

## Students' Academic Satisfaction: The Case of CED at KFUPM

ADEL S. ALDOSARY

*Associate Professor, City and Regional Planning Department,  
King Fahd University of Petroleum and Minerals,  
Dhahran, Saudi Arabia*

**ABSTRACT.** University administrations world wide are keen to know that their students are satisfied with their academic life in the university, including colleges, faculty, courses, facilities, etc. This issue is of vital importance for high standard universities, which adopt internal evaluation systems. Students input on such attributes is of great importance for both academic and fiscal planning purposes. King Fahd University of Petroleum and Minerals (KFUPM) is no exception. The University has its own evaluation system of courses, faculty, as well as services. However, sometimes individual colleges or programs, need more and specific information about their students satisfaction with their programs. This study is based on the results of a large scale survey that was conducted among all College of Environmental Design (CED) students. Its findings provide major insights and accurate accounts of the students academic satisfaction in a Saudi university. It also outlines the ways and approaches that students feel can make them satisfied with their colleges, or universities. The implications are obvious and can be useful to all universities world wide.

### **Background and Literature Review**

The students academic satisfaction levels are the major concern to university administration as well as academic and educational planners. Therefore it has caused a number of researchers to study different aspects of the academic life and the students evaluation of it<sup>[1,2,3,4,5]</sup>. It is normally used as a way of evaluating the academic experience of university administration as well as justifying any fiscal commitments<sup>[2,3,5,6,7,8]</sup>. This particular aspect of the academic experience is vital to any improvements efforts attempted by any college academically or administratively and it is shared globally<sup>[9,10,11,12]</sup>.

Many studies have been conducted to evaluate the performance of students at different levels. All of which have dealt with this issue from different perspectives. Neumann and Neumann argue that the concept of student satisfaction is composed of four factors (sex, major, school years, and academic performance). Each of these factors is best predicted by a different combination of independent variables. However academic performance is a dominant predictor of all four factors<sup>[1]</sup>. A student attitude inventory (SAI) was developed by Thompson in Britain which contains 47 items to identify students in

higher education on the basis of 1) motivation, 2) study methods, 3) examination technique and 4) lack of distraction towards the academic work<sup>[13]</sup>. A third study by Margrain investigated the students personal characteristics and their predictive potential for academic achievement<sup>[14]</sup>. Feldman studied students evaluations of their courses and teachers. He found that college students anticipated or actual grades in class were in fact positively related to their evaluation of their courses and teachers<sup>[15]</sup>. Teaching effectiveness is another aspect which was studied by Atieh, Alfaraj, and Alidi. They presented a model based on the assumption that teaching effectiveness is a linear function of five variables: a) students evaluation, b) graduating students evaluation, c) chairman's input, d) colleagues input, and finally e) course file<sup>[5]</sup>. This multidimensional model was developed to select the best faculty member for a teaching award.

A different type of research was examining the basic principles of academic evaluation, using ABC system of grading and its rival the GPA system. Huntley have studied this aspect and provided some analysis, proposals, and suggestions for the reform of the current system of academic evaluation<sup>[16]</sup>.

Yet another type of research is probing the learning approach and its outcomes. Saljo in his empirical observations, described a distinction between a memorizing reproductive strategy on one hand, and on the other hand a strategy which is focusing on comprehending main ideas and principles<sup>[17]</sup>. Harvey reports on the University of Central England experience with their student satisfaction survey which they conduct annually, and suggests that the three levels of student feedback, namely teacher assessment, questionnaires and course or module feedback, are the main factors to be considered in making the management strategic decision making at the university<sup>[11]</sup>. Fulford on the other hand is suggesting in his research that when students perceive interaction to be high, they will have more positive satisfaction towards the instruction than they will when interaction is perceived as low<sup>[12]</sup>.

In short, very little has been done so as to highlight what are the stronger factors in the student academic satisfaction. An extensive review of literature, in the field of academic evaluation and performance, were also examined, but did not yield any result so as to enhance or compare with this study<sup>[18-27]</sup>.

With this in mind a survey was conducted among the students of the College of Environmental Design (CED), at King Fahd University of Petroleum and Minerals (KFUPM). This study is based on the outcome of that survey. The aim was to study the current CED student body reactions and responses to certain questions regarding their selection of their majors and their satisfaction levels in three main categories: faculty, facility, and curriculum, along with some other related issues. This survey was essential to see the response of the committed group at the undergraduate studies level, that is after they have made the selection.

