

# Student satisfaction with advising systems in higher education: an empirical study in Muscat

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Khalfan Al-Asmi

Venkat Ram Raj Thumiki

Modern College of Business and Science, Oman

## Abstract

Advising systems play an important role not only in the student development process but also in student retention. Academic scholars across the world have been emphasising the presence of an effective student advising system as one of the requirements of a standard educational set up. To ensure student satisfaction with the advising system, institutions conduct satisfaction studies to monitor the effectiveness of their system and to understand key issues such as influencing factors and the association between demographic and influencing variables. The current paper addresses these key issues. A survey was conducted during Fall 2012 with students from across the GCC at three colleges in Muscat, Oman, to identify the factors influencing student satisfaction with advising system. In our study twenty-six variables were formed into five factors. The results show that student satisfaction with the advising systems is highly influenced by 'feel good', 'critical situations' and 'IT' factors. It was also found that satisfaction is independent of gender but not of the education level: lower level students were found to be more satisfied with advising systems than the students at the higher level. Student satisfaction has a significant positive correlation with training/orientation on advising and perceived quickness in solving students' problems.

## Introduction

Higher educational institutions realize the significance of student satisfaction for functioning and progress (Tessema et al., 2012) and hence are increasingly conducting student satisfaction surveys on a regular basis (Hester, 2008). Various dimensions are considered in student satisfaction studies, viz., satisfaction with amenities and facilities (Shahid et al., 2012), satisfaction with teaching methodologies and instructional effectiveness (Cox, 2009), satisfaction with courses offered (Bolliger, 2004), satisfaction with counselling services (Kangai et al., 2011), satisfaction with after-education services such as placements and alumni services and satisfaction with the student advising system adopted by the institution (Hale et al., 2009). Letcher & Neves (2010) stated that educational institutions and universities consider all of the above and even more dimensions for ensuring student satisfaction.

According to Coll & Draves (2009) and Hester (2008), the student advising system has emerged as one of the key ingredients of a modern education system. All educational institutions need to have a clearly defined advising policy framed into clearly worded statements but not all of them do (Habley, 1993). A written statement of advising policy is required because advising has proven to be effective in such cases (Creamer & Scott, 2000). According to Winston & Sandor (2002), a properly defined advising system would provide

a systematic process of student-advisor relationship, aimed at achieving educational, career and personal goals of the students. (p. 8)

One should not understand academic advising as a mere administrative function or a supplementary activity to the education process (Ender, 1983) but as a greater combination of all these aiming at an overall development of the students (Virginia et al., 2011).

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Academic advising is a systematic and planned collaboration between the student and advisor (Kramer, 1988). Academic advising can be described as a teaching function (Crookston, 1972) emphasizing advisors, as their attitude may affect the advising process (Ford & Ford, 1989). According to Fielstein & Lammers (1992) student advising is aimed at improving study skills to explore career options of the students. It helps students in choosing educational programs to achieve their total potential (O'Banion, 1972). Available literature on student advising places this function beyond just signing forms and giving information (King, 2005) and mentions that student preferences and personal priorities must be addressed (Winston & Sandor, 1984; Fielstein, 1989). According to the National Academic Advising Association (NACADA), USA, that supports and promotes academic advising in higher education, "academic advising must essentially address three key issues, viz., curriculum, pedagogy and learning outcomes" (Figure 1). Institutions must make academic advising intrinsic to their mission of transforming students into learned individuals in society (*ibid*).



Source: NACADA (2006)

**Figure 1: Fundamentals of academic advising.**

In an effective advising system, student interaction with campus personnel, directly face-to-face or online appears to be imperative (Nutt, 2003) even in this Internet world. Furthermore, various contexts and elements in the campus have an impact on student advising (Grites, 1979). Advising style can be understood as a specific method adopted and a specific way of dealing with the situation during the advising process by an advisor (O'Banion, 1972; Crookston, 1972, p. 13) and this may vary from advisor to advisor (Winston et al., 1982; Beasley-Fielstein, 1986).

