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Impact of Faculty Student Rapport on Classroom Environment

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Abstract: Rapport-building is a well-known construct and so is Classroom Environment (CRE). Faculty-student rapport (FSR) in higher education is perceived to enhance motivational level, comfort level, communication and eventually learning. Connecting with students also leads to better student engagement in the learning process. A lot has been said about faculty-student rapport by theoreticians however research needs to measure its impact empirically. This research paper measures impact of FSR on CRE in the institutions imparting management and engineering education in NCR, India.. Objective of this paper is to establish whether a positive correlation exists between FSR and CRE. Other objectives of this paper are to evaluate if stream of education (engineering/management) and gender of teacher have significant impact on FSR.

Data was collected from 800 students from private institutions of National Capital Region (NCR), India using Professor-Student Rapport Scale and The College and University Classroom Environment Inventory (CUCEI) questionnaire. The impact of FSR on CRE has been measured through Pearson Correlation. The impact of stream of education (engineering/management) and gender of teacher on FSR have been measured through T-test. This research paper primarily measures student perception.

Pearson correlation on this data size of 800 affirmed that there exists a positive correlation between Faculty-student rapport and Classroom Environment. T-tests determined that stream of education does not impact FSR whereas gender of the teacher impacts FSR.

Previous research has shown mixed results that FSR impacts student achievement. This does not mean that FSR should be neglected or given less importance. Faculty-student rapport impacts Classroom Environment and hence should be considered and maintained in higher education.

Keywords: Rapport, classroom environment, correlation, t-test, higher education

Introduction

A safe, inclusive and positive work-environment is very important to accelerate learning at educational institutions. Well-being of learners should be kept at same level of

importance as the implementation of new technologies. Teachers may never be holistic psychological counselors but they can certainly create a healthy classroom environment that fosters congeniality so as to relieve the students from the basic tensions that they wrestle with. The fact that teacher has to address different students from different cultural background, gender, preferred learning styles, aspirations and view of life leads a thinking mind to consider the significance of flexibility in rapport with students. Single technique won't serve all. Unipolar approach would divide the class and hamper unity. A great teacher brings personal transformation to lives of the students. Such a teacher imbibes love for learning in the hearts of the students rather than merely focusing on the grades. In practical terms, all this is possible only with flexibility in approach. Teaching is about passion. And this passion develops not just an environment conducive to know each other well and be able to work together but it also aims at a sense of high achievement. Most of the students in such a classroom would come up the learning curve in a stipulated timeframe however it is expected that retention of learning will be life-long. There are many ways to build and maintain good rapport with students. First and foremost, faculty should never under-estimate power of first impressions. Be flexible in the first class however, first lecture sets the tone for the entire semester. First lecture should never be taken casually. It would be a grave mistake that might take many transactions to recover. Another strategy for building rapport is to be sensitive about students' diverse backgrounds. This includes acceptance of the fact that they come from different cultures, have different needs and skill-set. It should also be acknowledged that they have different personalities and it takes time and efforts to get to know the students. It is all the more important because students from different states come to NCR for professional education. And since, they are away from their parents; it

becomes even more important on the part of the faculty to give them a feeling of safety. This is specifically important for students who have just joined the university (first year students at Bachelor's degree level). Classroom adult-adult equation may sometimes turn into unspoken power tug of war also. Faculty should give importance to critical acclaims on the subject area that they are teaching. Mutual openness and democracy in classroom discussions should be appreciated and managed in a controlled way. This way an effective learning environment will be maintained. Faculty should respond positively and constructively to the errors that learners make so as to keep morale of the students high.

This research paper is about measuring impact of faculty student rapport (FSR) on classroom environment (CRE) in the institutions imparting professional education. The scope of the study is defined within the boundaries of private universities and institutes imparting engineering and management education in NCR, India. It is important to understand that students from many states of India move to NCR, India to get education. So it's a mixed student profile. Faculty too moves from different states to NCR for employment. Hence, it is note-worthy that a teacher from southern part of India may be teaching a class of mixed profile with both students from Delhi, NCR and different states of India. In such a scenario, relating to all the students gets very challenging. Also, teachers in higher education accept that they have gaps in knowledge and adult students accept that it is not only teachers who are perfect sources of knowledge. Yet they need to work together to make it a win-win situation. Teaching adult students does not demand spoon-feeding, over-nurturing and coddling. All these aspects make it necessary to accept each other and therefore maintain good rapport. Students already have existing frameworks on their mental slate and their need is to add new knowledge and skills to these. Along with

imparting deliverables to the students, teachers have to set rhythm of the class. A careful observation would reveal that faculty of these engineering and management institutes are very young. At the onset, it seems that both the stakeholders with little difference in age would be great at building rapport. However, here the challenge is that some trouble making students present in the class don't let this happen. Managing optimum level of rapport in cross-gender situation is also a difficult ballgame.

