Effective Higher Educational Practices - A Survey of Student Engagement

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Abstract: The quest for excellence in teaching and learning in higher education is a world- wide concern. Universities and colleges have responded to the challenge for higher quality in instruction by looking closely at the nature of the typical teaching and learning environment. It is concurred that the quality of undergraduate education largely depends on the quality of teaching provided by faculty. This paper reports on a research project that seeks to obtain information about the undergraduate educational experience at a university. In particular, the study focuses on the extent to which undergraduate students engage in good educational practices. An instrument is administered to random samples of final year students to identify the level of student engagement and aspects of the undergraduate experience that could be improved. Findings revealed that the students perceived their campus environment as supportive of their academic needs. They also reported adequate levels of academic challenge and participation in enriching experiences. Nevertheless, students reported lower levels of interaction with faculty members and in active and collaborative learning. Results from the study point to the need for institutional improvement efforts in order to transform undergraduate experience into more holistic and engaging learning environments.

INTRODUCTION

Assessment of student learning and personal development gains are necessary evidence of the quality of undergraduate education. Research in college and university student development have shown

that time and energy students devote to educationally purposeful activities is the single best predictor of their learning and personal development (Astin, 1993; Pascarella & Terenzini, 1991; Pascarella, 2001). Thus, those institutions that more fully engage their students in the variety of activities that contribute to valued outcomes of college can claim to be of higher quality in comparison with similar types of colleges and universities.

Student engagement is defined as "the student's psychological investment in and the effort directed toward learning, understanding, or mastering knowledge, skills, or crafts that academic work is intended to promote" (Newman, 1992, p.17). More than just the energy to complete the task, engagement represents the psychological investment that cognitively involve students in the work they are doing.

Engagement requires both an inner quality of concentration and commitment to learning and a willingness or intention to act on the commitment. Student engagement can be viewed as a continuum for more engaged to less engaged, just as student disengagement can be plotted on a continuum. The extent of student engagement must be estimated or inferred from indicators such as the amount of participation in academic work, the intensity of their concentration, the interest and enthusiasm expressed and the care and quality shown in completing the work.

Student engagement is generally considered to be among the better predictors of learning and personal development (Astin 1993; Kuh, 2003; Pace, 1990; Pike, 2004). It is believed that the more students study or practice a subject, the more they tend to learn about it. Likewise, the more students practice and get feedback on their writing, analysing or problem solving, the more adept they should become (Kuh, 2001a; Tinto, 1993). The act of being engaged also adds to the foundation of skills and disposition that is essential to live a productive and satisfying life after graduation. That is, students who are involved in educationally productive activities in universities are developing habits of mind that enlarge their capacity for continuous learning and personal development (Shulman, 2002).

The implication for estimating collegiate quality is clear. Those institutions that more fully engage their students in the variety of activities that contribute to valued outcomes of college can claim to be of higher quality. In other words, the most educationally effective colleges and universities are those that are able to channel students' energies toward appropriate activities and engage them at a high level in the activities.

This new perspective on the meaning of collegiate quality demanded that researchers use student engagement measures as indicators for good educational practices. Emphasising good educational practice helps focus faculty, lecturers and students on the task and activities that are associated with higher level of student outcomes. Towards these ends, faculty and lecturers will need to arrange the curriculum and other aspects of the college and university experience in accord with these good practices, thereby initiating and encouraging students to put more effort in their learning. This will result in greater gains in such areas as critical thinking, problem solving, effective communication, self-directed learning and responsible citizenship.

LITERATURE REVIEW

Certain institutional practices are known to lead to high levels of student engagement (Astin, 1993; Chikering & Reisser, 1993; Pascarella & Terenzini, 1991). The best known set of engagement indicators is the *Seven Principles for Good Practice in Undergraduate Education* (Chikering and Gamson 1987, 1991). These enumerated principles were empirically linked to measures of 'collegiate quality'. The principles are grounded in theories developed by proponents of experiential learning (Dewy, 1958), cognitive learning (Bruner, 1960) and adult learning (Houle, 1964). These seven principles were: frequent student-faculty contacts, co-operation among students in their learning efforts, faculty use of active learning strategies, prompt feedback to students on their performance, communications of high expectations to students,

time spent by students on task, and respect for the diverse talents and students' ways of learning.