Available literature on advising styles mentions that an advisor, in order to be affective, may pursue the parenting style of advising (Coburn & Treeger, 2003). Winston & Sandor (1984) attempted to list and explain different advising styles, based on some characteristics from the Academic Advising Inventory (AAI), such as decision-making by advisor, content of the advising, personalization, behaviour of the advisor, etc. According to them, an advisor may adopt one or more or all of a variety of advising styles, including *counsellor style* (an emphasis on personal issues), *scheduler style* (an emphasis on academic issues) or *teacher style* (an emphasis on both personal and academic issues). Other styles include *directing*, *coaching*, *supporting* and *delegating* (Centre for Student Involvement, Advising manual, University of Wisconsin Milwaukee). However, advising style is just one element: the students are equally responsible for decision making and play an important role in the whole process of effective advising (O'Banion, 1972).

Having established an academic or developmental advising system, institutions would like to know whether they have been able to continuously and effectively advise their students in general. Thus

arises the need for conducting an assessment of the advising activity (Dautch, 1972). According to Hurt (2004) an effective advising assessment must include a study of student satisfaction with the advising system: student satisfaction surveys seem to be imperative in the process of developing the existing academic advising systems (Fierk, 2012; Coll, 2007).

## Need for the study

Colleges need to track student satisfaction from time to time regarding various academic and non-academic aspects of student life (Fielstein & Lammers, 1992). One of the key ingredients of satisfaction studies is the study of influencing factors (McGovern & Hawks, 1986; Tessema et al., 2012). Though studies are conducted on student satisfaction related to various aspects of advising viz., advising styles (Hale et al., 2009), relationship with student self-confidence (Coll, 2007), effectiveness of advisors (Dautch, 1972), etc., there is a need to conduct similar studies across various geographical areas, education institutions and systems (Coll & Zalaquett, 2008). The current study is an extension to many such studies and focuses on factors influencing the student satisfaction with advising systems adopted by various educational institutions in Muscat, Oman. The study also investigated various aspects related to student satisfaction through correlation and association tests.

## Objectives of the study

The current research was carried out to achieve the following objectives:

- To identify the factors influencing student satisfaction with the existing advising system in Muscat area.
- To study the association between student satisfaction with advising and their demography.
- To study the relationship between student satisfaction with the advising system and the variables that will be found as influencing their satisfaction.

## Hypotheses

To meet the above objectives, it was decided to conduct association tests and correlation analyses. For this purpose, the following null hypotheses were set to conduct the association tests:

1.  $H_0$ : Training or orientation to students on advising has no impact on student satisfaction.
2.  $H_0$ : Advising style has no impact on student satisfaction.
3.  $H_0$ : Student satisfaction with the advising system is independent of gender.
4.  $H_0$ : Student satisfaction with the advising system is independent of education level.

Along with the above, the following five hypotheses were set to test the correlation between variables by using Pearson's  $r$  with an alpha of 0.05.

1. Students who are satisfied with the advising system reported that they received training or orientation on advising.
2. Students who are satisfied with the advising system reported that their problems are solved quickly.
3. Students who are satisfied with the advising system reported that their advisor's advising style is good.

4. Students who are satisfied with the advising system reported that the duration of their advising sessions is reasonable.
5. Students who indicated that their advisors' advising style is comfortable also indicated that their advisor's ability in advising is high.

## **Research methodology**

The survey focused on Muscat, capital of the Sultanate of Oman, which has students from almost all parts of the Arab world (Oman Observer, 2012). It was decided to use convenience sampling and to choose a sample of 375 respondents. According to Katz (1953), convenience sampling can be chosen in cases of non-availability of sampling frames (in the current research, lists of students from various colleges was not available). In factor analysis, the sample (or number of subjects) must be at least 5 times the number of variables in the questionnaire (Hatcher, 1994). The literature available on sample size for factor analysis mentions that even if the number of variables is less than 20, the minimum sample size required is 100 (MacCallum et al., 1979; Arrindell & Ende 1985, pp. 166). Thus, in the current study, as there are 26 variables included, the sample should be more than 130. According to Field (2005), although sample size in factor analysis depends on various considerations, in general above 300 is adequate. This is satisfied in the current paper: out of 375 administered questionnaires, 336 questionnaires were fully completed and filled by the students of three different colleges in Muscat city. One college uses an American education system and the other two colleges follow the UK system of education. The authors studied the advising systems in the selected colleges and found that all three colleges have similar advising systems in place. The sample unit comprised of all undergraduate students of various streams of education.

