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Academic Counselling in Student Support Services in Sri Lanka

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ABSTRACT :

Distance Education refers interactive, educational process between two people, student and teacher, separated by physical distance. There is a two-way communication between teacher and student. Through this communication process, students have active role in distance education according to compare with traditional classroom environment. The Open University of Sri Lanka offered degrees and diplomas using distance course materials supported by mostly by print. Students are adequately supported by Student Support Services such as print and contact sessions, and subsequently other media such as AV materials. The objective of the study was to examine the perception of academic councilors on student support services of the Open University of Sri Lanka. The data were gathered through piloted and validated questionnaire from the academic counselors of the Open University of Sri Lanka covering over 100 staff members. CART, a data mining technique was use in the analysis of data. The distribution of designation of the academic staff members showed that Lecture category (47%) exceeds the rest of the categories in the sample. The age distribution of the sample population showed that 35% of the total sample is represented by the age group 42-49 yrs. These were considerable difference in perception of support services with respect to the age and academic qualifications of the academic counselors. Interactively participation of students in Day Schools and the structure of the final examinations paper use to evaluation the student evaluation performance were played an important role in the variation in perception of the student support service by academic counselors within the Open University. This situation can be explained by considering the respondent's experience in the distance education methodologies and training etc. This study reveals that there is need in in-depth studies on the academic staff perception on the support services offered by the Open University of Sri Lanka with a vast collection of information and data mining techniques to avoid reaching subjective conclusions. The organization of training programs for academic staff and improvement of print materials are important and should be prioritized.

1. INTRODUCTION :

Distance education refers to interactive, educational processes between two people, student and teacher, separated by physical distance (Harry, et al., 1993, p.32). It provides equal opportunities to learner and reduces the distance among communicators for global, competitive learning environments among the countries. Distance education becomes popular among the developed countries and also its applications are quite new for developing countries like Sri Lanka. In order to create effective distance education system, it should be known what are the perceptions of staffs and their roles as communicators based on the study of literature reviews. Distance Education can be done as telecommunicating, audio conferencing, email, and functions. There is a two-way communication between teacher and student

as well (Isman, 1999). Through this communication process, students have active role in distance education according to compare with traditional classroom environment. Computer Aided learning, computer managed Instruction and Computer Conferencing are the three applications of distance education. Computer Managed instruction is management that provide administration of learning process and Computer Aided learning includes software applications to make students learn through pre structured and programmed materials. Computer Conferencing requires electronic network that enables individuals to communicate (Clark, 2001). Through the system organization, distance education provides self-learning, responsibility on learning and achievement. There is a communication between learner and instructor.

Holmberg (1995) is of the opinion that the didactic conversation between teacher and student is an important characteristic in distance education: 1.Those feelings of personal relation between the teaching and learning parties promote study pleasure and motivation, 2. That such feelings can be fostered by well-developed self-instructional material and two-way communication at a distance, 3. That intellectual pleasure and study motivation are favorable to the attainment of study goals and the use of proper study processes and methods, 4. That the atmosphere, language and conventions of friendly conversation favor feelings of personal relation; 5. Those messages given and received in conversational forms are comparatively easily understood and remembered, 6. That the conversation concept can be successfully translated, for use by media available, to distance education.

The Open University of Sri Lanka offered degrees and diplomas using distance course materials supported by mostly by print. The Support services of the Open University are being undergoing considerable change. Initially, the students were adequately supported by print and contact sessions, and subsequently other media such as AV materials.

As the day school activity became better confined and considered main support service offered at the main center, however, during past three decades, there were a number of Regional Centers and Study Centers were established and a significant growth in distance enrolments. Thus, OUSL required improving student support services on a budget matching with the size of its operation.

As far as the support services are concerned, there are several components, which play an important role in a distance education system. These components include student support services, management of the institution, financial services, examination etc. For the proper functioning of distance education institution, these components are to be coordinated carefully. Student Support Services is one of the major components of a distance education system. Therefore, studies on student support services in a distance education system are essential in maintaining a proper function of an institution. The poor support services can be led to a number of issues related to teaching-learning [process of the institution.

The student retention and drop out is one of the major concerns of both the institution and the student, as the financial costs of dropout can be considerable (Barefoot, 2004 ; Givney, 2004 ; Simpson, 2004). Analyzing student retention in tertiary education is universally regarded as a difficult activity. Woodley (2004) has pointed out just how difficult it is effectively identifying the reasons for dropout. Further, a considerable number of student- withdrawals are actually normal in (Simpson, 2004). McGivney (2004) has noted that 'all researchers in the field emphasize that non-completion is a complex issue' (p. 37) and added that 'there will always be some students who do not complete. It is a fact of life that people's choices, aspirations and circumstances change' (p. 45). Studies on retention must be careful to define terms to ensure that results are transferable. Therefore, the literature of student retention drop out in distance education suggests that studies now tend to report tentative and subjective

conclusions drawing from self-selecting samples, unique contexts, and often suspect methodology. Statistics gathered from student enrolment and completion data, also tend to be either inadequate or of poor quality (McGivney, 2004). Simpson (2003) has commented that both quantitative and qualitative analyses of student dropouts are such that 'neither gives very decisive answers' (p. 15).

