# Omani Undergraduate Students' Satisfaction with the Formative Feedback

By

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## Abstract

*The aim of this study is to investigate the extent to which Omani undergraduate students satisfy with formative feedback and their satisfaction in relation with students' GPA, instructor's experience, and gender. A questionnaire of thirty two items to measure Omani undergraduate students' satisfactions was used. A sample of 102 students was used to collect data. The findings indicates that students were satisfied with the feedback they received from their instructors ( Mean 3.55 out of 5.00). Statistical analysis shows a significant differences in students' satisfaction due to students' GPA in favor of high GPA as compared with low GPA and no significant differences were found between high and average GPA and average and low GPA. In addition, no significant differences were found due to instructor experiences, and also, there were no significant differences due to gender. The study concluded with recommendations to improve the weak areas and revise the procedures and processes to ensure the provision of more effective feedback.*

**Keywords:** *Feedback, satisfaction, Omani undergraduate students*

## 1. Introduction

Feedback is widely recognized as a powerful tool in education in general and on student achievement, motivation, and satisfaction in particular, arguably ranking above students' personal attributes and learning environments (Biggs 2003; Black and Wiliam 1998; Hattie 2009; Hattie and Timperley 2007). It is an essential component in all learning contexts and serves a variety of purposes including evaluation of students' achievements, development of students' competences and understanding, and elevation of students' motivation and confidence (Hyland, 2000). Feedback to the learner is defined as information a learner receives about his/her learning process and achievement outcomes (Butler & Winne, 1995) and it is "one of the most powerful component in the learning process" (Dick & Carey, 1990, p. 165). Within teaching and learning activities in a higher education setting, feedback can be perceived as any information communicated to the learner as a result of a learning-oriented action (Race, 2001). While feedback can be provided to students at various contexts (e.g. class discussions, teacher's answers to questions), the formal feedback process commences with the production of student work as a result of a formative assessment. formal feedback is provided in response to students' work on formative assessment such as essays, assignments and projects. In order to be effective, feedback on formative assessment needs to possess a number of qualities: it needs to be timely, constructive, motivational, personal, manageable and directly related to assessment criteria and learning outcomes (Race, 2006; Irons, 2008; Juwah et al, 2004; Race, 2001). A formative feedback strategy should address as many as possible of these attributes in order to promote learning. The term feedback strategy, however, actually encapsulates two components: the contents of feedback itself and the method(s) used to communicate the feedback to students. Effective formative feedback provides a tool to direct students through the learning process, rather than to merely communicate facts about one particular piece of work (Jonassen 2004; Sadler 1983). Formative feedback has been demonstrated to be effective across a number of learning outcomes and settings, and its importance in higher education in particular has been recognized as central to guiding students through the learning process (Black and Wiliam 1998; Yorke 2003).

Communication of formative feedback is very important since the method selected may discourage or draw students' attention in the feedback process. In order to be effective, it should ensure that students

engage with the content provided. Formative feedback can be communicated to students in a number of different ways, both traditional and electronic. Traditional tactics include handwritten comments on students' assessed work and print-outs of word-processed feedback forms which are returned back to the students. These traditional ways of communication do not seem to be efficient since they suffer from the problem of not reaching the student. Electronic feedback methods range from simple techniques such as emailing comments to students to more sophisticated tools that allow tutors to place comments and annotations to electronically submitted work. Electronic feedback methods are increasingly used by teachers since they enhance feedback production, delivery and communication (Race, 2001). In one study, for example, investigators found that prompt feedback was a significant predictor of student perceived learning and satisfaction (Arbaugh & Hornick, 2006). Further, Lang & Costello found a range of factors that influenced student satisfaction with their learning experience in discussion boards (Lang & Costello, 2009)

Understanding the underlying dimensions of student satisfaction and the factors that contribute to student satisfaction has several potential benefits and applications for institutions, students, and society. Numerous studies have looked at the dimensionality of university student satisfaction (e.g., Elliott & Healy, 2001; Wiers-Jenssen, Stensaker & Grøgaard, 2002). There are some fairly consistent contributing factors: course content, social aspects and/or opportunities, the aesthetic features of the campus, and staff's helpfulness and teaching abilities (Garcia-Aracil, 2009; DeVore & Handal, 1981). Therefore, student satisfaction is an important part of the effort to successfully market higher education (Hermans, Haytko, & Mott-Stenerson, 2009: 1). If students are viewed as consumers of higher education, their satisfaction is crucial (Moro-Egido †& Panadés, 2008). One way through which quality and overall effectiveness of higher educational institutions are measured is by student outcomes, such as student retention, attrition, and graduation rates (Wintre & Bowers, 2007; Schreiner, 2009). As a result, institutions are now examining factors that affect student retention, attrition, and graduation rates. One such factor that affects student retention, attrition, and graduation rate is college students' level of satisfaction with the college experience (Moro-Egido †& Panadés, 2008; Russell & Lehman; Schreiner, 2009). Hence, student satisfaction is of compelling interest to colleges and universities as they seek to continually improve the learning environment for students, meet the expectations of their constituent groups and legislative bodies, and demonstrate their institutional effectiveness.