### ***Secondary data***

Secondary data was collected from various supplementary sources such as websites of universities and colleges, accreditation agencies, books and articles on academic advising, reports and theses sourced from libraries (Green et al., 2008). However, the Internet is the major source of secondary data. Information related to the advising system in the colleges studied is taken from their respective websites.

### ***Primary data***

In order to study variables that influence the student satisfaction with the advising system, primary data was collected by administering a structured questionnaire (Appendix G), translated into the regional language, Arabic, for the convenience of some of the respondents. The survey instrument consisted of 26 statements on potentially influencing variables, 2 questions on demography (gender and education level) and 1 question on satisfaction level. The influencing variables were presented in the form of statements on a Likert scale of 1 to 5 (1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly Agree). And the respondents were asked to rate each statement on the Likert scale presented at the end of each sentence.

### ***Data analysis tools and techniques***

SPSS software (version 17.0) was used to analyse the data. Factor Analysis was conducted to identify the factors that influence student satisfaction with the academic advising system and to analyse other findings of the research (Luck & Rubin, 2007). While correlation tests were conducted to find out the relationship between influencing variables and student satisfaction, Chi-square and crosstabulation analyses were conducted to understand the association between the demography of the students and their satisfaction with the advising system (Green et al., 2008).

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### **Testing of the questionnaire**

A pilot study was conducted to test the questionnaire for validity and reliability purposes (Cudeck & O'Dell, 1994). The questionnaire was circulated among 71 respondents, students of Modern College of Business & Science, Muscat. The Kaiser-Meyer-Olkin (KMO) statistic that measures the reliability and validity of the instrument was 0.762, which is an acceptable level to proceed further with the factor analysis (Cudeck & O'Dell, 1994). Following the Eigen Value method, the study variables were formed into 6 factors covering a total variance of 71.03%. The pilot study results were encouraging and provided initial clues and support for conducting the final survey. The questionnaire was also tested for reliability using Cronbach's Alpha (.881) and the Guttman Split-Half Reliability statistic (.930).

### **Variables influencing student satisfaction with the advising system**

For the purpose of understanding the influencing factors, the following 26 variables were identified, based on the literature review (Table 1):

**Table 1: Variables expected to influence students' satisfaction with their advising system.**

1	Availability of advisor
2	Speed of advising website
3	Helpful and supportive attitude of advisor
4	Attitude of support staff (staff of registration department and computer lab)
5	Attractiveness of website
6	Friendly and sociable nature of advisor
7	Training & orientation given by college in (self) advising
8	Help and support of support staff
9	Knowledge of advisor about courses and program of the advisee
10	Extended support and help of college in case of new programs/new courses
11	Attitude of advisor
12	Availability of support staff
13	Advisor's help and support at the time of troubles faced by advisees/students during registration or throughout the advising process
14	Ability of advisor to advise and counsel - student's understanding and perception
15	Guidance of website while navigating during advising process
16	Knowledge of advisor about issues related to academic advising - student's understanding and perception
17	Advisor's understanding of the advisee's problems
18	Ease in navigating the advising website
19	Friendly nature of support staff
20	Advisor's support and help in case of new courses
21	Change of advisor
22	Department of advisor (advisor may or may not belong to the advisee's department)
23	Easily understandable (not complicated) advising system
24	Advising style of the advisor
25	Length of advising sessions
26	Quickness in solving advising related problems