### **Objectives and Methodology of the Study**

The main objectives of this study are:

- a) Evaluating the satisfaction of CED students with their majors.

- b) Identifying the main factors in the major selection process (CED in this case).
- c) Identifying the marketing methods to attract more students to a specific major (CED for example).
- d) Identifying major factors in CED students satisfaction levels with their college.

To achieve these objectives, an appealing questionnaire was designed and a large scale survey was conducted on the students of CED. 165 survey instruments were delivered to all CED students of different classes on the same day and in the same class period. 68 forms were received back which was quite a representative sample and response rate for such a class size. The response rate is therefore about 41.2%.

The survey results were coded and computer graded and indexed, the major factors isolated, ranked and analyzed. Finally the students comments and recommendations were looked into to explain the students responses.

## **Analysis of Results**

### ***1. General Information***

The current CED student body seem to be dominated by Saudis, about 63%. The distribution of those CED students, who participated in the survey, by major, was 37% Construction Engineering and Management (CEM), 18% Architecture (ARC), and 46% Architectural Engineering (ARE). The method of enrollment to CED was a major issue in the selection process, and only 26% come from preparatory year, while 32% are transfers, and 41% are graduate admissions. It seems that the orientation year does not give enough contact or knowledge about the university programs such as CED, that enable students to select them. This would mean that this 32% transfer would have been in CED directly had they had the proper introduction to CED programs. That is a savings in terms of wasted time through major shuffling and credit transfer, which inevitably prolong the graduation time and education cost to the university per student [8,9,10,11,12]. Obviously that would give us a clue about the percentage of students who were aware of CED programs prior to enrolling in CED. The students were asked if they knew about CED before enrolling, and about 60% said yes, while the remaining 40% did not know about CED before enrolling. It calls for a close study as this large portion 40% would result in some increased enrollment if it were targeted by some form of advertisement. The students have in fact given their input on the methods that they feel would improve the enrollment, and these methods are believed to be effective since they were nominated by the students who merely indicate what they feel reached out with or touched by. Advertising available jobs in the field to orientation students seem to be the most promising attraction method 34%. Secondly come the invitation of high school students and introducing CED programs to them and explaining the importance to society of these programs at 28%, as this would create a preconceived idea about CED that would pay off at the orientation year when they join KFUPM. The distribution of brochures with 25% weight seem to be also promising as it ranked third among the attraction methods. Introducing CED programs to orientation students is also a promising attraction method, at 22%, which was suggested earlier in the orientation survey student suggestions. Other

methods come fairly distributed over a spectrum ranging from making a permanent exhibition with 19% weight, to assigning a percentage of orientation students (quota system) which weighed about 4%, and that renders it unfavorable by students.

When asked about the reasons for selecting their majors, CED students responded with interest in the major as the most outstanding reason for the selection. It has over 68% weight. The next reason is only 25% weight, and that is market demand. Surprisingly the curriculum subject matter was also important to the extent of 12%, and that puts subject interest and curriculum over 83% of all influencing reasons for the selection. It seems that CED students are really committed and enjoying their major quite substantially. Other insignificant reasons were also suggested but their influence was marginally infirm.

## ***2. Satisfaction Ratings in General***

CED students have indicated that they are very satisfied with their college on every single aspect to say the least. The results show that satisfaction levels in all three categories (faculty, facility, and curriculum) that range from somewhat satisfied to very satisfied, are very high, 95% for facilities (25%, 27%, 43%), 83% for faculty (31%, 34%, 18%), and 84% for curriculum (19%, 41%, 24%). These figures are strong manifestations of the other side of the interest in the major influence in the selection process. It is clearly a certificate of appreciation by the students to CED. Among other things this is a strong indication that CED is popular among those who know about it and it would be fair to CED and to Saudi Arabia to properly introduce it to all new comers to KFUPM. It helps to examine the causes given by the students to justify their satisfaction and in some cases pride with CED.

A part of any successful development program is its internal mechanism of improvement and evaluation, and CED is no exception. In fact, CED holds its internal evaluation of faculty, committees, programs, and courses every semester, in addition to other ad hoc evaluation efforts to better understand the performance of its programs, and faculty. In addition to that CED is striving for other distinction awards and recognition in terms of promoting, short courses, professional seminars, research awards, advising awards, etc. In all, CED is closely monitoring its professional practice at all times, and is doing its best to better improve it and serve the Saudi society.