Gathering satisfaction feedback in order to understand student experiences of studying at university and to improve teaching is not new, with Cohen (1980) noting that collection of student feedback has been in use since the 1970s. Collecting student feedback is a reliable and valid method of collecting information on student opinions of a course (Hendry, Lyon, & Henderson-Smart, 2007; Nair, 2010), and that information can go on to assist lecturers to make changes and improve course quality (Cohen, 1980; Murray, 1997; Springgay & Clarke, 2007). Maintaining and improving students' satisfaction has been considered an important goal of education and universities (Orpen, 1990), with the assumption that student satisfaction is indicative of institutional effectiveness (Barton, 1978). A key factor of student satisfaction is the quality of the teaching staff. As a result, the use of student rating scales as an evaluative component of their teaching system has increased. The majority, if not all, teaching staff at most universities have been required or expected to administer some type of teaching evaluation form to their students during each course offering for some time (Seldin, 1993).

In a study investigating prior knowledge and feedback type design on achievement and satisfaction in blended introductory university accounting course, Campbell (2013) found that students were more satisfied when they received elaborate feedback; with elaborate feedback being defined as feedback which explains to a learner why a particular response is correct or incorrect (Shute, 2008). Jones and Blankenship (2014) found that 92% indicated they were satisfied with the amount of feedback received, 81% indicated they were not expecting more feedback than was received, and 83% were often or always satisfied with the amount of feedback they received. In a study by van der Kleij, Eggen, Timmers, and Veldkamp (2012), evaluating the effects of feedback timing and learning with respect to computer-based

assessment, the authors found that students perceived elaborate feedback as most useful for learning. In yet another study investigating the effects of feedback on student satisfaction and academic performance in an online classroom, Gallien and Oomen-Early (2008) found that personalized feedback provided to students resulted in greater satisfaction and academic achievement than when collective feedback was provided. Chang et al 2013 indicated that It is time for all faculty concerned with effective student learning to understand more about the provision of feedback via the assessment process. Awarding a single grade is not welcomed by students and is not conducive to improving learning. A study by Wiers-Jenssen et al. (2002) examined how overall student satisfaction can be broken down into broader aspects of student's learning experience. The analysis found that quality of teaching (academic and pedagogic) to be a crucial determinant of student satisfaction (Wiers-Jenssen et al.). The study also emphasized that the social climate, aesthetic aspects of the physical infrastructure and the quality of services from the administrative staff, quality of supervision and feedback from academic staff, composition, content and relevance of curriculum, quality of, and access to leisure activities should not be overlooked when considering factors of student satisfaction. Thomas and Galambos (2004) argue that students are regarded as consumers of higher education. University students' satisfaction is important to institutional success in that effective institutions have satisfied 'customers' because this satisfaction supports the enrolment of additional students or 'customers'. Assessing student satisfaction provides a way that universities can focus directly on issues of quality development in order to ensure that educational standards are high (Wiers-Jenssen, Stensaker, & Grogaard, 2002). Measures of student satisfaction can also assist in identifying and implementing areas for development. Ali & Ahmad (2011) indicated that the majority of the students of their study about satisfaction showed high levels of satisfaction regarding student-instructor interaction and instructor's performance. The personal contact between students and the instructor are key factors influencing a student's perceived satisfaction with their learning. However, 'instructor to student' over 'student to student' interaction was found to be the most significant variable influencing student satisfaction in a survey of online students (Marks, Sibley, & Arbaugh, 2005).