Despite the variance and uncertainty surrounding the results of retention studies, some generalization is possible. Woodley (2004) has stated that 'it seems reasonable to hypothesize that a dropout rate is likely to be determined by both the nature of the student intake and the characteristics of the host course/institution' (p. 53). Work by Shin (2002, 2003) confirms the latter and further adds the influence of peer and teacher presence. Transactional presence is defined by Shin (2002) as 'the degree to which a distance student perceives the availability of, and connectedness with teachers, peer students, and institution' (p. 132), have a demonstrable influence on student retention. Studies confirming how interventions can improve student retention (Huett et al., 2008) indicate the real potential of even simple support activities. Simpson (2003) has pointed out the positive influence of motivational contact by offering encouragement through a telephone call or postcard. Simpson (2003) has cited certain studies in such contact did not even need to be personalized to be successful. Further, Simpson suggested that such interventions be brief, informal, and appropriate. Having such contact across the period of study was also found beneficial for retention. Veronica et al., (2004, pp. 21–24) has suggested that institutions base their interventions by Developing and implementing a comprehensive set of support services. Such an institutional approach helps to ensure a good return on intervention investment, focusing support activities where they are most needed and ensuring a long-term institutional commitment to funding retention strategies. Finally, Nash (2005) has pointed out that even comprehensive support services offered to distance learners may have some disappointing levels of use, perhaps because many distance learners are themselves independent or else are under time pressures that do not give them scope to make use of these services. It is important, therefore, that support services actively seek out those most likely to benefit from them. While identifying students with at-risk profiles for deliberate follow-up is a useful strategy, it is important that those considered at little risk also have support clearly available (Barefoot, 2004).

The main objective of the study is to examine staff perception on student support provided by the Open University and to make recommendations and suggestions to the policy makers for their consideration for implementation. The staffs' perception on the students support services such as face-to-face teaching component, teaching materials, practical components, project work, and tutor clinics seems to be varying individually as well as at the level of sub-populations. Therefore, the objective of the present study was to examine the staff perception on support provided by the faculties of the OUSL through a classification and regression tree analysis of staff response data.

2. METHODS :

The target population included 113 staff members for the survey. A piloted, validated questionnaire was use to gather information. Questionnaire was distributed to 113 staff members and returned 100 duly filled forms. Return rate of the questionnaire was 88.8%.

A descriptive analysis such as frequency and cross tabulation was performed on the response. In addition, Classification and regression tree analysis also carried out on the data set obtained from the study.

Data mining is a data processing method with a very broad area of usage (Sevindik and Demirkeser, 2010). The constant increase of the information in the developing world increased the use of data mining as well. This is particularly due to the market competition which data mining is applied and determination of the goals,

making the situation assessment and charting the project plan. In general, data mining have been employed in wide array of education research (Romero et al., 2008) and in student success in distance education system (Kovačić, 2010). The Classification and regression tree analysis on of the data mainlining tool that has been widely used in different field of studies. The classification and regression tree (CART) is an interesting simple and straightforward way to perform pattern recognition. CART is a nonparametric method of classification and regression, which aims to find mutually exclusive regions of the data space containing homogeneous subsets of the data (Daszykowski et a., 2004; Breiman et al., 1984). CART yields a binary decision tree containing nodes connected by branches Nodes giving rise to two new nods(named child notes) are called parent nods otherwise they are terminal nods. The tree is constructed via a recursive procedure partitioning objects from a parent node into two child nodes. Each node is characterized by a logic rule usually defined for a single explanatory variable. (e.g. if .. greater than .. then …) which led to two child nodes that divide the sample into non-homogenous sets compared to the original parent node. Usually partitioning is stopped when the increase in the tree complexity outweighs the increase in accuracy. Relevant advantages of CART can be summarized as (Questier et al., 2005): (i) it is a non-parametric method (which means that no assumptions are made regarding the underline distribution of the data; (ii) it is invariant to monotonic transformations of the explanatory variable (only the rank order of each explanatory variable is important); (iii) is it fast simple and intuitive; (iv) it allows for a graphical interpretation; (v) it can handle missing data; (vii) it is robust to outliers as they will be separated into a different group of either do not influence the prediction; and (vii) cross-validation can be employed to access its usefulness. In the present study, the responses of were subjected to CART was to find the patterns of responses reflected from the data. A number of regression trees were developed and two trees were chosen based on the cross validated and re-substitution errors (0.077 and 0.028 respectively).