## ***3. Suggestions for Improvements***

For the issue of improving CED programs, students feel that the most effective way to improve CED programs, is to introduce more variety of topics in the form of more electives, with 52% weight. Next is the introduction of more concentrations within each program, which is known as the major and minor concentrations within each program with 51% weight. This is a substitute for new programs, where faculty assignment is considered jointly by all programs, therefore improving the integration of the college, and better using the faculty expertise.

There is always the need for more study and concentrations, as well as diversification of fields, since knowledge is always improving, and getting deeper into the subject mat-

ter to the extent that a new major or concentration is created due to the accumulation of special knowledge on that particular concentration. The point is self sustaining virtually at all measures, however, the need for such concentrations in the society is to be determined prior to its inception and creation. The next improvement suggested was to introduce non thesis option in the master program of CEM, with a 50% weight. This suggestion can be argued both ways, and indeed it is rather controversial. There are two arguments at hand here, the first is whether the requirements should be lightened and provide non thesis option, thereby decreasing the retention rate and improving the graduation levels, but supposedly with less quality of research graduates. The second is to do nothing and the status quo would prevail, therefore keeping the retention rate at the current level, but ensuring a better research quality graduates. These arguments are both valid for the right situation, however, the current situation does not warrant an immediate intervention, at least for the time being. Another important suggestion with 31% weight, is calling for accepting work experience in lieu of credit hours. Again this also is controversial, because credit hours are mandated to ensure a minimum level of academic knowledge, supported and subsidized by professional experience but not the other way around. Because that would give the program too much practice, and too little theory, leading to a non KFUPM standard, weak program. The remaining suggestions for improvements were the typical student agony complaints of demanding reduction in or additions to the credit hours or number of courses in the current program, overall, the responses call for the need to reconsider the initiation of new concentrations within current CED programs, and quite possibly more new and up to date challenging majors that respond to the needs of the built environment in our ever changing world. The mechanism of the initiation of such programs and concentrations is yet to be developed, and that is only after the need for such new moves have been established, which we believe can be easily done.

The final finding in this survey, describes what is termed miscellaneous items in the CED survey. These are some specific items aimed at probing students for their opinion of the college overall performance. The first three questions asked about the current advising system and the answers demonstrated the students satisfaction with CED current advising system. In all three questions the weighted influence was over 92%. It seems that the advising system is effective, and does make a difference. In response to a question about the college need for new programs, about 43% said yes, while the remaining 57% said no. In this question the students input of CED's need for new programs was requested, as opposed to more concentrations and electives. The difference is clear but very thin. It seems that there is need for at least considering new programs in the college over the next few years, at the undergraduate level. The nature and design of these programs can be better configured using a series of market surveys to assess the economy's need for such new programs.

There seems to be some confusion surrounding the name of the college. CED does not appear to be describing the college properly, only 56% think that it does, while 44% think that it does not. Ironically the word Environmental internationally imply many programs and concentrations that are not available in CED. It calls for a closer look at

the college name. May be it would be more understood and better appreciated if it were given a different name.

About 72% of CED students think that their programs as they stand, can attract new students, which leave about 28% suggesting improvements for their programs to be more attractive. The big question for CED students survey was whether they have made the right choice by enrolling, and about 88% believe that they did make the right choice. Such a high satisfaction level is uncommon among technological programs, since the motivation to make a choice is seldom done on pure desire basis, rather it is made on economic basis, namely market supply and demand jobs availability.

### **The Influence Factors and their Weights**

The survey has five major influence attributes. The first was directed to study the most effective attraction method for CED new students. The results of these factors influence were analyzed and the major findings of this ranking were highlighted, which were found to be advertising jobs to preparatory year students, inviting high school students to CED, distributing brochures, and introducing CED courses in preparatory year.

The second group of factors that were ranked and their influence studied, was the reasons for selecting the major. By far the subject interest was the strongest, then came the market demand, followed by curriculum. That strong influence of subject interest demonstrate the importance of CED as a major attraction center in KFUPM academic life.

The satisfaction levels were also examined and their influence seem to indicate a general satisfaction with CED status quo, as for faculty, facilities, and curriculum. These improvements are listed in their influence in descending order. Other improvements were also suggested, but they were insignificant as outlined earlier.

Finally, a set of attributes were assigned influence weight by the students in their overall evaluation of CED. These attributes relate to the current advising system, which was rated very well. Another issue was the need for other programs, and a significant percentage of the students felt the need for such a move.

The name of CED seem to carry with it some ambiguity, and over 44% of the students thought so. 70% of the students felt that their programs can attract new students as they stand, and therefore, over 88% felt that they made the right choice by entering CED. That support other findings that overall, CED students are satisfied with their college.

