Impact of Diversity in Networks on Academic Performance of Management Students

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Scholars have highlighted the significance of a diverse group on individual's performance and have argued in favor of diversity within a group, institution or organization. However, the impact of diversity within one's networks has not been explored. Even within a diverse group, a student might approach someone coming from similar background. The present study attempted to explore, in the context of Indian management education, how does diversity within one's networks impacts student's academic performance. For the study, 107 students from one of the toptier and oldest institutes of management in India were selected. Their network, and diversity within their networks was mapped and calculated. The findings hinted that diversity within networks might not always result in a positive outcome.

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Diversity

Diversity signifies the differences between the individuals based on any attribute, which may result in the perception of the self-being different from another person (e.g., Jackson, 1992; Triandis, 1994; Williams & O'Reilly, 1998). Practically, diversity can be the difference between two persons based on any dimension. It can be based on age, nationality, religious background, functional background, task skills, relational skills, etc. Bowman (2010) used meta-analytic techniques to explore the relationship between college diversity experiences and cognitive development, which provided strong evidence that several types of diversity experiences—interpersonal interactions with racial and nonracial diversity, diversity coursework, and diversity workshops—are positively related to cognitive development. Interpersonal interactions with racial diversity are more strongly linked with cognitive growth. Diversity improves the learning process (Hansen et al., 2006; Gurin & Lopez, 2004; Milem et al., 2005).

The important question comes here is: how does diversity lead to positive

changes in cognition? The theoretical link between diversity and cognition has been delineated by Gurin and colleagues (Gurin, 1999; Gurin et al., 2002), who framed their argument for the educational importance of college diversity in terms of seminal theories of cognitive development (Erikson, 1946; Piaget, 1971, 1985; Ruble & Stout, 1994). The explanation of cognition development due to diversity has the fundamental roots in the two main types of thinking: controlled thinking and automatic thinking. The sameness of the surroundings or the encounter with the similar things (people with similar attitudes, background, gender, race, culture) all the time habituates the mind/cognition to react in the same way. This leads to automatic thinking. In one early study indicating the pervasiveness of automatic thinking, Langer (1978) described many positive benefits derived from using active, effortful, conscious modes of thought (controlled thinking). She also argued that such thinking helps people develop new ideas and ways of processing information that may have been available to them but were not often used. What kind of situations evokes an effortful, mindful thought process? Coser (1975) calls complex social structures — situations where one encounters people who are unfamiliar to us when these people challenge us to think or act in new ways when people and relationships change and thus produce unpredictability, and when people we encounter hold different expectations of us evoke effortful thinking. Langer (1978) also contended that people would engage in active, effortful, conscious modes of thought when they encounter a situation for which they have no script or when the environment demands more than their current scripts provide, such as an encounter discrepant with their experience. Development theorists (Erikson, 1946; Piaget, 1971; 1985; Ruble, 1994) emphasized that the discrepancy, tension, and discontinuity experienced due to such encounters lead to cognitive growth. Piaget (1985) termed this process disequilibrium. Gurin et al. (2002), based on these theories, suggested the features of the diverse student body that will foster active thinking and personal development. These features are:

- Novelty and unfamiliarity that occurs upon the transition to college.
- Opportunities to identify discrepancies between students with distinct precollege social experiences.
- Diversity as a source of multiple and different perspectives.

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Bowman (2010) argued that the repeated exposure to complex and novel situations through diversity interactions often forces students to question their beliefs and might lead to a general tendency toward drawing complex and multifaceted attributions (i.e., greater attributional complexity).

Network

A social network is a social structure made up of individuals (or organizations) called "nodes", which are tied (connected) by one or more specific types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, or relationships of beliefs, knowledge or prestige (Kosorukoff, 2011). A social network consists of a set of actors ("nodes") and the relations ("ties" or "edges") between these actors (Wasserman & Faust, 1994). The ties can exist between two individuals or more than that, between groups, between communities or between nations. Kosorukoff (2011) noted that research in a number of academic fields has shown that social networks operate on many levels, from families up to the level of nations, and play a critical role in determining the way problems are solved, organizations are run, and the degree to which individuals succeed in achieving their goals.