## Discussion of the results

### Sample characteristics

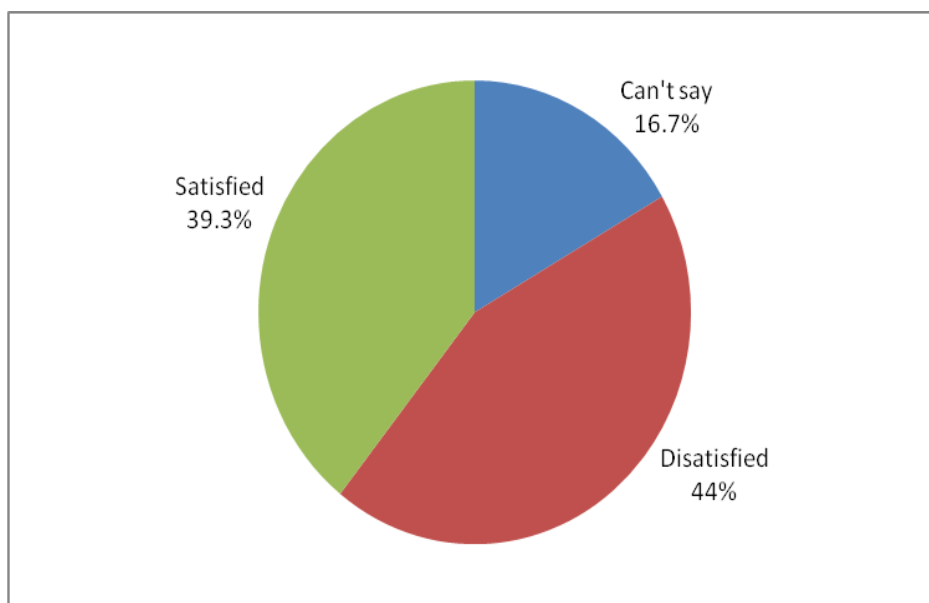
The survey was conducted during the academic period, Fall-2012. A total of 336 valid questionnaires were completed and filled out by male and female respondents pursuing different educational programs such as Business Management, Aviation Management, Economics and Computers and from different levels/years in the undergraduate programmes of three colleges in Muscat. Characteristics of the sample are presented in Table 2 below:

**Table 2: Sample characteristics (N=336)**

Characteristics of sample		No.	Percentage	Total
Gender	Male	161	47.9	100%
	Female	175	52.1	
Education level	Level 1: Foundation	30	8.9	100%
	Level 2: Freshman	22	6.5	
	Level 3: Sophomore	142	42.2	
	Level 4: Junior	86	25.6	
	Level 5: Senior	56	16.7	

### Analysis of student satisfaction with their existing advising system

To ensure that the students are satisfied with the advising system is one of the key components of achieving overall student satisfaction (Alexander et al, 2010). From the current research, it is evident that the satisfaction levels are not high (Figure 2). Only 39.3% of the respondents are satisfied with their respective advising systems. A major proportion (16.7%) of the students could not conclude whether their advising system is satisfactory, and the largest segment of the students (44%) are dissatisfied with the student advising system. This finding calls urgently for more detailed study of student satisfaction with advising systems (Kangai et al, 2011). Further in the analysis (Appendix C) it can be understood that within gender 44.6% of female respondents and 57.8% of male respondents are dissatisfied with their respective advising systems.



**Figure 2: Student satisfaction with advising system.**

### **Factors influencing student satisfaction**

The KMO statistic that measures the sampling adequacy needs to be more than 0.8 to be acceptable for continuing the factor analysis (Kaiser, 1974). The KMO value in the current analysis is 0.840, which is classified by Kaiser as 'meritorious' and means that factor analysis is worth pursuing (Appendix A). After initial analysis of reliability of the questionnaire and the grounds for conducting Factor Analysis, the next task is to identify factors that influence student satisfaction with the advising system. Five factors with Eigen value greater than 1 are considered as common factors (Nunnally, 1978). Results of the factor analysis are presented in Table 3:

**Table 3: Factors influencing student satisfaction with their advising system.**

No.	Label	Variables	Variable no.	Factor loadings
1	FEEL GOOD FACTOR	Support staff attitude	4	.905
		Advising style comfortable	24	.826
		Advisor friendly and sociable	6	.786
		Duration of advising sessions reasonable	25	.779
		Support staff friendly	19	.727
		Advisor's attitude	11	.658
		Ability of advisor	14	.653
		Advisor not frequently changed	21	.641
2	SUPPORT FACTOR	Advisor helpful and supportive in general	3	.922
		Orientation by college in advising	7	.921
		Support staff help and support regarding advising	8	.862
		Quickly problems are solved	26	.850
		Advisor belongs to same department	22	.831
		Advisor more help in case of new courses	20	.606
3	CRITICAL SITUATION FACTOR	Advisor knows about programs and courses I am studying	9	.864
		Advisor help and support during trouble times	13	.794
		Advisor understands my problem	17	.736
		Advisor is knowledgeable about advising	16	.701
		College more help in case of new programs/courses	10	.659
4	IT FACTOR	Website speed	2	.907
		Website guides in navigation	15	.848
		Website easy to navigate	18	.807
		Website attractive	5	.734
5	ACCESSIBILITY FACTOR	Advisor available, personal and approachable	1	.903
		Advising system not complicated. Easily understandable	23	.844
		Support staff available	12	.820

Table 3 presents suggested factor labels, different variables falling into various factors, their serial number in the questionnaire along with their respective factor loadings. Each factor describes the key variables that influence student satisfaction with the advising system. These five factors explain

a total variance of 70.03%, which is considered acceptable in the area of applied research (Silva & Fernandes, 2012). Factor description is presented in Appendix F along with variance explained by each factor.