Literature Review

When it comes to empirical research on rapport, literature [1-12] has shown mixed results on impact of faculty-student rapport on academic performance of students. However, there are relational goals associated with teacher student relationship [13]. Coupland [14] argued that rapport-building can impact classroom environment in a positive way. Dwyer et al [15] claimed that a connected classroom environment translates into communication environment. Literature in [16-21] concluded that rapport building leads to motivation and engagement. Rodriguez et al [22] offered that positive teacher-student interactions put classroom environment more at ease and students enjoy the learning environment. Murray [23] consolidated through literature that teacher-student interaction builds a relationship showing utmost consistency and instructional outcomes that can be measured.

Wilson et al [24] emphasized through their research that one aspect of positive learning environment is professor/student rapport built through teacher-student interactions.

Teachers cannot shoulder all the problems that students face but a positive classroom environment will slowly and steadily bring strength to them. For years, rapport has been a taken-for-granted area

[25]. The paradox of rapport is that it is notoriously problematic to define and it is equally difficult to quantify [26]. Despite all this, faculty-student rapport is the fundamental requirement for education system. A study has concluded that rapport helps in increasing class attendance along with increasing the desirability to learn the subject [27].

Objective and Hypotheses

Much has been conceptualized on rapport and much has been researched on actual and preferred CRE, however, empirical research requires measuring the impact of FSR on classroom environment. The objective also expands to analyze whether stream of education and gender of the teacher have an impact on FSR.

The objectives mentioned have led to the formulation of the following hypotheses:

1. H_1: There exists a positive correlation between FSR and CRE, as perceived by the students

2. H_2: Stream of education i.e. engineering and management has significant impact of on FSR. In other words engineering and management students maintain different level of rapport with their teachers.

3. H_3: Gender of the teacher has significant impact on FSR. In other words, students maintain different level of rapport with male and female teachers.

Research Methodology and Data Collection

Keeping in view the objectives and scope of the study, an empirical study was conducted from 800 students from the private universities imparting engineering and management education in NCR. Data was

collected from eight different institutions imparting either engineering related program or management related program. While collecting data from classrooms, it was clearly informed to the students that questionnaire needed to be filled for research purpose so objectivity was required. And in order to minimize the possibility of bias, the teacher concerned was requested to move out of the class till students filled up the questionnaire.

Since the study was aimed at finding the impact of students' perception of Faculty Student Rapport (FSR) on students' perception of Learning Environment/ Classroom Environment (CRE), correlation was used for the purpose of analysis.

Data was collected from 800 students studying in engineering or management related programs in NCR. This data was collected from different classrooms in eight different private institutions/universities in NCR. Eight faculty members from eight different institutions supported collection of data. Data was collected from 100 students each, with the help of their faculty. Before students started to fill the questionnaire, it was informed/announced that this data was meant for research purpose. Respondents were also requested to be as objective as possible since results of this research would help teaching community as a whole.

In order to establish the impact of Faculty Student Rapport (FSR) on Learning Environment/ Classroom Environment (CRE), Professor-Student Rapport Scale with 34 items, developed by Wilson et al (Georgia Southern University, 2010) was used [24]. Quite a few instruments have been contributed to study learning environment however, The College and University Classroom Environment Inventory (CUCEI) questionnaire was chosen to be administered since among all of them, this one is specifically meant for higher education. Others (CES, ICEQ, MCI, CLES, and WIHIC) were mainly for primary and secondary education.

The CUCEI has 49 items. So the questionnaire used for this study had 83 items: item no. 1-34 on FSR and item no. 35-83 on CUCEI. Responses were taken using 5-point Likert scale. Fourteen questions in CRE questionnaire were reverse scored. For conducting the analysis, responses of all the reverse scored questions were adjusted in order to bring similarity in measuring responses. Statistical analysis of the collected data (n=800) was done through SPSS version 20.

