR	Contribution

2. The purpose of the study

The current survey aims at enlightening the causes leading to IEK students' contentment or obstructing it.

3. The instrument

The instrument, which intended to measure IEK students' satisfaction regarding their studies quality, is SEVQUAL (Parasuraman, Berry and Zeitham, 1985; 1988; 1990). This tool consisted of 25 items referring to five different attitude subscales, as follows: (a) Tangibility- respondents' positive or negative attitudes towards organization facilities and equipment, environment and brochures about services (Tan1, Tan 2, Tan3, Tan 4, Tan5), (e.g. Tan1: Up-to-date and well-maintained facilities and equipment); (b) Reliability- respondents' positive or negative attitudes towards Services, timing, Consistency of charges, staff professionalism and competence (Rel1, Rel2, Rel3, Rel4, Rel5, Rel6) (e.g. Rel1: Services should be provided at appointed time); (c) Responsiveness - respondents' positive or negative attitudes towards concerning Prompt services and staff Responsiveness Res1, Res2, Res3, Res4 (Res1: e.g. Students should be given prompt services).

(d) Assurance- respondents' positive or negative attitudes towards staff friendliness and courteousness, behavior and knowledge (Ass1, Ass2, Ass3, Ass4) (e.g. Ass1: Friendly and courteous teachers/staff); (e) Empathy - respondents' positive or negative attitudes toward service availability, students feedback, staff interest and empathy

(Emp1, Emp2, Emp3, Emp4) (e.g. Emp1: Obtain feedback from students); Accessibility - respondents' positive or negative attitudes toward parking facilities and availability and organization position. (Acc1, Acc2, Acc3) (e.g. Acc1: There are adequate parking facilities).

Each item of the instrument used a 7-point Likert scale that ranged from 1- Strongly Disagree to 7- Strongly Agree. The value of the Cronbach's α coefficient for this instrument in this study's sample was 0.889.

4. Sample

The research was carried out at IEK of West Macedonia, Greece. The sample consists of 312 IEK students.

5. Data analysis

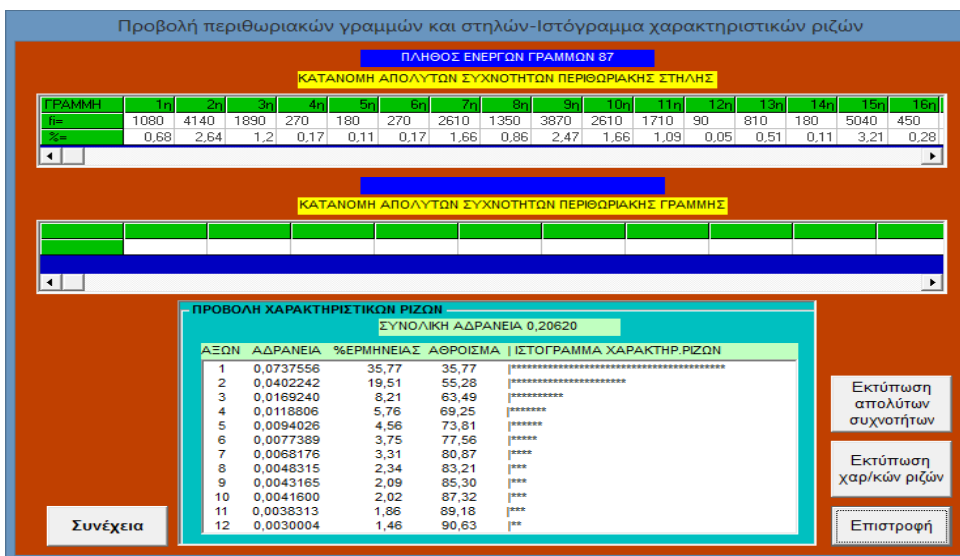
The research data were analyzed via Factorial Analysis of Correspondences (Analyse Factorielle des Correspondences - AFC). By applying the Factorial Analysis of Correspondences, we achieve an almost global description of the situation aided by a lower number of new composite independent variables, the so called factors (Papadimitriou, 2007). The factors, which take the form of axes, vertical in two, are the factorial axes and are created from the composition of groups of initial variables, resulting in an all the more revealing search of relationships among variables-items in our case. The interpretation of the findings of the Factorial Analysis of Correspondences takes place in the first factorial planes, those namely, which are created by the factorial axes based on the rates of characteristic values λ_k , where $k = 1, 2, 3, 4$ for every axis, with values between 0 and 1. The results of Factorial Analysis of ---