Extensive research has been done on the functionality and significance of social networks (Healy & Cote, 2001; Woolcock, 2001). In the field of education, social networks have been found to result in greater educational achievement (Halpern, 1999; Zimmerman, 2003; Sacerdote, 2001; Lin, 2005; Hanushek et al., 2003). The benefits of social networks are manifolds. Not only it provides emotional and social support, but in higher education, it provides resources that are contextually significant. For example, many times, important books or references for readings, previous years question papers, exams pattern, useful contacts needed for leadership roles are not available to anyone and everyone. It is the networks with the people with resources that enhance or results in the achievement which could not have been possible without these networks. Also, the influence or effects of peers on educational achievement has long been debated. Lin (2005), by using a dataset from the National Longitudinal Study of Adolescent Health (Add Health), specified peers as actual friendship networks. It was found that peers can have a substantial influence on one's academic achievement. De Giorgi et al. (2007) found that one is more likely to choose a major when many of his/her peers make the same choice. They estimated that, when it diverts students from majors in which they seem to have a relative ability advantage, this effect leads to lower average grades and graduation mark, a penalty that could cost up to 1,117 USD a year in the labor market.

Interaction between Diversity & Network

Both diversity and networks are ubiquitous. Can we find any place where we cannot see the element of diversity? There is nothing completely homogeneous. It is just a matter of what type of diversity. From one lens or the other, the factors of differentiation between two individuals or two groups or two units can always be found. It depends on the perspective from which we are arguing the concept of diversity.

Human beings are always tied in some way or the other, within a group. It

can be transactive ties, emotional ties, negative ties, or somewhere in between. Can we talk about any group without a tie? Not only diversity but the pattern of diversity or how diverse elements are tied also becomes important. Diversity or network in isolation is a partial revelation. What if within a diverse group, the members approach or are strongly tied to people who share some common background (educational, regional, workplace, etc.). Diversity is an individual-level construct, but how these individuals are tied together? People from a diverse background can come together, but the significant question is: are they tied together? In diverse groups, this may mean that people distinguish subgroups within the workgroup. People tend to favor in-group members over out-group members, to trust in-group members more, and to be more willing to cooperate with them (Brewer & Brown, 1998; Tajfel & Turner, 1986). Diversity, in the real sense, would be more effective only when diverse people are tied together. In a learning environment or educational context, diversity and network becomes two important features as people from a different background might come together. Still, in reality, people with similar background might be tied together. So, it becomes more important to study how a group of people is tied together and how that affects the performance of the students.

Hypothesis Generation

Undergraduate Institute: It captures experiences, skills, or perspectives pertinent to cognitive work tasks that comes by virtue of being studied in a particular institute. Pelled (1996) argued that diversity attributes such as functional, educational, or industry background capture experiences and perspectives relevant to the tasks performed by most workgroups. As such, this type of diversity is proposed by Pelled and others (Sessa & Jackson, 1995; Milliken & Martins, 1996) to have a stronger impact on the task-relevant group processes and performance. In the Indian context, the institutes vary in terms of the infrastructure, curriculum, faculty, extracurricular activities, lab equipment, student-faculty ratio, government funding, placements, etc. Students coming from different institutes will have different exposure and experience and thus resulting in different perspectives, learning processes, and worldviews. So, we can hypothesize:

Diversity attributes such as functional, educational, or industry background capture experiences and perspectives relevant to the tasks performed by most workgroups.

H01a: Diversity in the academic network based on the undergraduate institute will lead to better performance.

H01b: Diversity in the outside academic network based on undergraduate institute will lead to better performance.

H01c: Diversity in the academic network based on the undergraduate institute will lead to better performance.

Centrality

Kosorukoff (2011) defines centrality as the measure that gives a rough indication of the social power of a node based on how well they "connect" the network. Betweenness Centrality is defined as the extent to which a node lies between other nodes in the network. This measure takes into account the connectivity of the node's neighbors, giving a higher value for nodes that bridge clusters. The measure reflects the number of people who a person is connecting indirectly through their direct links. Baldwin et al. (1997) found a positive relationship between the network centrality of master of business administration (M.B.A.) team members and their grades. Brass (1981) found that the centrality of employees' positions in a network representing the flow of work was indirectly related to job performance via job characteristics. Network centrality was chosen because it signifies the extent of a person's access to resources, such as confidential information and task-related knowledge.