The first of these principles pertains to the *encouragement of student-faculty contact*. Student motivation and involvement are fostered by frequent student-faculty interaction in and out of the classroom (Chickering & Gamson, 1991). Faculty concern helps students get through difficulties and keep on working. Interaction with faculty members enhances students' intellectual commitment and encourages them to think about their own values and future plans. The *encouragement of co-operation* among students is the second principle. Chickering and Gamson (1991) contend that co-operation among students heightens learning. This principle incorporates elements of collaborative teaching and learning. Working with others often increases involvement in learning and that sharing one's own ideas and responding to others reactions sharpens thinking and deepen understanding. The third principle concerns *the encouragement of active learning*. Learning is increased if students actively participate in their courses by discussing and writing about course content (Chickering & Gamson, 1991). Students must be given the opportunity to talk about what they are learning, write about it, relate to past experience and apply it to daily lives.

The *provision of prompt feedback* constitutes the fourth principle of good practice. Appropriate feedback on course performance helps students assess their knowledge and skills. Students should be provided with frequent opportunities to perform and receive feedback or ways to improve their work (Chickering & Gamson, 1991). The fifth principle postulates that *time on task should be emphasised*. Learning to use one's time well is critical for students and future professionals. Students need help in learning effective time management. Allocating realistic amount of time means effective learning for students and effective teaching for faculty.

The *communication of high expectations* is specified by the sixth principle. This principle requires that faculty not only hold

students to high standards but also expect that students will meet them. The seventh principle entails faculty *respect for diverse talents and ways of knowing*. Students have different set of experiences, skills, abilities and ways of learning. Students should be provided with the opportunity to show their talent, demonstrate their skills and use their styles of learning to their best advantage (Chickering & Gamson, 1991). By taking into account students' differences, lecturers are in a better position to design activities which would foster individual learning.

The seven principles of good practices have been proven to be valid and appropriate for promoting learning and personal development for all students at all types of institutions (Braxton, Olsen & Simmons, 1998; Pike, 2004; Kuh & Pascarella, 2004). Many studies have been carried out to develop instruments that consist of examples and indicators of the seven principles. The College Student Experience Questionnaire (CSEQ) developed by Pace (1990) is a research tool containing indicators that measure several of the seven principles and is used to predict students' progress in learning. The questionnaire has been used in many studies (Kuh & Vesper, 1997; Kuh, Pace & Vesper, 1997) and the seven indicators of good practices exhibited adequate psychometric properties as measured by students' reported gains in the CSEQ questionnaire. These indicators could be considered as reliable and valid indicators of students outcomes.

Friedlander, Pace and Lehman (1991) created the Community College Student Experiences Questionnaire (CCSEQ), a survey based on the seven principles which assesses the breadth and quality of effort community college students exert in attaining educational gains and development. The instrument has been used widely and findings generated from studies by Friedlander, Murrell & MacDougall, 1993; Douzenis, 1996; Swigart & Murrell, 2001, support the use of this instrument as an assessment tool for exploring students involvement and self-reported academic gains in the community college setting. Data from the CSSEQ provided relevant information to community colleges in addressing programmatic needs in student development

as well as in providing a better understanding of students' views of their undergraduate learning environment (McClenney, 2004).

Building on the seven principles of good practices, a group of researchers from Indiana University Center for Postsecondary Research developed a survey of student engagement which is intended to provide information about the extent to which colleges and universities exhibit characteristics and commitment to good practices and high quality student outcomes (National Survey of Student Engagement, 2000). The survey gathers information about classroom and non classroom experience during preceding school year, which is used to estimate students' engagement in college. The results of the survey have been used to produce a set of national benchmarks of good educational practice that colleges and universities can use as proxy measures to identify opportunities for improving undergraduate education (Kuh, 2001a).

PURPOSE OF THE STUDY

Although universities and colleges place the students as the focus of the teaching and learning process, too little is known about whether students are engaged in the process of acquiring knowledge and in the various instructional techniques utilised by the faculty. As such, we need to find out and understand how students are affected during their university experience and what they gain from their learning experience. Consequently there is a need to examine the extent to which students are engaged in good educational practices and what they gain from their university experience.