Correspondences, extracted with MAD software (Karapistolis, 2000), are interpreted via inertia, which every factorial axis (criterion 1) explains, and finally, via correlation (Cor) and contribution (Ctr). These indices allow us to immediately discern the most significant and determining variables or objects, contributing to the creation of factorial axes. Values $Cor \geq 200$ (criterion 2) and $Ctr \geq 1000$ /numbers of classes, criterion 3) are considered satisfactory (Karapistolis, 2015).

6. Results

Results of the Factorial Analysis of Correspondences (Analyse Factorielle des Correspondences – AFC): The analysis of the table of data via AFC gives initially Figure 1, which shows the characteristic values of Burt table, as well as the inertia percentages of each factorial axis. Figure 1 allows us to distinguish the amount of the principal factorial axes, which are the most suitable in interpreting the results. The inertia percentage of each factorial axis offers the ability to know the percentage of importance each axis conveys (criterion 1) (Karapistolis, 2000, 2015). According to the rates accompanied by the histogram (Figure 1) the percentage of importance of the first factorial axis is 35.77%, of the second it is 19.51%, of the third it is 8.21%, and of the fourth it is 5.76% and 4.56% is the percentage of the fifth factorial axis, 3.75% of the sixth, 3.31% of seventh, 2.34% of eighth, 2.09% of ninth, 2.02% of tenth, 1.86% of eleventh, 1.46% of twelfth. The totality of information provided to us by the first 12 factorial axes, amounts to 100%. In the following table, we can see the sum of information offered by the first five factorial axes.