Factor 1 refers to creating a comfortable zone for the students in the overall advising process. Variables such as duration of the advising sessions, advising style (0.826 factor loading) and friendly attitude of the advisor and support staff create a *Feel Good* environment and become major influencers of student satisfaction by explaining 27.35% of the variance. Factor 2, labelled *Support*, explains a variance of 16.32% and is a result of quickness in solving problems that may arise in the advising process, orientation provided by the college in advising (factor loading of 0.921) and advisor belonging to the same department that the student belongs to. *Critical Situation* factor explains a variance of 11.84% with variables such as advisor's knowledge about students' programs and courses (0.864 factor loading), advisor's awareness of the advising process and his advisees' problems particularly in the case of new courses and programs such as Aviation Management or Health & Safety Management. The other two factors namely, the *IT Factor* (9.28%) and the *Accessibility Factor* (5.24%) together with the first three factors explain a total variance of 70.03%.

### **Reliability analysis**

Reliability analysis needs to be conducted to measure the internal consistency of the variables in each factor derived from factor analysis (Santos, 1999). Cronbach's alpha can be used here to measure the internal consistency and reliability of the instrument (Cronbach, 1951). Hence, it was decided to test the reliability of all variables and also each of the factors formed. The value of Cronbach's Alpha should be as close as possible to 1: a higher number indicates higher correlation among the variables in the model. In the current research, the Cronbach's Alpha for all variables (26 items) is 0.881. Similarly, for each of the factors the Cronbach's Alpha is higher than 0.7 which indicates the significance of the model (*ibid*). Details are presented in Appendix E.

### **Hypothesis testing**

#### **Association tests: Chi-square ( $\chi^2$ ) tests of Independence**

- i) Impact of individual variables on satisfaction
- ii) Association between demographic characteristics of students and influencing variables

Available literature (Schiffman & Kanuk, 1998; Letcher & Joao, 2010) indicates that the marketers (college authorities in this case) must understand the association between the demographics of their target customers (students) and variables that influence their behaviour and also the impact of individual variables on satisfaction. This calls for application of association tests & tests of independence. The current research contains data pertaining to two demographic variables: gender and education level. After reviewing related literature, the following null hypotheses were set:

*H<sub>0</sub>: Training or orientation on advising has no impact on student satisfaction*

Since the chi-square value is significant at 95% level of confidence, this hypothesis is rejected (Table 4): it appears that an orientation on advising *does* impact on student satisfaction with the advising system. Further from the crosstabulation (Appendix B), it can be understood that those who received orientation on advising are more satisfied with the advising system (56.25% of those who received orientation). This finding helps us to understand the relationship between the orientation on advising and student satisfaction with the advising system, and indicates the need for student orientation on the advising system.

*H<sub>0</sub>: Advising style has no impact on satisfaction*

As the chi-square value is not significant at 95% confidence level (Table 4), this hypothesis is accepted: the perceived advising style appears to have no impact on satisfaction.

*H<sub>0</sub>: Satisfaction with the advising system is independent of gender*

As the chi-square value of 3.098 is not significant at 95% confidence level, this hypothesis cannot be rejected (Table 4): student satisfaction with their existing advising system appears to be independent of gender. It cannot be concluded that males are more satisfied than females or vice-versa.

*H<sub>0</sub>: Satisfaction with the advising system is independent of year/level of the student*

As the chi-square value of 32.369 is significant at 95% confidence level (Table 4), the hypothesis cannot be accepted. Thus, it cannot be concluded that students in a particular year of study are more satisfied or dissatisfied.