There is a clear relationship between instructors' feedback and student satisfaction and perceived outcomes. The debate about whether student satisfaction improves students' academic performance or whether students' performance improves student satisfaction is an interesting and important issue (Bean & Bradley, 1986). Research conducted by Siegel and Bowen (1971) on measures of satisfaction and performance indicated that satisfaction follows performance. In addition, they found that self-esteem moderated the relationship between performance and satisfaction. Feedback is a motivator to many students and should be incorporated into the design and teaching of courses. Although students prefer feedback from the instructor, peer feedback can also be a valuable instructional tool. There has been very little research into how feedback collection during a course can be used to improve student satisfaction and assist lecturers to improve their teaching while the course is in progress. Student satisfaction can be affected by factors such as course expectations and needs, feelings of isolation from instructor and classmates, frustration and confusion, technical and time management issues and feeling less engaged with subject matter (Blackmon & Major, 2012; Wu, Tennyson, & Hsia, 2010). These factors are important to be considered when dealing with students' satisfaction about feedback.

**Purpose of the study**
The purpose of this study therefore is to investigate students' satisfaction of formative feedback in a large university in Oman where instruction is carried out in a mainly face-to-face mode. This study came as a result of students rating of instruction of the spring semester of 2013 in which it was observed their low rating of the feedback item of the survey. Students at the college of education of Sultan Qaboos university get their feedback in different ways orally, written on the assignments sheets, through email and from discussion board of the MOODLE platform and face to face during instructors' office hours. Specifically the study seeks to answer the following questions:
1. To what extent Omani students are satisfied with the formative feedback received from their instructors?

2. Do students' satisfaction of formative feedback vary according to student GPA, teaching experience of their instructors, and students' gender?

### *Importance of study*

The findings of this study can help instructors and university administrators understand to what extent university students are satisfied with feedback, their opinions of such feedback, and also how this will affect their academic achievement. This information will subsequently enable instructors to revise and reflect on the different ways they provide students with effective feedback.

### *Instruments*

In order to develop the instrument, the researcher surveyed the literature and informally interviewed students and instructors in the College of Education at Sultan Qaboos University in Oman to get some preliminary information from them about their use of feedback and its effectiveness. The instrument used was a questionnaire composed of 32 likert-type questions for measuring students' satisfactions of feedback (Contact the author for the scale). The survey was expected to take ten to fifteen minutes to complete. A panel of faculty members reviewed the instrument for face validation and provided suggestions for its improvement. The researcher took these suggestions on board and revised the instrument accordingly. The reliability of the instrument as measured by alpha Cronbach by the use of SPSS were found to be 0.88. This value is sufficient for the purpose of this study. After the creation and revision of the instrument, it was ready for distribution to the sample of the study to get the needed information. When the data had been collected it was analyzed using SPSS-21 software. Each item was measured on five-point Likert scale with response options ranging from not satisfied (1) to very satisfied (5). The mean and standard deviation of the scale was found to be normal and acceptable for the purpose of statistical analysis (M= 3.55, SD= 0.79).

## 2. Procedure

The present study was carried out during the Fall Semester of 2014 in the College of Education at Sultan Qaboos University in the Sultanate of Oman. The questionnaire was distributed to students who registered in the Fall Semester of 2014. The total number of students who participated in this study was 102. This college has a total student body of approximately 1629. The student gender breakdown of this college is 53.2% female and 46.7% male. The following table shows the distribution of the sample.

**Table 1: Distribution of the sample.**

| Variable | Variable levels | Number |
|---|---|---|
| Gender | Female | 62 |
| | Male | 40 |
| GPA | Low | 13 |
| | Average | 42 |
| | High | 47 |
| *Instructor's experience* | Short experience | 52 |
| | Long experience | 48 |

The questionnaire was collected from the students during lecture times and instructors names and experience were written on the envelope. The data was entered in the computer and treated using the Statistical Package for Social Sciences SPPS-21. The data was analyzed using suitable statistical methods to obtain the answers for the research questions

## 3. Results and discussion

In order to answer the first question which states "To what extent Omani students are satisfied with the formative feedback received from their instructors?" means and standard deviations of students response for the questionnaire items were calculated by the use of SPSS-21. Table 2 below shows the results