Figure 1.: Inertia – Characteristic roots

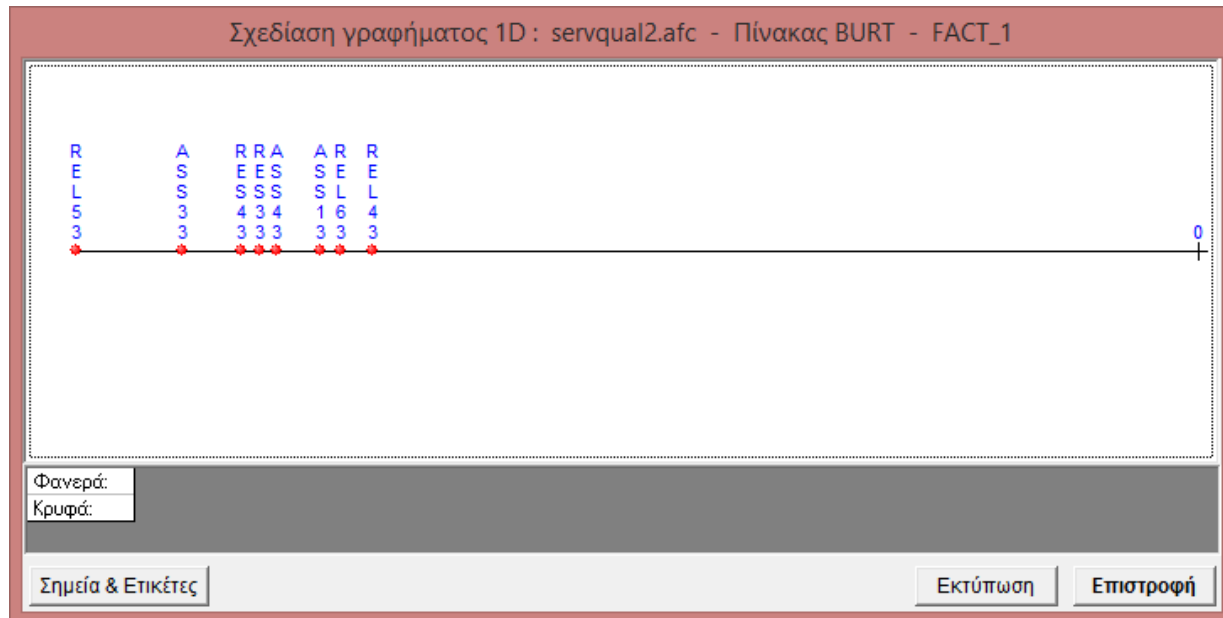


Based on the cumulative frequency, the first two factorial axes interpret 55.28% of the total variance of data (Figure 1). This percentage is considered satisfactory for data interpretation. Then, from the table of results of the factorial correspondence analysis and according to the above mentioned selected criteria (inertia, correlation and contribution), we detect the variables contributing to the formation of the first two factorial axes.

The variables were deemed most significant for the extracted factorial axes according to the two criteria, correlation ($Cor \geq 200$, criterion 2) and contribution ($Ctr \geq 1000$ /numbers of classes=11.4, criterion 3).

Interpretation of the first factorial axis e_1 : More specifically, based on the answers of the test takers, and as it derived from the factorial analysis, the first axis – factor e_1 , with eigenvalue 0.0737556 explaining, 35.77% of total variance is constructed from classes Rel53, Ass33, Res43, Res33, Ass33, Ass13, Rel63, Rel43. In fact, the first factorial axis e_1 is formed by those variable classes projecting examinees attitudes referring to Reliability and Assurance (Figure 2).