**Table 4: Summary of Chi-square ( $\chi^2$ ) test results (Dependent variable: satisfaction).**

Influencing/independent variable	Hypotheses	Significance	Chi-Square statistics	Conclusion (crosstabulation)
Orientation given on advising	Training/orientation on advising has no impact on student satisfaction	Significant H <sub>0</sub> : Rejected	$\chi^2$ Value: 29.606 P- value: 0.000 Dof: 8 $\alpha$ : 0.05	More satisfaction among those who received orientation on advising
Advising style	Advising style has no impact on satisfaction	Not significant H <sub>0</sub> : Accepted	$\chi^2$ Value: 10.199 P- value: 0.251 Dof: 8 $\alpha$ : 0.05	***
Gender	Satisfaction with advising system is independent of gender	Not significant H <sub>0</sub> : Accepted	$\chi^2$ Value: 3.098 P- value: 0.212 Dof: 2 $\alpha$ : 0.01	***
Year/level of the student	Satisfaction with advising system is independent of year/level	Significant H <sub>0</sub> : Rejected	$\chi^2$ Value: 32.369 P- value: 0.000 Dof: 8 $\alpha$ : 0.01	Satisfaction levels are relatively higher in lower years of education

### Relationship between student satisfaction and influencing variables - Correlation analyses

*H<sub>0</sub>: Students who are satisfied with the advising system reported that they received training in advising*

Correlation analysis presents a significant positive strong correlation (.872) between training on advising and satisfaction with advising system (Table 5). It can be interpreted that if the students are aware of various aspects of advising, they will be more satisfied.

*H<sub>0</sub>: Students who are satisfied with the advising system reported that their registration problems are solved quickly*

With a Pearson Correlation coefficient of .792 (significant at 95% confidence level), it can be concluded that there is a strong positive correlation between quickness in solving registration related problems and satisfaction with the advising system (Table 5).

*H<sub>0</sub>: Students who are satisfied with the advising system reported that their advisor's advising style is good*

There is no significant correlation between student satisfaction with the advising system and the advising style (Table 5).

*H<sub>0</sub>: Students who are satisfied with the advising system reported that the duration of their advising sessions is reasonable*

There is no significant correlation between the duration of the advising sessions and student satisfaction with the advising system (Table 5).

*H<sub>0</sub>: Students who indicated that their advisors' advising style is comfortable also indicated that their advisors' ability in advising is high*

As presented in Table 5, there is a significant positive correlation between the student perception of advisors' ability and comfortable advising style (.803). It can be interpreted that if the advisors adopt a comfortable advising style, they can be perceived positively and as expert in advising.

**Table 5: Correlation analyses.**

Hypotheses	Variable 1	Variable 2	Correlation coefficient
Students who are satisfied with the advising system reported that they received training on advising	Satisfaction	Training/orientation on advising	.872**
Students who are satisfied with the advising system reported that their registration problems are solved quickly	Satisfaction	Quickness in problem solving	.792**
Students who are satisfied with the advising system reported that their advisor's advising style is good	Satisfaction	Advising style	.084
Students who are satisfied with the advising system reported that the duration of their advising sessions was reasonable	Satisfaction	Duration of advising sessions	.059
Students who indicated that their advisors' advising style is comfortable also indicated that their advisors' ability in advising is high	Advising style	Ability of advising	.703**

\*\* Correlation is significant at 0.05 level

## Conclusions and recommendations

To ensure student satisfaction, institutions need to understand various aspects that influence their satisfaction. As the overall satisfaction levels are low, with 42.3% (142 out of 336) respondents dissatisfied with their advising system, it is recommended for institutions to understand various key aspects such as advising style, website and online experience, proper orientation on advising, support and help needed, so that higher scores can be secured on student satisfaction with the advising system. It is recommended to create a 'Feel Good' environment for the students (Factor 1 explaining 27.35% variance). As students depend upon support staff such as staff of the registration department and computer labs (.905 factor loading), these staff must be trained and motivated to provide better services as a part of the advising system. The advisor should not be changed

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frequently (.641 factor loading). However this becomes inevitable when the advisor leaves the job, so it can be understood that faculty turnover can lead to these types of problems as well. The management must be cautious about this issue and must ensure that good advisors are retained.

Students look for support in the form of training (.922 factor loading and .872 correlation coefficient), quickness in solving the problems (.850 factor loading and .792 correlation coefficient); also, in the case of new courses (Critical Situation factor, variable 10), and one expects especially with junior students, advisors' help and guidance significantly influences students' satisfaction with the advising system. Hence, the institutions must regularly provide orientation and training to the students on the advising system. It may not be appropriate to assume that the system is easy, clear and can be understood by the students. Instead, the colleges must regularly provide input on self-advising and other key aspects of advising system to ensure student satisfaction.