Thus, the purpose of this study is to obtain valuable, immediately usable information about undergraduate educational experience including the activities to which students devote their time and their views on the quality of their education. Two research questions guided the study:

1. What is the level of students' engagement according to the benchmarks of effective educational practices?

2. Do the engagement levels of male and female students differ according to the benchmarks?

It is believed that eliciting information from students regarding their perceptions and meanings they construct of their learning experiences can help us to better understand how to improve our effort in engaging them in their learning process.

RESEARCH METHODOLOGY

Sample

The sample consists of final year students (n=1097) from 8 faculties in a local university. Information is solicited from the final year students because they have had the most exposure to faculty and are in the best position to judge the overall learning experience. The students randomly selected to complete the questionnaire are final year students from the faculties of Education (n=97), law (n=75), Islamic Studies (n=116), Marketing and Management (n=119), Engineering (n=158), Health and Allied Sciences (n=173), Science and Technology (n=60) and Medicine (n=299). Of the 1097 participants, 36.6% (n=294) were male students and 63.4% (n=803) were female. They were however similar in regards to age. Slightly more than 80% were under 23 years of age.

Instrumentation

This study employs a self-report questionnaire adapted from *The College Student Report* (2000). The questionnaire was designed to measure the degree to which students participate in educational practices, that prior research have shown are linked to valued outcomes of college (Chickering & Gamson, 1987; Ewell & Jones, 1996; Kuh, 2001a). The main content of the questionnaire represents student behaviours that are highly correlated with many desirable learning and personal development outcomes of university. For instance, students are required to report the frequency with which they engage in activities that represent good

educational practice such as using the university's resources, curricular programme, nature of examination and coursework. Responding to the questionnaire requires students to reflect on what they are putting into and getting out of faculty university experience.

The student engagement questionnaire relies on student self report. A fair amount of research (Pace, 1990; Pike, 1995; Kuh, Hayek, Carini, Quimet, Gonyea & Kennedy, 2001) has shown that self-reports are likely to be valid if (1) the information requested is known to the respondents, (2) the questions are phrased clearly and unambiguously, (3) the questions refer to recent activities, (4) the respondents think the questions merit a serious and thoughtful response, and (5) answering the questions does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to respond in socially desirable ways (Kuh et al., 2001). Empirical evidence indicate that *The College Student Report* satisfy all of these conditions (Kuh, 2001b; Kuh et al., 2001). In addition, research has found that test-retest reliability for students is quite high (.83) and the alpha coefficient ranged from .84 to .94 (Kuh, 2001b; Kuh et al., 2001). Kuh et al. (2001) also reported strong evidence for construct, convergent, and discriminant validity of the instrument.

The questionnaire comprised 40 questions that measure the important aspects of the students' experience that contribute to learning and personal development. Each question is assigned to a cluster of similar activities to develop five benchmarks of effective educational practice. Items are measured on a four-point scales ranging from 1- never to 4-very often. For each item, students rated how often during the current school year they had engaged in the activity in question. Higher score reflects greater and more diverse amounts of engagement. Table 1 contains the descriptions of the benchmarks along with their internal scale consistencies (Cronbach's alpha) for the current study. An alpha coefficient of .83 was obtained for the questionnaire, indicating that the 40-item measure is a stable index of students' perceptions of engagement.

Table 1: *Descriptions of Benchmarks and Reliability Coefficient*

Benchmark	Description	Sum of items	Cronbach's alpha
1. Level of academic challenge	Nature and amount of academic work performed – time spent preparing for class, amount of reading and writing, and expectations for academic performance	10	.82
2. Active and collaborative learning	Frequency of class participation and collaborative learning – class participation, working with other students, discussion of ideas with others	7	.76
3. Student-Faculty Interaction	Frequency of student interaction with faculty members – students' discussions with faculty, feedback from faculty, and opportunities to participate in research	6	.84
4. Enriching Educational Experience	Degree of participation in educationally fruitful activities – interacting with diverse groups of students, using electronic technology in classes, participating in a variety of curricular and co-curricular activities	11	.82
5. Supportive Campus Environment	Degree to which the institution is perceived to be supportive - extent to which students perceive the institution helped them succeed and promoted positive relationships with colleges, peers and administration	6	.86

Results are analysed by looking systematically at each of the items of the five areas of effective educational practice, which are: level of academic challenge, active and collaborative learning, students interaction with faculty members, enriching educational experiences, supportive campus environment. Using these clusters of responses, we have a picture of the extent of student engagement in the five areas of effective practices for the current student sample (n=1097).