Figure 2. Factorial axis e_1

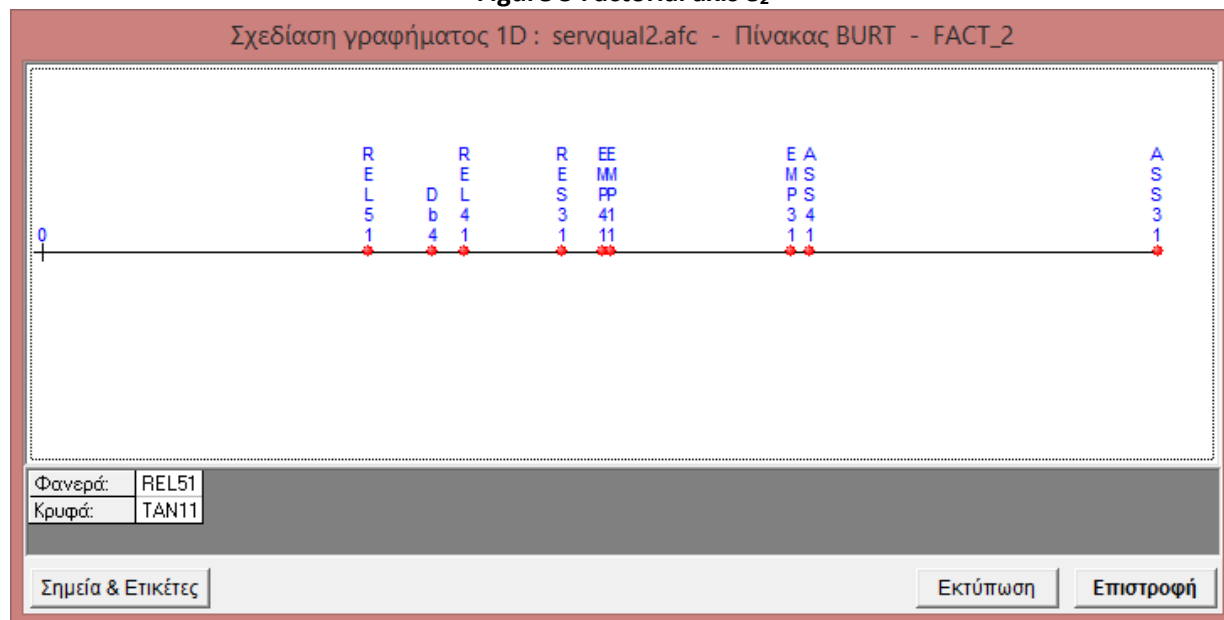


Moving further on the axis from left to the right we note the gradation of the respondents' attitude. At the beginning we observe the positive attitude. More especially respondents claimed that there is consistency of charges (Rel53) (Cor=619, Ctr=31), students are treated with dignity and respect (Ass33) (Cor=786, Ctr=46), waiting time is not more than one hour (Res43) (Cor=691, Ctr=31), director/teachers /staff attitude instill confidence in students (Res33) (Cor=, Ctr=), and they explain thoroughly educational condition to students (Ass43) (Cor=748, Ctr=37). In addition respondents believed that director/teachers/staff are friendly and courteous (Ass13) (Cor=807, Ctr=19) and IEK maintains accurate records for students (Rel6). Respondents are claimed Error-free and fast retrieval of documents (Rel43) (Cor=715, Ctr=30)

On the whole on the left of the first factorial axis we distinguish the classes establishing positive attitude in respect of Vocational Training School (IEK) Greek students' satisfaction regarding the quality of their studies.

Interpretation of the second factorial axis e_2 : The variables, which are more important for the second factorial axis are based to the criteria, inertia and contribution, In fact, based on the examinees' responses, and as it stems from the factorial analysis, the second axis-factor e_2 with eigenvalue 0.0402242 explaining 19.51% of total variance is composed from classes Rel51, Db4, Rel41, Res31, Emp41, Emp11, Emp31, Ass41 and Ass31 (Figure 3).

Figure 3 Factorial axis e_2



On the right of the first factorial axis there are the classes determining negative attitudes. More especially, on the right of the second factorial axis the examinees aged 15-30 years old Db4 (Cor=316, Ctr=30). First we notice the negative attitude regarding whether there is consistency of charges (Rel51) (Cor=335, Ctr=35). Respondents express a modest agreement on whether the facilities and equipment are Up-to-date and well-maintained (Tan11) (Cor=335, Ctr=35). More specifically, these students claimed that there is no consistency of charges (Rel51) (Cor=335, Ctr=35), director / teachers / staff are not both professional and competent (Rel41) (Cor=336, Ctr=35), director/teachers /staff do not instill confidence in students (Res31) (Cor=437, Ctr=53), director/teachers/ staff do not understand the specific needs of students (Emp41) (Cor=545, Ctr=62) and they do not obtain feedback from students (Emp11) (Cor=468, Ctr=43), they do not have student's best interest at heart (Emp31) (Cor=663, Ctr=74) and finally educational condition are not explained thoroughly to students (Ass41) (Cor=586, Ctr=78) and students are not treated with dignity and respect (Ass31) (Cor=597, Ctr=82).

On the whole on the left of the second factorial axis we distinguish the classes establishing negative attitude in respect of Vocational Training School (IEK) Greek students' satisfaction regarding the quality of their studies.

Interpretation of the first factorial plane: The first factorial plane $e_1 \times e_2$ (Figure 3) interprets 55.28% of total inertia – information (Figure 1), a particularly satisfactory percentage. The first factorial axis contrasts the extreme cases, while the second the middle ones.

In the first factorial axis on the right, in the first quadrant (e_1+, e_2+) we meet the classes Emp31, Ass41, Emp11, Emp41, Res31, Rel41, Db4, Tan11, Rel51, Tan11 which define the negative attitude of the respondents.

In the first factorial axis on the left, in the second quadrant (e_1^+, e_2^-) we meet the classes Rel53, Ass33, Res33, Rel63, Res43, Ass43, Rel43, Rel43, Ass13, which define the positive attitude of the respondents.