**Table 2: Means and standard deviations of the satisfaction of the sample**

| item | means | Std. | item | means | Std. | item | means | Std. | item | means | Std. |
|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| S1 | 3.83 | 1.08 | S9 | 3.58 | 1.06 | S17 | 3.52 | 1.05 | S25 | 3.46 | 1.04 |
| S2 | 3.79 | 0.99 | S10 | 3.54 | 1.04 | S18 | 3.55 | 1.12 | S26 | 3.59 | 1.00 |
| S3 | 3.55 | 1.03 | S11 | 3.37 | 1.09 | S19 | 3.65 | 1.07 | S27 | 3.60 | 1.02 |
| S4 | 3.68 | 1.01 | S12 | 3.56 | 1.10 | S20 | 3.46 | 1.00 | S28 | 3.41 | 1.02 |
| S5 | 3.51 | 1.07 | S13 | 3.71 | 1.06 | S21 | 3.36 | 0.99 | S29 | 3.54 | 0.95 |
| S6 | 3.47 | 1.10 | S14 | 3.57 | 1.04 | S22 | 3.46 | 1.07 | S30 | 3.50 | 1.02 |
| S7 | 3.53 | 1.10 | S15 | 3.60 | 1.11 | S23 | 3.55 | 1.05 | S31 | 3.62 | 1.04 |
| S8 | 3.60 | 1.00 | S16 | 3.62 | 1.11 | S24 | 3.32 | 1.08 | S32 | 3.45 | 1.04 |
| **Grand mean** | | | | | | | | | | 3.55 | 0.79 |

It is clear from Table 2 that the means are between 3.32 and 3.83 which means that student satisfactions fell somewhere between "uncertainty about" and "agreement about" feedback options. Their overall satisfaction mean was 3.55 which means they agree that the feedback they received was satisfactory. Item S1 (The feedback I received encouraged me to become active learner.) received the highest means, which means that students were satisfied with this item and considering the feedback they received was encouraging for learning. Item S2 (The written feedback was relevant and useful) comes at the second rank with mean 3.79. Item S13 (The feedback I received contained information that I could use in the future.) comes at the third rank. Item S4 (I was able to understand the feedback throughout discussions) comes at the fourth rank.

Item S24 (The feedback I received was specific rather than general) has a mean of 3.32 received the lowest ranking, which means that students were uncertain about whether they get specific feedback. Item S11(When necessary, I received feedback by appointment) has a mean of 3.37 comes at the second lower rank That means students did not get feedback by appointment when they need it. This result goes well with what Price, Handley, Millar, & O'Donovan. (2010, p. 278) statement in which they said that "Fundamental beliefs about learning and the learning process will strongly influence how individuals satisfy with the feedback … the students' ability or willingness to do this [act on feedback] might depend on the emotional impact of feedback . . . , a student's pedagogic intelligence or the student's past experiences. This result is consistent with Scot 2006, Ferguson, 2011, Denton et al., 2008 in which students were unhappy with the timing of their feedback. Also students have a strong preference for feedback that is prompt and timely.

To check whether the GPA affects students' satisfaction ANOVA test was used as shown in table 3

**Table 3: ANOVA of the means of the GPA variable**

| Variations | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|-------|------|
| Between Groups | 5.315 | 2 | 2.658 | 4.281 | .016 |
| Within Groups | 61.460 | 99 | .621 | | |
| Total | 66.776 | 101 | | | |

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The analysis revealed that there is a significant difference in means of students' satisfaction due to GPA variable That means students have different satisfaction level depending on their GPA. To determine which GPA value has the highest means Scheffe;s pairwise comparisons was used as indicated in table 4 below.

**Table 4: Scheffe's Pairwise Comparisons for the GPA means**

| (I) gpa | (J) gpa | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Low | average | -.32303 | .25007 | .437 | -.9445 | .2985 |
| | high | -.65761* | .24691 | .033 | -1.2712 | -.0440 |
| Average | low | .32303 | .25007 | .437 | -.2985 | .9445 |
| | high | -.33457 | .16730 | .141 | -.7504 | .0812 |
| High | low | .65761* | .24691 | .033 | .0440 | 1.2712 |
| | average | .33457 | .16730 | .141 | -.0812 | .7504 |

*. The mean difference is significant at the 0.05 level.

The above table indicates that students with high GPA are more satisfied with the feedback they received than those with low GPA. This result agrees with what Bean & Bradley (1986) and Siegel & Bowen (1971) finding in which they indicated that satisfaction follows performance. In addition, they found that self-esteem moderated the relationship between performance and satisfaction. In addition, Table 5 shows there is no significant difference between students satisfaction due to GPA between high and average GPA students. Also, there is no significant difference between students satisfaction due to GPA between average and low GPA students. One can say students with expectations for a grade of (A) demonstrated higher levels of satisfaction which means increased satisfaction with increased GPA expectations. This finding may point toward an issue of student self efficacy as it relates to both expectations and satisfaction.