Level of Academic Challenge

Challenging intellectual and creative work is pivotal to student learning and collegiate quality (Kuh, 2003). Ten questions from the questionnaire correspond to the components of academic challenge that represent the nature and amount of academic work, the complexity of cognitive tasks presented to students, and the standards faculty members use to evaluate student performance. On the scale of 1-4 (1-never to 4-very often), the mean score of the level of academic challenge was computed at 2.52. Table 2 shows the mean scores of the 10 items for the benchmark. Students reported the lowest mean for item 1: they did not prepare for class (studying, reading, writing) and other activities related to academic programme. A high mean of 3.01 indicates that their campus/university environment emphasises to a substantial extent spending significant amounts of time on studying and academic work. On the whole, the students reported that they are adequately challenged academically (m =2.52). It seemed that the faculties and campuses have succeeded to a certain extent in creating an academically challenging environment.

Nonetheless, it is interesting that when we look at some items that contribute to academic challenge, the findings are rather disappointing. For instance, only about 5.4% reported that they have always worked harder than they thought they could to meet an instructors' standard. In addition, the majority of the students (81.1 %) reported that they spent less than 15 hours per-week

preparing for class, an amount that fall well short of the recommended hours student should spend studying outside of class. For a 3-hour course, the students are supposed to spend at least two extra hours reading, discussing and studying. Thus, if a student enrolled in 5 courses (15 credit hours), he or she should spend an additional 30 hours in independent learning outside of

Table 2: *Level of Academic Challenge (m=2.52)*

Items	Descriptions	Mean Scores
1	Preparing for class and other activities related to academic programmes	1.69
2	Number of assigned textbooks, books of course readings	2.84
3	Number of written papers or reports (20 pages or more)	2.31
4	Number of written papers or reports fewer than 20 pages	2.39
5	Coursework emphasises analysing elements, ideas, experiences, theories	2.57
6	Coursework emphasises synthesising & organising ideas, information/experiences	2.40
7	Coursework emphasises making judgement about value, information, argument, methods	2.52
8	Coursework emphasises applying theories or concepts to practical problems or new situations	2.49
9	Worked harder than you thought you could to meet expectations	2.49
10	Faculty environment emphasises spending significant amounts of time studying and on academic work	3.01

class. The students seemed to fulfil only about half of the recommended study time.

Active and Collaborative Learning

Students learn more when they are intensely involved in their education and have opportunities to think and apply what they are learning in different contexts (Chickering & Gamson, 1987; Kuh, 2003; Pascarella, 2001). At university level where active and collaborative learning approaches are most needed, the students in the present study seemed to be less involved in collaborative learning activities. As can be seen from Table 3, active and collaborative learning has a low mean score (m=2.28), suggesting that a "teacher-centred" teaching and learning style prevails or predominate in the faculties. The lowest mean scores are for items 5 (m=1.99) and 6 (m=2.04). Students seemed to be least involved in peer teaching and this may be due, in part, to their unfamiliarity

Table 3: *Active and Collaborative Learning (m= 2.28)*

Items	Descriptions	Mean scores
1	Asked Questions in class or contributed to class discussion	2.19
2	Make a class presentation	2.53
3	Worked with other students on projects during class	2.26
4	Worked with classmates outside of class to prepare class assignments	2.80
5	Tutored or taught other students	1.99
6	Participated in a community-based project as part of a regular course	2.04
7	Discussed ideas from your reading for classes with others outside of class	2.44

with tutoring skills. The analysis also revealed that: 1) 77.5% occasionally asked questions in class, 2) 61.9% occasionally work in class with other students on projects, 3) 80.2% of all students say that they have at least occasionally tutored or taught other students, 4) 80% occasionally or never participated in a community-based project as part of their regular course.