The internal consistency for CUCEI for its seven subscales has been established and verified in many studies and Cronbach's alpha ranged between 0.70 to 0.90. In this study also, reliability of the FSR instrument (item no. 1-34) and CRE instrument (item no. 35-83) was measured through Croanbach Alpha individually and altogether (item no. 1-83). Cronbach Alpha for FSR Questionnaire (item no. 1-34) was found to be .933, for CRE Questionnaire (item no. 35-83) was found to be .850 and for the entire questionnaire (item no.1-83) it was found to be .938 . Table 1 shows reliability statistics of these questionnaires. So instruments qualify the test of reliability.

Table 1 Reliability Test Results of Questionnaires

Reliability Statistics	Cronbach's Alpha	No of Items
FSR Questionnaire	.867	34
CRE Questionnaire	.864	49
FSR and CRE Questionnaire taken together	.919	83

Results and Discussion

After collecting the responses through the research instrument as per standard procedure, the obtained scores were statistically analyzed in order to test the hypotheses. Statistical analysis of the collected data (n=800) was done through SPSS version 20.

H_1: There exists a positive correlation between FSR and CRE, as perceived by the students.

The statistical methods involved those of inferential statistics (Pearson Correlation) for FSR and CRE. The results indicate that FSR correlates significantly with CRE (r = 0.740, p < 0.000). This supports the first hypothesis that there is a significant relationship between FSR and CRE. The results depicted in Table 2 indicate that there is a significant and positive statistical relationship between FSR and CRE. Accordingly, the null hypothesis is rejected. Hence if FSR alters, then there would be a corresponding change in CRE. The coefficient of determination, (R - squared = 0 .5476), implies that 54.76% of the variation in CRE can be attributed to FSR, which implies that the remaining 45.24% can be explained by other factors which were not considered in the study.

H_2: Stream of education i.e. engineering and management has significant impact on FSR. In other words engineering and management students maintain different level of rapport with their teachers.

In order to test whether FSR differs between Engineering and Management students, statistical method involved those of descriptive statistics with mean and standard deviation and inferential statistics with Independent sample t-test for the stream of education and FSR. Table 3 indicates the mean and standard deviation of two groups of stream of education namely, management and engineering. Mean value of FSR among management students (3.7481) is a little more than engineering students (3.7397).

Table 4 provides the result from the independent samples t-test and Levene's test (for equality of variances). If the variances are not equal in both the groups, then p value ("sig.") will be less than 0.05. In this analysis, the p value is 0.008 for Levene's test. Hence this is to conclude that the variability in the two groups is significantly different and looking at equal variance not assumed column, T-value, df and two-tail significance for the equal variance estimates can be used to determine whether stream of education differences exist. In this study t(798)=.209, p=.835. P value shows that the null hypothesis might be accepted. So it can be concluded that there is no significant difference between means of FSR and stream of education of students (management and engineering students).

H_3: Gender of the teacher has significant impact of on FSR. In other words, students maintain different level of rapport with male and female teachers.

Table 2. Correlation of FSR and CRE

		FSR	CRE
	Pearson Correlation	1	.740**
FSR	Sig(2-tailed)		.000
	N	800	800
	Pearson Correlation	.740**	1
CRE	Sig(2-tailed)	.000	
	N	800	800

** Correlation is significant at the 0.01 level(2-tailed)

Table 3 Descriptive Statistics of FSR as per Stream of Education

	Group	N	Mean	Std. Deviation
FSR	Management	402	3.7481	.52705
	Engineering	398	3.7397	.60572

Table 4. Independent Sample T-test on FSR and Stream of Education

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FSR	Equal variances assumed	6.967	.008	.209	798	.835	.00837	.04013	-.07041	.08715
	Equal variances not assumed			.208	780.861	.835	.00837	.04016	-.07047	.08720

Table 5. Descriptive Statistics of FSR as per Teacher Gender

	Teacher Gender Group	N	Mean	Std. Deviation
FSR	Male	299	3.8082	.58243
	Female	501	3.7056	.55498

Table 6. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FSR	Equal variances assumed	.103	.748	2.483	798	.013	.10260	.04132	.02149	.18370
	Equal variances not assumed			2.453	602.946	.014	.10260	.04182	.02046	.18474

In order to test whether FSR differs between male and female teachers, statistical method involved those of descriptive and inferential statistics (t-test) for the gender of the teacher and FSR. Table 5 indicates the mean and standard deviation of two groups of teacher gender. Mean value of FSR among male teachers (3.8082) is more than female teachers (3.7056).

Table 6 provides the result from the independent samples t-test and Levene's test for Equality of Variances. If the variances are not equal in both the groups, then p value ("sig.") will be less than 0.05.