### **Conclusion and Recommendations**

In summary, it can be seen that traditional enrollment through orientation is only 26%, while 32 are transfers, calling for the need to study the best way to introduce CED to the orientation students, so that they may be able to make a better selection choice. This fact was reiterated several times through the comments, as well as the results, where only 60% of CED students were aware of it before enrolling. Several methods to attract more students were suggested and the most prominent ones were, advertising jobs to orientation students, inviting high school students, distributing brochures, and in-

roducing a CED course in the preparatory year. The majority of CED students have selected their major based on their interest in the subject, followed only marginally by market demand, suggesting that CED students are committed to their profession and their college. Their satisfaction levels with the college call for admiration indeed, because on average it was above 85%. They have suggested some improvements to their programs, such as introducing more electives, more concentrations, non thesis option in CEM program, and accepting work experience as credit.

Finally, the advising system in CED seem to be winning the endorsement of the students, although they feel that introducing new programs would improve the college, as well as looking into changing the name of the college. They were confident that their programs are good enough to attract new students, and that they indeed have made the right choice by joining CED.

We can generalize from the results of this study that, students academic satisfaction with their programs at KFUPM, is dependant on the factors outlined in the study. These factors should be given extreme care by university administration if they were to maximize their student satisfaction with their programs, reduce retention and drop out rates.

The results of this study show that CED students satisfaction with their college as well as KFUPM is very high. It may be an indication of the general satisfaction level amongst all KFUPM students. CED students were used as an example to find out why and how, they have reached such satisfaction levels. The students have provided some clues for less popular programs to improve their image, attract more students, and gain more popularity utilizing some of the suggested marketing methods, which is a common academic problem world wide. The implications of the results of this study to other universities may prove useful and could be of interest to their administration, if they were used as an approach to integrate student views into management strategic decision making, by transforming the relevant survey statistical data into management information designed to identify clear areas for action.

### ***Acknowledgement***

The author would like to express his thanks to King Fahd University of Petroleum and Minerals (KFUPM) for providing various facilities and support for conducting this research.

### **References**

- [1] **Neuman, Y. and Neuman, L.**, Determinants of Students Satisfaction with Course Work: An International Comparison between Two Universities, *Research in Higher Education*, **14**(4): 321-333 (1981).
- [2] **Flammer, F.**, The Achievement of Learning & Learning Efficiency as the Basis for Recognizing and Rewarding Teaching, *ASEE Annual Conference Proceedings* (1984).
- [3] **Powell, R.**, Grades, Learning, and Student Evaluation of Instruction, *Research in Higher Education*, **7** (3): 193-205 (1977).
- [4] **Kovacs, R.**, Personality Correlates of Faculty and Course Evaluations, *Research in Higher Education*, **5** (4): 335-344 (1976).
- [5] **Atieh, S., et al.**, A Methodology for Evaluating College Teaching Effectiveness, *European Journal of Engineering Education*, **16**(4): 379-386 (1991).