Students Interactions with Faculty Members

Substantive interactions between students and their lecturers are important to achieve the desired outcomes of college (Astin, 1993, Kuh, 2003). In general, the more contacts students have with their lecturer the better it is. Such interaction, however, does not occur very often for the students. This benchmark score is the lowest of the five (m= 1.8). The frequency of student-faculty interaction is much less than what is suggested as optimal. To put this in perspective, majority of the students (90.2%) reported that they hardly discussed grades or assignments with lecturers. In addition,

Table 4: *Student Interactions with Faculty Members (m = 1.8)*

Items	Descriptions	Mean Scores
1	Discussed grades or assignments with lecturers	1.59
2	Talked about career plans with a faculty member or advisor	1.53
3	Discussed ideas from your reading or classes with faculty members outside class	1.76
4	Worked with faculty members on activities other than coursework	2.04
5	Received prompt feedback from faculty on your academic performance	1.86
6	Worked with a faculty member on a research project	1.95

substantial percentages of the students never discussed ideas from their reading with faculty members (36.6%), never talked about career plans with a faculty member or advisor (55.2%) and never worked with a faculty member on a research project (39.5%).

As indicated in Table 4, the mean scores for these items are low enough to be worrisome. Astin (1993) and Kuh (2003) have found that the amount of interaction between individual student and faculty has widespread effects on student development. Astin's study also revealed that student-faculty interaction has its strongest positive correlations with the quality of instruction, student satisfaction, academic attainment outcome and the overall college experience.

Enriching Educational Experiences

The majority of the students reported that they participate in one or more enriching educational experiences (m=2.3). Practicum and internship are particularly popular (m=2.68), as more than 82.% of the students reported having such a placement at some point during university. This reflects the value that students place on obtaining practical experience relevant to students' majors or careers while they are still in university. Complementary learning opportunities inside and outside the classroom enhance the academic learning. The students also reported that campus environment encourages contact amongst students from diverse backgrounds, indicating in particular, the campuses are committed to providing a 'civic-oriented' environment for the students. Approximately 72% of the students reported positive response to their campus environment (m=3.01). In addition, approximately 72.7% of the students reported some type of culminating senior experience although about 73.2% did not carry out independent study or self-designed major during their university years.

This result seems to suggest that the students in this university benefit from activities that promote collaboration between peers irrespective of race and religion. Experiencing diversity is important as it teaches students valuable things about themselves and other cultures and religion. Practicum is also identified as having

Table 5: *Enriching Educational Experience (m= 2.3)*

Items	Descriptions	Mean Scores
1	Participating in co-curricular activities	1.21
2	Practicum, internship, field experience, co-op experience, or clinical assignment	2.68
3	Community service or volunteer work	2.42
4	Foreign language coursework	2.26
5	Study abroad	1.93
6	Independent study or self-designed major	1.87
7	Culminating senior experience (thesis, project)	2.63
8	Has serious conversations with students with religious beliefs, political opinions, or personal values very different from yours	1.99
9	Had serious conversations with students of a different race or ethnicity than your own	1.97
10	Used an electronic medium (e-mail, chat group, etc) to discuss or complete an assignment	2.66
11	Campus environment emphasises: Encouraging contact among students from different economic, social, and racial or ethnic backgrounds	3.01

a positive impact on student learning. Learning is reinforced when there are multiple opportunities to see applications and to practice skills. It seemed the faculties are doing a better than average job of reinforcing undergraduate academic learning with application and opportunities to apply them during practicum and internships. Experiencing diversity, internship and practicum provide students with opportunities to synthesise, integrate, and apply

their knowledge. In this regard, the faculties seemed to offer a professional education which includes the application of knowledge. Nonetheless, the low mean score of several items, namely for independent study, indicate that special attention should be given to students as early as possible to help them benefit from taking part in various educational activities that are more self-designed and independent in nature.

Supportive Campus/University Environment

Most students rate their campus as supportive and responsive (m=2.87), which is considered an important facilitating condition for learning. This is a sign that the campuses are succeeding in efforts to create welcoming and affirming environments. This finding is in keeping with theories postulated by Astin (1993) and Zhao and Kuh (2004) who believed that students perform better and are more satisfied at universities that are committed to their success and that cultivate positive working and social relations among different groups in campus. In particular, the students in the present study reported satisfaction with the quality of relationships with other students (m= 3.20); the majority of the students (93 %) reported positive responses to the item. In addition, approximately 76.6% of the students reported positive quality of relationship with campus administrative personnel and offices (m=3.00). It also appears that the campus environment provides the support students need in order to strive socially as 82.1% of the students reported favourable views of the campus climate.