In this data analysis, the p value of 0.748 for levene's test is greater than 0.05. So it is concluded that the variability in the two groups is significantly different and look at equal variance not assumed column. T-value, df and two-tail significance for the equal variance estimates can be used to determine whether teacher gender differences exist. In this study $t(798)=2.483$, $P=.013$. P value shows that the null hypothesis is rejected. So it can be concluded that there is significant difference between means of FSR and teacher gender (male and female). It can be concluded that students maintain different level of rapport with male and female teachers.

From above discussion it is clear that it is important to adopt flexibility in approach In order to improve FSR as well as CRE in classroom environment. Based on mean score obtained by different questions in the questionnaire, recommendations have been made to improve FSR and CRE. Following are the recommendations for FSR:

Faculty should make more efforts to get along with the students. They should be more considerate towards students. Faculty is found not to be completely aware of the amount of efforts students are putting in their respective subjects. Efforts should be made in this direction. Faculty should mentor the students.

Faculty should make more efforts to make their classes more likeable and enjoyable so that students start liking coming to their respective classes. They should create so much interest in the class that students opt for another course to be delivered by them. Faculty should make conscious efforts to make their body language approachable regarding any concern with their subjects. Faculty should be more compassionate and communicate well with the students. Faculty should add value to the subject knowledge of the students so that they feel they have learnt more from this particular faculty. Faculty should be more receptive, behave as a role-model and should have the desire to make a difference. Faculty should be fair with all the students and should try to win trust of the students.

In order to improve CRE, faculty should work as per the following suggestions:

Faculty should consider feelings of the students. They should be friendly and communicate with the students openly. They should go out of the way to help students. Faculty should move around in the classroom to help students. They should try new ideas as well as new and different ways of teaching. Faculty should think various innovative and unusual activities. Seating should be arranged differently in the class. Faculty should give a chance to students to know first names of classmates and to know one another well. Students should be informed about goals of a specific class in advance. Students should also be made to do some work in the class. Class should always be organized. Assignments should be clear in terms of objectives. Class should adhere to timelines. Activities in the class should be planned very carefully. Individuals' pace of learning should also be respected. Students should have a fair share in deciding how class time is spent. Approaches to teaching should allow students to work at their own pace. Students should also decide about progression of the class. Faculty should

give equal attention to questions put by every individual. Also, students should be equally praised for good work.

Finally, remembering the names of all the students is also equally difficult where a teacher has a bunch of 180 students distributed in 3 sections each; who will stay with the same teacher for one semester-building rapport is certainly a challenge. However, despite all these difficulties, it cannot be ignored. An effort should be made to know the students individually. A professional comfort level should be brought among the students so that students can approach the faculty in times of need. Faculty can follow structure as guided by the institution that he/she is working for; however imbibing a great learning environment with humanity is majorly in his/her hands. Any one of the above suggestions used independently may not bring fruitful results however a combination of these strategies used over a period of time will help improve FSR and CRE. It has to be understood that classroom rapport is not based on only mutual liking, but respect and acceptance. Accepting differences and yet finding commonalities to move forward will help build good rapport. In adult-adult teaching learning equation, challenging situations should provide a common platform to remove any misunderstandings due to complex subject-matter or informal talks.

For students, it is advised to teach them rapport-building techniques explicitly so that any cultural/social complexity is not displayed in their behavior while building and maintaining rapport with faculty. And faculty is the referee of the class, and needs to put class in order using positivity not only through her speech rather should be action-oriented.

They should walk the talk since actions always speak louder than words.

Limitations and Future Scope

The scope of this study was limited to private professional institutions with programs in engineering and management in national capital region, India only. Also, the study covers only three hypotheses. There could be other cultural and demographic variables which need further study such as age of the teacher, number of years of work experience, technical complexity of the subject, profile of students from various states etc. Also, the study is indicative of only student perceptions of FSR and CRE relationship. Impact of FSR and CRE on students' academic performance and grades has not been assessed. It is advised to study faculty perception on FSR and CRE. Various cultural and demographic features can also be taken into account. Another suggestion would be to measure FSR and CRE at different time intervals like at the beginning of the semester and towards the end and note down the variation.

Conclusion

From the above research, it is concluded that faculty-student rapport significantly impacts classroom environment. It is also concluded that engineering and management faculty can build rapport with their students equally well. Another conclusion drawn from this research is that students maintain different level of rapport with male and female teachers.

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