The advisor should have an idea of his/her advisees' courses and program of study (Critical situation factor, variable 9, factor loading .864). Variable 15 is featured in the IT factor with a factor loading of .848, indicating that even the advising system website has a crucial role to play in advising students. Hence, institutions need to design a better and more usable advising website. All the five factors explained a variance of 70% in the behavior of the students with reference to satisfaction with their advising system, with the Feel Good factor emerging as the most important factor; this suggests that the managements of institutions should make greater efforts to create a feel good environment.

Since, it is found that the student satisfaction with the advising system is independent of gender (Table 5), the managers need not be too concerned about gender variations. Advising style did not emerge as an important variable influencing the student satisfaction (.084 Correlation Coefficient); hence it is recommended not to emphasize the advising style and instead to look into various other key aspects influencing the student satisfaction. As the advising style does not influence male and female students differently, the advisors need not change their advising styles in an effort to cater to different genders. On the other hand, as lower year students are more satisfied with their advising system than the higher year students (Appendix D), there is a need to maintain this satisfaction and increase the satisfaction levels. Another key finding is that the duration of the advising sessions is not very important (insignificant correlation coefficient of .059). It cannot be concluded that longer the duration of advising sessions, higher will be the satisfaction levels; instead, the advisors should quickly facilitate solutions for their advisees' problems.

Student advising is the key to student improvement and empowerment, and is a necessary ingredient of the functioning of an institution. With 42.3% students dissatisfied with their advising system, this calls for immediate attention. Management of the institutions should emphasize creating a better advising system for the benefit of the student. Some of the immediate aspects to look into include providing training on advising, creating a 'feel good' environment for the students and supporting the students during the crucial times such as registration and choice of new courses.

## Future scope

Assessment should not be limited to students; advisors' experiences are crucial for the successful advising process and need to be explored (Cuseo, 2003). This calls for understanding and capturing advisors' opinions and experiences relating to advising (Hogan & Rogol, 2012). There is a need to look into the whole process from the advisors' viewpoint. Also separate studies can be conducted in further geographic locations (Shahid et al., 2012) as well as with students of different nationalities.

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## Appendix A

### Classification of KMO values

KMO Value	Degree of Common Variance
0.90 to 1.00	Marvellous
0.80 to 0.89	Meritorious
0.70 to 0.79	Middling
0.60 to 0.69	Mediocre
0.50 to 0.59	Miserable
0.00 to 0.49	Don't Factor

Source: Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.

## Appendix B

### Satisfaction & orientation in advising (Crosstabulation)

		Received orientation in advising					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Dissatisfied	Count	56	33	55	4	9	157
	% within Satisfaction	35.7	21.0	35.0	2.5	5.7	100.0
	% within Orientation	60.9	43.4	52.9%	16.7	22.5	46.7
Can't say	Count	14	10	16	6	10	56
	% within Satisfaction	25.0	17.9	28.6	10.7	17.9	100.0
	% within Orientation	15.2	13.2	15.4	25.0	25.0	16.7
Satisfied	Count	22	33	33	14	21	123
	% within Satisfaction	17.9	26.8	26.8	11.4	17.1	100.0
	% within Orientation	23.9	43.4	31.7	58.3	52.5	36.6
	Count	92	76	104	24	40	336
	% within Satisfaction	27.4	22.6	31.0	7.1	11.9	100.0
	% within Orientation	100.0	100.0	100.0	100.0	100.0	100.0

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## Appendix C

### Satisfaction with advising system (gender-wise analysis)

Satisfaction * Gender Crosstabulation					
		Gender			Total
		Female	Male		
Satisfaction	Dissatisfied	Count	78	93	171
		% within Gender	44.6%	57.8%	50.9%
	Can't say	Count	34	24	58
		% within Gender	19.4%	14.9%	17.3%
	Satisfied	Count	63	44	107
		% within Gender	36.0%	27.3%	31.8%
Total		Count	175	161	336
		% within Gender	100.0%	100.0%	100.0%