These promising findings seemed to suggest that campus activities have been successful in promoting collaboration between peers irrespective of race and religion. Experience in diversity teaches the students valuable things about themselves and other cultures and religion. Such experiences will make learning more meaningful and ultimately useful in order to become responsible citizens because what the students learn and experience will become a part of who they are (Pascarella & Terenzini, 1991). This result is in support of Umbach and Kuh's (2004) research findings which indicated that residential colleges and universities that have

Table 6: *Supportive Campus/University Environment (m= 2.87)*

Items	Descriptions	Mean Scores
1	Campus environment emphasises: providing the support you need to help you succeed academically	2.65
2	Campus environment emphasises: helping you cope with non-academic activities	1.94
3	Campus environment emphasises: providing the support you need to thrive socially	2.17
4	Quality of relationship with other students	3.20
5	Quality of relationship with faculty members	2.09
6	Quality of relationships with administrative personnel and offices	3.00

effectively infused diversity experiences have high potential in affecting students' values, attitudes, self-concept, intellectual orientation and a host of other personal variables that contribute to leadership and character.

Additionally, mean and standard deviations were determined by gender for each benchmark. The statistics as well as t-test between gender for each benchmark are presented in Table 7 below. The analyses indicated female (n = 803) students scored higher than their male (n = 294) counterparts on all the five benchmarks. This finding is similar to findings presented by Pike, Kuh and Gonyea (2003) who found that male students tended to be less involved than their female counterparts in college. These findings underscore the importance of taking into account the

role of gender in theories of student development in higher education.

Results from the *t*-test showed a slight significant gender differences on one of the benchmarks which is active and collaborative learning (t = -3.28, p < 0.05). Thus, compared with male students, female students indicated that they were more engaged in active and collaborative learning. However, there are no statistically significant differences between male and female students with respect to the other four benchmarks. This suggests that the level of engagement of male and female students on the level of academic challenge, student-faculty interaction, enriching educational experiences and supportive campus environment are comparable.

In general, the present study revealed that the engagement experiences of male and female students do not differ a great deal.

Table 7: *Mean, Standard Deviation, and T-Test by Gender on Engagement Benchmarks.*

Benchmarks	Gender	Mean	Standard Deviation	t	P
Level of Academic Challenge	Male	2.75	5.28	-1.45	0.15
	Female	2.80	5.24		
Active and Collaborative Learning	Male	2.26	2.75	-3.24	0.01
	Female	2.34	2.60		
Student–Faculty Interaction	Male	1.78	2.46	0.304	0.76
	Female	1.79	2.53		
Enriching Educational Experience	Male	2.12	3.65	-1.30	0.19
	Female	2.14	3.45		
Supportive Campus/ University Environment	Male	3.48	4.62	-0.81	0.42
	Female	3.52	4.11		

Moreover, given the small difference in mean and standard deviation between the two groups, it was considered appropriate at this juncture to conclude the findings based on the overall performance of the sample.

CONCLUSIONS AND RECOMMENDATIONS

This study highlights some promising and disappointing aspects of student engagement in the context of a university. Among the former is that a substantial proportion of students seemed to be adequately challenged academically and experiencing supportive campus environment. Less comforting is that the frequency of student-faculty interaction was much less than what research studies suggest is optimal. In addition, students seemed to be less involved in active and collaborative learning and in enriching educational experiences. These preliminary results have immediate implications for the university and in particular to the faculties concerned. The most obvious and immediate implication of these findings is that faculty improvement efforts must be redoubled, especially those focussing on areas in which student disengagement is reportedly high.

On the whole, the overall level of engagement in effective educational practices that the students reported is below what may be desirable. In other words, there is substantial room for improvement on all the measures. In terms of student-faculty interaction, lecturers need to invite frequent student contacts in order to stimulate students learning. Each faculty needs to show more interest in their students, get to know them through formal as well as informal channels and engage and show interest in their intellectual development. Those will lead to more students' response and enthusiasm as well as a higher level of engagement. To do this, each faculty must systematically reflect on and determine the desired forms and frequency of their contacts with students, taking into account the different needs of students and their major fields.