3. RESULTS AND DISCUSSION :

The sample population included 100 academic counselors representing the four faculties of the Open University of Sri Lanka, which were presented in Table 1. The sample comprised a higher proportion of academic staff from Faculty of Education followed by the Faculty of Natural Sciences. The distribution of designation of the academic staff members showed that Lecture category (47%) exceeds the rest of the categories in the sample. The age distribution of the sample population showed that 35% of the total sample is represented by the age group 42-49 yrs.

The aim of CART is the objective selection of variables from 30 variables in the data set. During the development of decision tree, CART has chosen three (03) response variables. The decision tree developed by CART for response data indicated that majority of the total variation in response data were explained by the items related to the Prospectus/guide book issued by the faculties at the pre-registration stage of the student enrolment (Figure 1). Subsequently, the item number related to the way of participation in the Day Schools (weather they participated by raising question) and the item number related to the structure of the final examinations paper use to evaluation the students evaluation performance were played an important role in the splitting the data set into groups. The quality such as content, readability, novelty etc., of educational materials specially printed materials of the Open University need to be improved (Doluweera et al., 2008). This may be because most of the academic staff of the Open University is less exposed to the student evaluation procedures and special training on evaluation techniques should be organized. It is often believe that structure of the examination paper is often considered as a tool, which should be scaled to suite for a distance education mode.

Table 1 : Frequency Distribution of the Academic Staff included in the Survey

Faculty	Number of Staff	Percentage Overall
Natural Sciences	32	29.4
Engineering Technology	21	19.3
Humanities and Social Sciences	10	9.2
Education	37	33.9
Sub-total	100	91.7
System	9	8.3
Total	109	100.0

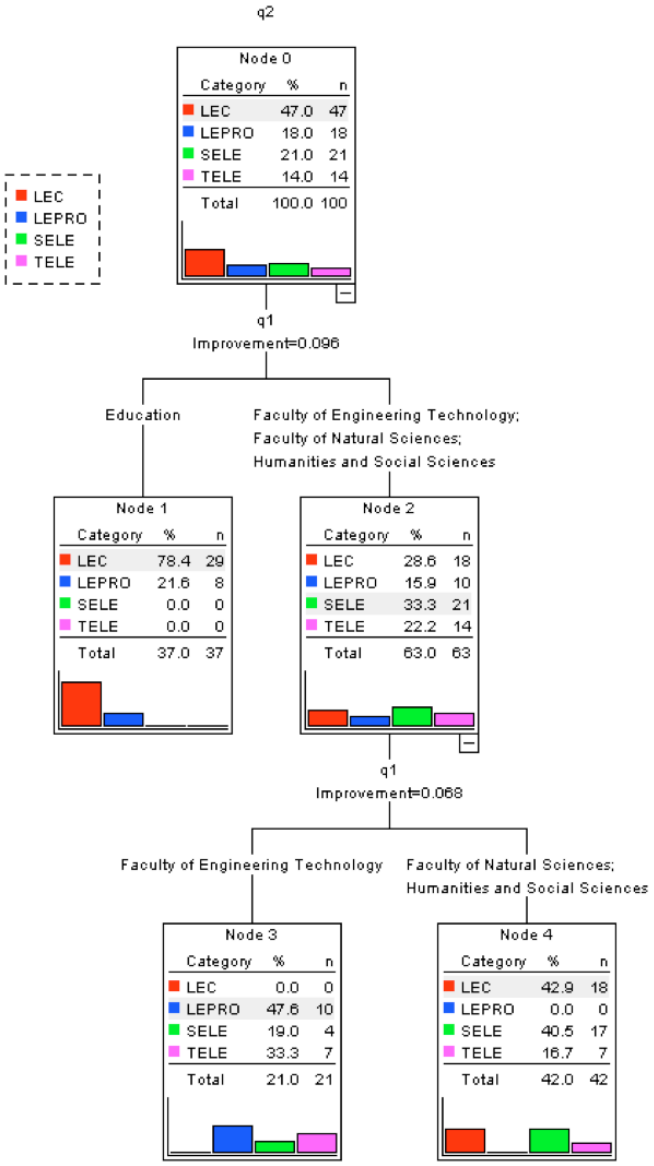

Figure 1 : Decision tree from CART analysis of staff response data on the student support services. q2 =Category of counselors; q1 = Faculty