## Appendix D

### Satisfaction \* Education level Crosstabulation

		Education level					Total
		Foundation	Freshman	Sophomore	Junior	Senior	
Dissatisfied	Count	8	11	55	43	40	157
	% within Satisfaction	5.1	7.0	35.0	27.4	25.5	100.0
	% within Education	26.7	50.0	38.7	50.0	71.4	46.7
Can't say	Count	8	4	21	13	10	56
	% within Satisfaction	14.3	7.1	37.5	23.2	17.9	100.0
	% within Education	26.7	18.2	14.8	15.1	17.9	16.7
Satisfied	Count	14	7	66	30	6	123
	% within Satisfaction	11.4	5.7	53.7	24.4	4.9	100.0
	% within Education	46.7	31.8	46.5	34.9	10.7	36.6
Total	Count	30	22	142	86	56	336
	% within Satisfaction	8.9	6.5	42.3	25.6	16.7	100.0
	% within Education	100.0	100.0	100.0	100.0	100.0	100.0

## Appendix E

### Reliability of five factors that influence student satisfaction with the advising system

Reliability	Cronbach's Alpha	No. of variables
Overall reliability	0.881	26
Reliability of factor 1	0.901	8
Reliability of factor 2	0.922	6
Reliability of factor 3	0.868	5
Reliability of factor 4	0.860	4
Reliability of factor 5	0.867	3

## Appendix F

### Factor description and variance explained

Factor	Description	Variance explained
1. Feel Good factor	Good feeling and comfort level of the students in the whole advising process	27.35%
2. Support Factor	Supportive scenario in the college regarding advising	16.32%
3. Critical Situation Factor	Advising rendered during critical situations such as wrong & late registration	11.84%
4. IT Factor	Role of Internet and ICT	9.28%
5. Accessibility Factor	Availability of required personnel and degree of complexity of the advising system	5.24%
Total variance		70.03%

## Appendix G

### Questionnaire

1. Name: (optional) \_\_\_\_\_
2. Gender:         Female                       Male
3. Level:  
 Foundation     Freshman     Sophomore     Associate     Bachelors
4. Are you satisfied with the existing advising system:  
 Dissatisfied         Can't say         Satisfied

Please provide your response for the statements presented below. Kindly follow the scale in giving your response.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>

No.	Description	1	2	3	4	5
1	My advisor is always available for me regarding advising. He/she is personal and approachable to me.	1	2	3	4	5
2	The advising website is reasonably speedy in navigation.	1	2	3	4	5
3	My advisor is helpful and supportive.	1	2	3	4	5
4	Support staff like employees of registration department and IT staff have the attitude to help the students regarding advising.	1	2	3	4	5
5	The advising website is attractive.	1	2	3	4	5
6	My advisor is friendly and sociable	1	2	3	4	5
7	I have received training/orientation on advising.	1	2	3	4	5
8	Support staff extend their help and all kinds of support regarding advising.	1	2	3	4	5
9	My advisor knows about the program and courses that I am studying.	1	2	3	4	5
10	In case of relatively new courses/program, college extends more help in advising.	1	2	3	4	5
11	My advisor has the attitude to help.	1	2	3	4	5
12	Support staff like registration department and IT staff are available whenever needed.	1	2	3	4	5
13	My advisor extends his help and support during trouble times in advising.	1	2	3	4	5
14	I am assigned to an able advisor (ability of the advisor in advising-student's understanding)	1	2	3	4	5
15	The advising system website guides me while I am navigating.	1	2	3	4	5
16	My advisor has an overall knowledge of the advising system and proper advising	1	2	3	4	5

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	(advisor's overall knowledge-student's understanding).					
17	My advisor will have a clear understanding of my problem whenever it arises.	1	2	3	4	5
18	The advising website is easy to navigate.	1	2	3	4	5
19	Support staff like registration & staff of computer lab are friendly.	1	2	3	4	5
20	My advisor extends more help in advising in case of relatively new courses.	1	2	3	4	5
21	I am assigned to only one advisor and my advisors are not frequently changed.	1	2	3	4	5
22	My advisor belongs to my/same department.	1	2	3	4	5
23	The overall advising system is not complicated and easily understandable.	1	2	3	4	5
24	My advisor's advising style is very comfortable (it is not complicated and matches with my level of understanding.)	1	2	3	4	5
25	Duration of my advising sessions is reasonable that I get proper advising.	1	2	3	4	5
26	Problems related to my registration or other advising related problems are solved quickly and not much time is consumed in solving my problems.	1	2	3	4	5