H02a: Higher degree of centrality in the academic network will lead to better performance.

H02b: Higher degree of centrality in the outside academic network will lead to better performance.

H02c: Higher degree of centrality in the professional network will lead to better performance.

Methodology

The data was collected from 20 groups of students. For the study, 107 students were approached from one of the oldest institutes of management in India. To decide the boundary of the group, one member of a group was contacted and was asked the names of the students he/she hangs out with regularly. Then, all the members named were approached and were asked the same question. Then, all the common names were listed down to define it as one group. Similarly, twenty groups were approached.

Dependent Variables: There are two dependent variables: CGPA (Cumulative Grade Point Average) and POR (Position of Responsibility). The CGPA of the students until the third term was taken from the students and was cross-checked with the office for verification. For POR, the students were asked if they held any position of responsibility in any official club on the campus. Then, the club was approached for verification.

Independent Variables: There are two main independent variables: Diversity and Network

For diversity, all the students were asked to report their Undergraduate Institute, Undergraduate Specialization, Regional Language and Region (the state they came from). For the network, there were three categories: Academic Network, Outside Academic Network, and Professional Network.

For the Academic Network, they were asked who did they approach within the group for academic doubts or to study with. For Outside Academic Networks,

they were asked, outside the group, who did they contact for academic-related doubts or to study with. Whoever they named, their under-graduation institute, under-graduation specialization, regional language, and the state they came from were noted. For the Professional Network, they were asked, who guided them or motivated them or encouraged them for a leadership position. In case they named anyone, their under-graduation institute, under-graduation specialization, regional language, and the state they came from was noted.

Data Analysis

UCINET Software was used to calculate the heterogeneity, centrality, and power factors for all the independent variables. UCINET is a Social Network Analysis tool: a comprehensive package for the analysis of social network data. Social Network Analysis methods include centrality measures, subgroup identification, role-analysis, power measures, etc. Also, the package has strong matrix analysis routines, such as matrix algebra and multivariate statistics. The data collected through the survey was coded and was run through UCINET software to get the Index of Qualitative Variation (IQV) of the heterogeneity factor within different types of networks. There were three types of networks: academic network, outside academic network, and professional. Also, the diversity index of the groups (based on Undergraduate Institute, Undergraduate Specialization, Regional Language, and Region) was calculated. Then, to identify the relevant variables for the study, the descriptive statistics were obtained, and all the variables with completely zero value were removed. To find out the level of diversity within the networks, a few steps were followed. First, all the three networks were considered for all the dimensions of diversity (Undergraduate Institute, Undergraduate Specialization, Regional Language, and Region). For example, diversity within the academic network, outside the academic network, and professional network based on the undergraduate institute was calculated.

For the present study, the variables taken were CGPA, Diversity Index based on the undergraduate institute (UI_DI), diversity within the out-ties in the academic network based on the undergraduate institute (UI_InAcad_Outties_IQV) and the betweenness centrality in an academic network (InAcad_nBtwns). CGPA was the dependent variable. Two independent variables were considered: Diversity Index based on the undergraduate institute and the IQV values of the heterogeneity factor of out-ties found within the academic network (based on the undergraduate institute). Since there were multiple independent variables and twenty groups, for the analysis, ANCOVA (Analysis of Covariance) was found to be an appropriate statistical tool. The betweenness centrality within the academic ties (InAcad _nBtwns) was considered as a covariate as out-ties signify the centrality within the network, and betweenness centrality can be an interacting or confounding variable. So, it was recognized as a covariate. For analysis, SPSS software was used. First, the descriptive statistics (Table 1) of the variables were analyzed.

