Journal of Mathematics and Statistics 8 (1): 64-71, 2012 ISSN 1549-3644 © 2012 Science Publications

Modeling of Engineering Student Satisfaction

¹Zainol Mustafa, ²Norbayani Basri, ¹Norkisme Zainal Abidin, ¹Nur Riza Mohd Suradi, ¹Zalina Mohd Ali, ¹Faridatul Azna Ahmad Shahabudin and ³Mohd Rashid Ab Hamid ¹School of Mathematical Sciences, Faculty of Science and Technology University Kebangsaan Malaysia, 43600 UKM Bangi, Selangor D.E. ²Ministry of Education, Malaysia ³Faculty of Industrial Sciences and Technology, University Malaysia Pahang, Lebuhraya Tun Razak, 26300 Kuantan, Pahang D.M.

Abstract: Problem statement: The purpose of this study is first; to identify the antecedents to student satisfaction and the relationship between student satisfaction and promotion. Second; to develop a suitable student satisfaction model considering the antecedents of student satisfaction with student satisfaction and promotion for students of engineering in universities in Malaysia. A total of 500 engineering students from University Kebangsaan Malaysia (UKM), University Putra Malaysia (UPM), University Islam Antarabangsa Malaysia (UIAM), University Malaya (UM) and University Tenaga Nasional (UNITEN) were involved as respondents in this research. **Approach:** To examine these relationships, a model from past study on student satisfaction of Applied Sciences students in Austria was referred. Based on this model, a suitable model measuring student satisfaction of engineering students in Malaysia is constructed. Structural equation modeling is used as its capability in testing the combination of relationship between service performance, university performance, relationship, university standing, student satisfaction and promotion in higher education simultaneously. **Results:** Suitable model which is able to explain the factors linked to student satisfaction in engineering education is established. **Conclusion:** This study finds that the antecedent factors have a direct effect on student satisfaction and also student satisfaction has a significant effect on promotion.

Key words: Student satisfaction, engineering education, structural equation modeling, university standing, service performance, engineering education, higher education

INRODUCTION

The world has become a global environment which forces higher learning institutions to reposition internationally. Additional resources therefore are needed for the institutions to face long term challenges in improving or maintaining existing standards, increasing students' access and facilities as well as strengthening market connections and competition globally. It is understood that competition increases not only in getting new students to enrol but also in getting financial support. Higher learning institutions should give the marketing factor more attention in achieving the desirable number of students' enrolment. This is merely because the students can be considered as customers and they are the determining factor to the survival of a higher learning institution. In general, the importance of marketing has become more accepted in the Higher Education environment.

Customer satisfaction is achieved when a customer is satisfied with a product or service that meets their requirements, needs or expectations. Satisfaction can be viewed as an outcome of a consumption activity or experience (Parker and Mathews, 2001) and many researches have been conducted recently especially at Higher Education Institution at different issue (Khozaei et al., 2010; Najib et al., 2011). Customer satisfaction also has an effect on the image of an organisation. There is an indirect relationship between customer satisfaction and customer loyalty through image (Bloemer and Ruyter, 1998). Satisfied and loyal customers can be very good and influential agents of promotion. They have the potential of being persuasive thus promoting the service they received, for instance, through wordof-mouth testimonials to neighbours, friends and relatives or even strangers. Therefore, customer satisfaction should be given proper attention by

Corresponding Author: Zainol Mustafa, School of Mathematical Sciences, Faculty of Science and Technology, University Kebangsaan Malaysia, 43600 UKM Bangi, Selangor D.E. Malaysia Tel: 03-89213597 Fax: 03-89254519