To check whether the instructors' experience affects students' satisfaction t test was used as shown in table 5

**Table 5: T test of the means of students responses regarding instructors' experience**

| Instructor experience | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| short | 52 | 3.5632 | .80871 | -.119 | 98 | .906. |
| long | 48 | 3.5821 | .78022 | | | |

Table 5 shows no significant differences in the means of students' satisfaction due to instructors' experience. This means that students have similar satisfaction level with feedback from their instructors regardless of the teaching experience short or long. One expects that long experience instructors may provide effective feedback more than the short experience instructors but that was not met in this study. This result disagrees with Ali & Ahmad (2011) who indicated that the majority of the students of their study about satisfaction showed high levels of satisfaction regarding student-instructor interaction and instructor's performance. In addition, they mention that personal contact between students and the instructor are key factors influencing a student's perceived satisfaction with their learning

To check whether the gender variable affects students' satisfaction t test was used as shown in table 6

**Table 6: T test of the means of gender**

| Gender | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| female | 62 | 3.5400 | .78078 | -.220 | 100 | .826 |
| male | 40 | 3.5757 | .82587 | | | |

Table 6 shows no significant differences in the means of students' satisfaction due to gender. This means that students satisfaction level with feedback was not affected by the gender variable. Male and female students have similar satisfaction level with the feedback they received. This result is in a disagreement with what Tessema, Ready & Malone (2012) who found that gender has a significant effect on students' satisfaction.

## 4. Conclusion and recommendations

This study attempted to answer the following two questions: 1- To what extent Omani students are satisfied with the formative feedback received from their instructors? 2- Do students' satisfaction of formative feedback vary according to student GPA, teaching experience of their instructors, and students' gender? The findings of this study show that the overall satisfaction was 3.55 which means they agree to some extent that the feedback they received was satisfactory. Statistical analysis shows a significant differences in students' satisfaction due to students' GPA in favor of high GPA as compared to low GPA and no significant difference was found between students satisfaction due to GPA between high and average GPA students. Also, there is no significant difference between students satisfaction due to GPA between average and low GPA. In addition, no significant difference was found in students' satisfaction due to instructor experiences, and also, there were no significant differences due to gender. Also, this paper attempted to extend the current literature by providing additional findings on the fact that there is no effect of gender on satisfaction with the feedback. These findings are significant for college student affairs personnel, by providing insight into gender differences and satisfaction with feedback. These findings should also be of interest to faculty who are preparing future teachers. Since one's academic ethic is learned behavior, it is important to recognize that academic achievement in college is rooted in one's early educational experiences (Chee, et al., 2005). While this study is an important step in understanding the extent to which GPA affects satisfaction with feedback, it also leaves some questions open for future research. First, this study was conducted in only one college with a small sample size. Hence, in order to generalize and validate the findings of this study, it is suggested that a similar study be conducted in other colleges. That is, additional research is needed to examine the robustness of the findings and generalizations. Second, it is beyond the scope of this research to identify whether particular college experiences can serve to lessen the effects of the GPA. It would also be interesting if future research studies attempt to determine the extent to which the specialization and educational level affect the satisfaction with feedback. More research needs to be done with a focus on identifying the factors that led to the difference of the effect of GPA on students' satisfaction with feedback. Finally, students responding to this survey were predominately undergraduate which limits the generalizability of the findings. Further research could be done with postgraduate students. factors affecting student satisfaction like interaction ,communication, course design, the learning environment, and individual student factors of self-efficacy and the ability to control an individual learning pace should be studied to add more value and literature to this area of research. In a general sense, the present findings may provide some guidance as to students' satisfaction with assessment feedback and, as such, serve to sensitize instructors to the domain of potential 'valued comments'. Several specific points are worthy of mention. Instructors seeking to provide developmental feedback should seek to balance 'assignment specific' comments with more 'transferable' feedback. Faculty seeking to encourage students might seek not only to acknowledge achievements, but also to recognize the effort invested, irrespective of outcomes. Finally, while students particularly value developmental feedback, the need to balance appropriately this with socio-emotional support is particularly underscored.

Based on the findings of this study, the following recommendations are suggested:
- Instructors should pay attention to the value and quality of the feedback given to students.
- Instructors should give specific and clear feedback to students.
- Instructors should allocate sometimes for students seeking help.
- Feedback given to students can be provided orally or in written format, but must be relevant, reasonable, and on time.

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