There are approaches suggested in the literature that would put students into more regular and meaningful contact with faculty members (Chickering & Gamson, 1991; Braxton, Olsen & Simmons, 1998). Some of the approaches include: stipulating the minimum levels of interaction desired between faculty members and students; linking campus-based activities with core courses of the majors; creating a learning environment beyond the classroom through social and cultural activities, and enhancing learning environment through consistent use of forums, discussion groups, faculty dinners, newsletters, field trips, etc.

Nevertheless, each faculty needs to consider the suggested approaches with caution. Kuh (2003) has argued recently that student-faculty interaction is an area of effective practice where 'more' may not necessarily be better. The question remains how much is optimal? For some activities such as discussing career plans, working with a faculty member outside of class on a committee or project, and doing research project with a faculty member, occasional contact may be enough. On the other hand, activities such as getting prompt feedback, discussing grades and assignments, and discussing ideas outside of class, require more frequent contact. Thus, rather than thinking about developing approaches and programmes to increase student faculty contact, each faculty should use the findings of the report as a starting point for discussion about what it is about student faculty contact that promotes learning and how much of that interaction is enough.

The less promising results in relation to two benchmarks, i.e., active and collaborative learning and enriching educational experiences, suggest that immediate steps must be taken by the faculties to improve their undergraduate teaching and learning activities. Certain forms of active and collaborative learning must be effectively used by the lecturers in order to transform classroom into more engaging learning environments. Each faculty needs to infuse active and collaborative learning strategies that address the learning needs of the students. More opportunities need to be given for the students to get experience in teaching and advising other students at some point of their undergraduate course through

activities such as peer editing, and writing programmes and peer tutoring.

A well designed, effective, student-centred learning environment that encourages active learning and enriching experiences will typically use a rich variety of relevant and effective instructional methods. Student-centred learning environments that contribute to active learning and enriching experiences include collaborative activities, goal-driven tasks, intellectual discovery, activities that heighten thinking, activities that provide practice in learning skills, tasks of a student's own invention and appropriate use of new technology and traditional resources. The lecturers need to be willing to experiment with alternative methods and to access their effectiveness in promoting active and enriching learning experience for their students. The aim is to use engaging teaching and learning activities that promote higher levels of student outcomes.

This study has identified the levels of student engagement and aspects of the students' undergraduate experience at an institutional level that could be improved. Based on these preliminary findings, this paper has proposed a few recommendations to the faculty involved with regards to producing quality learning environments.

Even so, how the faculty realises good practice in determining the delivery of its undergraduate programmes and implementing effective practices depends largely on its administration, staff and students. To do so, they need to examine successfully proven educational practices that produce higher quality learning environments. Fifty years of research has concluded that the most effective undergraduate learning is based on the *Seven Principles for Good Practice* (Chickering & Gamson, 1987). As a generally agreed-upon philosophy of good teaching and learning, these principles establish fundamental guidelines for quality higher education and therefore should be used as the building blocks for success by faculty, student and staff. Thus, strenuous efforts are needed to systematically adopt and implement the seven principles as a focus for improving the practice of

undergraduate education. For a start, a set of indicators based on the seven principles can be used to distinguish quality learning environments. A list of specific indicators of each of the seven principles can also be used to guide the students and lecturers to become more analytical in assessing their role in the educational experience.

The authors believe that the faculties involved in the studies are committed to strengthening the learning environment that currently exists in the university and that they are committed to the teaching and learning process and to the students who are engaged in that process. This is proven by their interest shown in the research project and their assistance in conducting the questionnaires. Although we take pride in some excellence in the teaching that currently exists in the faculties, we nevertheless cannot rest on these accomplishments. It is worthy to note that increased emphasis on teaching, learning and assessment is already evident in the university's evaluation procedures. Nonetheless, we need to closely examine what promotes effective undergraduate education and the ways in which learning environments can be effectively created and nurtured. This way, we can gain a better understanding of what really constitute institutional excellence in undergraduate education.

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