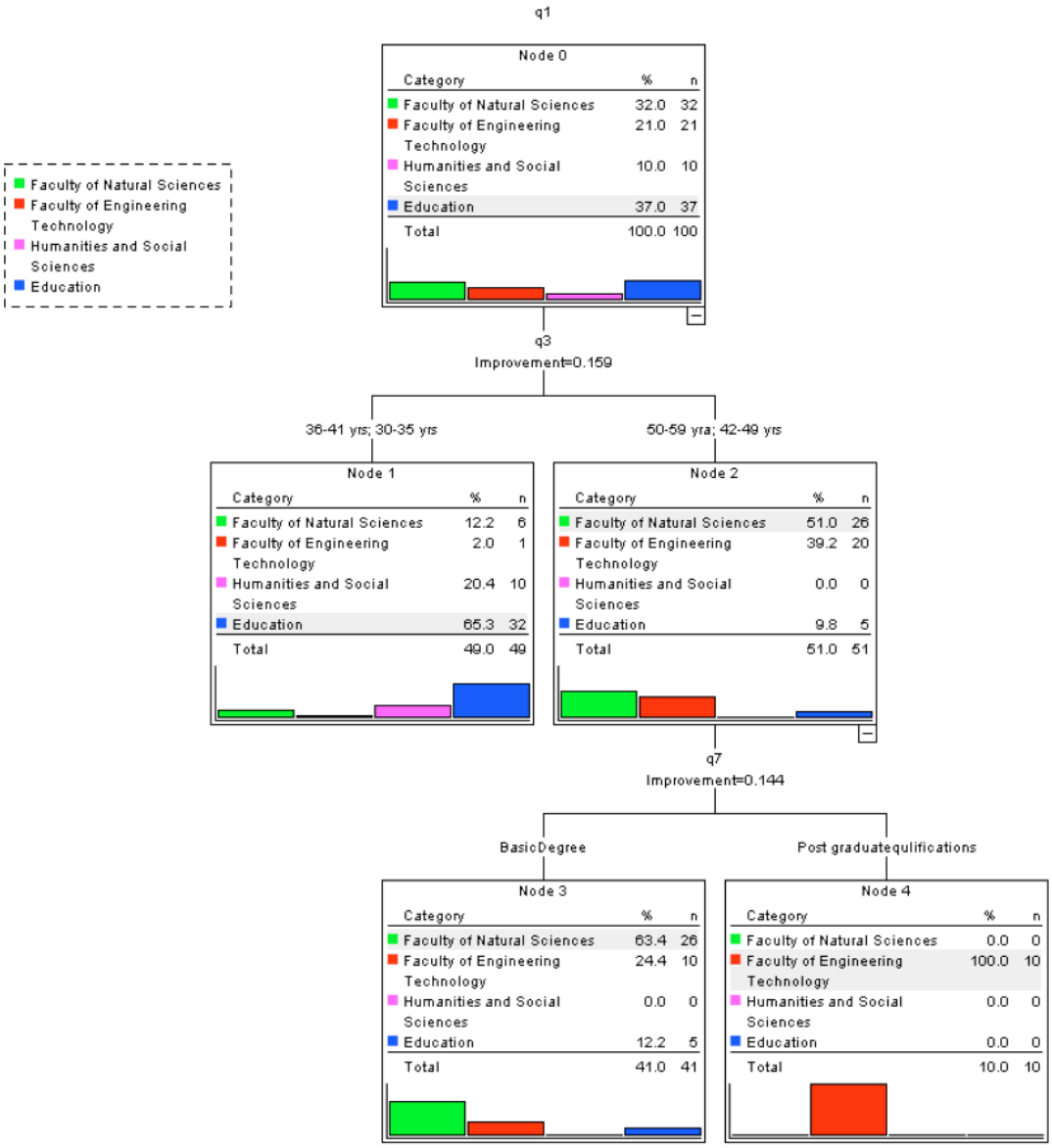

Figure 2 : Decision tree showing variation in perception of support services among the faculties. q1 = Faculty, q3 = age class, q7 = educational qualification

In summary, the results indicated that there were no perceivable differences in perception of support services between the faculties except for the item related to pre-enrolment guidance and interactive participation of students in the day school and structure of the final evaluation tool. This situation can be explained by considering the respondent's experience in the distance education methodologies, training, and so on.

The second decision tree (Fig. 02) helps to visualize the academic staff perception differences on the support service in the four faculties of the Open University of Sri Lanka. These were considerable variation in perception of support services with the age of the respondent and the academic qualification held by respondee. The distribution pattern shown in Figure 2, clearly represents the perception differences between in the Open University. Therefore,

the age composition and also the academic qualification of the academic counselor is of importance in selection and implementation of student support services based on their opinion.

This study reveals that there is need for in-depth studies on the academic staff perceptions on the support services offered by the Open University of Sri Lanka with a vast collection of information and data mining techniques to avoid reaching subjective conclusions. The organization of training programs for academic staff and improvement of print materials are important and should be prioritized.

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