- [6] **Ackernecht, D.** and **Burgess, H.**, *Professional Education for Environmental Designers in Saudi Arabia*, CED Review (1986).
- [7] **Aldosary, A.S.**, *Towards the Reduction of Foreign Workers in Saudi Arabia*, U.M.I. Inc., Ann Arbor, 1991.
- [8] Ministry of Finance and National Economy, Kingdom of Saudi Arabia, *Fifth Development Plan* (1990).
- [9] **Alsulaiman, T.M.**, *Architectural Education Goals in Saudi Arabian Universities*, King Saud University Journal, Volume 3, Architecture and Planning, Riyadh (1991).
- [10] **Aldosary, A.S.**, The Correlation between Final Grade Score, Attendance, and Homework in the Performance of CED Students, *European Journal of Engineering Education*, **20**(4): (1995).
- [11] **Harvey, L.**, *Keeping the Customer Satisfied: The Student Satisfaction Approach*, IEE Colloquium (Digest) No. **84**, IEE Stevenage, Engl., pp. 8/1-8/8 (1995).
- [12] **Fulford, C., Zhan, S.**, *Predicting Student Satisfaction from Perceptions of Interaction in Distance Learning*, IFIP Transactions A: Computer Science and Technology No. **A-29**: 259-268 (1993).
- [13] **Thompson, M.**, The Prediction of Academic Achievement by British Study Habits Inventory, *Research in Higher Education*, **5**(4): 365-372 (1976).
- [14] **Margrain, S.**, Student Characteristics and Academic Performance in Higher Education: A Review, *Research in Higher Education*, **8**(2): 111-123 (1978).
- [15] **Feldman, K.**, Grades and College Students Evaluation of Their Courses and Teachers, *Research in Higher Education*, **4**(1): 69-111 (1976).
- [16] **Huntley, J.**, Academic Evaluation and Grading: An Analysis and some Proposals, *Harvard Educational Review*, **46**(4): 612-631 (1976).
- [17] **Saljo, R.**, Learning Approach and Outcome: Some Empirical Observations, *Instructional Science: An International Journal*, **10**(1): 47-65 (1981).
- [18] **Cox, R.**, Evaluating Teaching in Higher Education, *European Journal of Higher Education*, **1**(4): 285-296.
- [19] **Prather, J., Smith, G.** and **Kodras, J.**, A Longitudinal Study of Grades in 144 Undergraduate Courses, *Research in Higher Education*, **10**(1): 11-24 (1979).
- [20] **Andrews, J.**, Teaching Format and Student Style, *Research in Higher Education*, **14**(2): 161-178 (1981).
- [21] **Barrall, M.** and **Axelrod, S.**, The Effects of Learning Partners and Retests on Pretests-Posttests Scores, Final Course Grades, and Student Attitudes, *Research in Higher Education*, **8**(2): 177-187 (1978).
- [22] **Hazeltine, B.**, Student Evaluation using Lists of Descriptive Statements, *Research in Higher Education*, **4**(1): 1-22 (1976).
- [23] **Aleamoni, L.** and **Eitelbach, S.**, Comparison of Six Examinations Given in Rhetoric 101, at The University of Illinois, Fall, 1965, *Research in Higher Education*, **4**(4): 347-354.
- [24] **Feld, S.** and **Grofman, B.**, Variation in Class Size, the Class Size Paradox and some Consequence for Students, *Research in Higher Education*, **6**(3): 215-222 (1977).
- [25] **Mdans, G., Kellaghan, T., Rakhov, D.** and **King, D.**, The Sensitivity of Measures of School Effectiveness, *Harvard Educational Review*, **49**(2): pp. 207-230.
- [26] **Johnston, J.** and **O'Neill, G.**, The Analysis of Performance Criteria Defining Course Grades as a Determinant of College Student Academic Performance, *Journal of Applied Behavioural Analysis*, **6**: 261-268 (1973).
- [27] **Semb, G.**, The Effects of Mastery Criteria and Assignment Length on College Student Test Performance, *Journal of Applied Behavioural Analysis*, **7**: 61-69 (1974).



## الرضا الأكاديمي لدى الطلاب : حالة كلية تصاميم البيئة بجامعة الملك فهد للبترول والمعادن

عادل بن شاهين الدوسري

قسم تخطيط المدن والأقاليم ، كلية تصاميم البيئة  
جامعة الملك فهد للبترول والمعادن ، الظهران - المملكة العربية السعودية

المستخلص . يهتم الإداريون في كافة جامعات العالم بمعرفة مدى رضا طلابهم عن حياتهم الأكاديمية والتي تشمل الكليات والأساتذة ، والمواد الدراسية ، والمنشآت وغيرها . إن هذه القضية مهمة بالنسبة للجامعات ذات المستويات العالية من الأداء والتي تعتمد أسلوباً للتقويم الذاتي ، كما أن رأي الطلاب حول هذه المواضيع مهم جداً في التخطيط المالي والأكاديمي للجامعة . وجامعة الملك فهد للبترول والمعادن ليست مستثناة من ذلك فلديها نظام تقويم الأساتذة ، والمواد ، والخدمات ، ولكن بعض الكليات أو الأقسام الأكاديمية قد تحتاج إلى معلومات إضافية ودقيقة حول رضا طلابها عن برامجهم . إن هذه الدراسة مبنية على نتائج إستفتاء جرى على نطاق واسع شمل كافة طلاب كلية تصاميم البيئة بالجامعة ونتائج قدمت صورة حقيقية ودقيقة عن الرضا الأكاديمي لدى طلاب جامعة الملك فهد للبترول والمعادن كما أن نتائج هذه الدراسة أوضحت الطرق والأساليب التي يرى الطلاب جدواها في رفع مستوى رضاهم الأكاديمي عن كليتهم وبالتالي جامعتهم . إن مدلولات هذه النتائج يمكن الاستفادة منها على مستوى الجامعات الأخرى في داخل المملكة وخارجها .