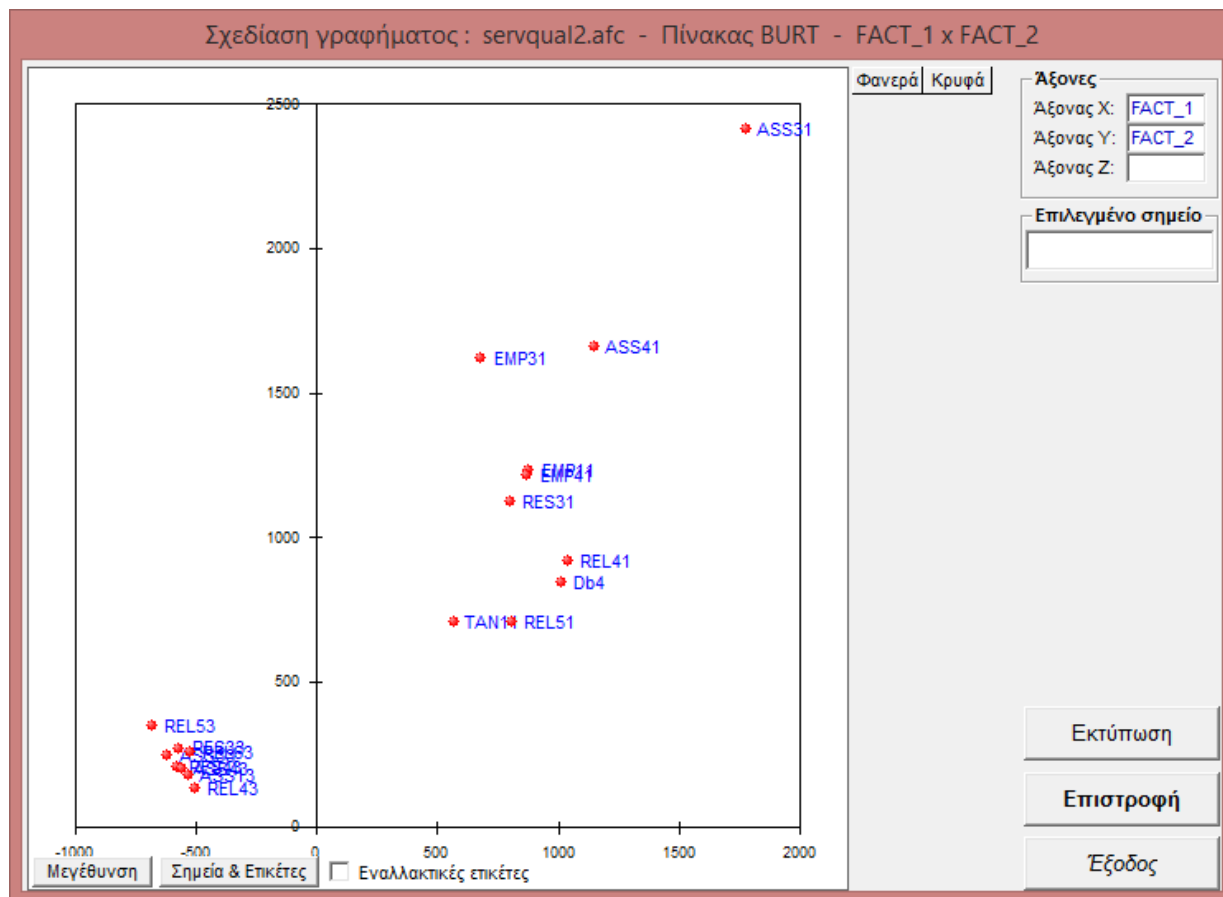


Figure 4. First factorial plane $e_1 \times e_2$

7. Conclusions

The fundamental objective in this research was to examination of grounds leading to Vocational Training School (IEK) students' satisfaction or obstructing it. Having as basis the results of the research three basic groups of Vocational Training School (IEK) students' were notable.

Concretely, the first group of students is disposed negatively to contentment in relation to their studies. Students express disappointment by IEK' facilities and equipment that are not Up-to-date and well-maintained. The thought that director / teachers / staff are incapable of being professional, they do not seek for student's best interest and fail of being good teachers.

Finally, the second group is disposed positively to satisfaction in relation to their studies. More over documents are founded to be Error-free and fast retrieval, charges consistent, services prompted, waiting time limited, staff professional and competent, staff attitude capable of instilling confidence in

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students, students achievement thoroughly explained, students' specific needs understood and students' best interest is found to be staff/ teachers first priority.

Still, a lot of research is needed to be done. A Swot analysis is also needed to stimulate strengths and weaknesses and the opportunities and threats of Greek IEK' institutions. Students' satisfaction is an index of quality and thus a long term research in relation to contentment is ought to be released.

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