Table 1 Statistics

		CGPA	UI_DI	UI_InAcad_Outties_IQV	InAcad_nBtwns
N	Valid	108	108	108	108
	Missing	0	0	0	0
Mean		6.172037	1.471122413	.288398	1.044907
Std. Error of Mean		.0886201	.0384324312	.0314346	.2259250
Median		6.110000	1.579631979	.000000	.000000
Mode		5.5200	1.609437912	.0000	.0000
Std. Deviation		.9209673	.3994015409	.3266783	2.3478814
Variance		.848	.160	.107	5.513
Skewness		.601	-.672	.361	3.881
Std. Error of Skewness		.233	.233	.233	.233
Kurtosis		-.236	.757	-1.652	19.644
Std. Error of Kurtosis		.461	.461	.461	.461
Range		4.1100	1.645439329	.8750	16.6670
Minimum		4.6400	.5004024240	.0000	.0000
Maximum		8.7500	2.145841753	.8750	16.6670

Results

For the analysis, once all the assumptions were met, ANCOVA was run in SPSS. As discussed in the beginning, the diversity index on the basis of undergraduate institute (UI_DI) was categorized into three levels: low (1), medium (2) and high (3) and out-ties within academic network on the basis of undergraduate institute was categorized into two: yes (if there was diversity), no (if the diversity factor was zero). The results of the descriptive statistics are presented in Table 2 and Table 3. The main ANCOVA results found Log_Inacd_nbtwns variable (the centrality variable in the network named as Inacd_nbtwns and then log transformation was done to normalize that distribution) to be insignificant at p level 0.05. Its statistical significance was 0.854. The out-ties variable within the academic network (named as UI_Outties) also came out to be insignificant with significance level 0.352 (Table 4).

Table 2 Between Subject Factors

		Value Label	N
Cat_UI_DI	1.00		9
	2.00		38
	3.00		61
UI_Outties	.00	no	59
	1.00	yes	49

The other independent variable, which is diversity within the group on the dimension of the undergraduate institute named as Car_UI_DI was found to be significant with the p-value 0.015. The interaction between the independent variables Cat_UI_DI*UI_Outties also came out to be significant at p- level 0.05. The significance level is 0.036. The table of parameter estimates gives a more clear and detailed picture. Within the diversity index (UI_DI), the lower level (p-value= 0.023) is strongly supported. The coefficient, 0.769, signifies that one unit in-

Table 3 Descriptive Statistics

Dependent Variable: CGPA

Cat_UI_DI	UI_Outties	Mean	Std. Deviation	N
1.00	no	7.114444	.7094384	9
	Total	7.114444	.7094384	9
2.00	no	6.062273	1.0600087	22
	yes	6.275625	.9381114	16
	Total	6.152105	1.0029474	38
3.00	no	6.350714	.9475345	28
	yes	5.786364	.5983980	33
	Total	6.045410	.8218284	61
Total	no	6.359661	1.0080606	59
	yes	5.946122	.7533089	49
	Total	6.172037	.9209673	108

Table 4 Tests of Between Subjects Effects

Dependent Variable: CGPA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	14.258[a]	5	2.852	3.802	.003
Intercept	2263.393	1	2263.393	3017.965	.000
Log_lnacd_nbtwns	.026	1	.026	.034	.854
Cat_UI_DI	6.616	2	3.308	4.411	.015
UI_Outties	.655	1	.655	.873	.352
Cat_UI_DI * UI_Outties	3.372	1	3.372	4.496	.036
Error	76.497	102	.750		
Total	4204.912	108			
Corrected Total	90.755	107			

a. R Squared = .157 (Adjusted R Squared = .116)

crease in this variable, will lead to an increase by 0.769. The medium level is weakly supported with a significance level of 0.072. Among the two categories within the out-ties variable within the academic network on the dimension of the undergraduate institute (UI_Outties), the level of no diversity is strongly supported. The significance level is 0.016. The coefficient, 0.556, signifies that a unit increase in the variable of out-ties with no diversity will lead to an increase in CGPA by 0.556. The interaction between the diversity within the group (Cat_UI_DI) and diversity within the out-ties of one's academic network (UI_Outties) have also been found to be significant (0.036) at the level when there is medium level diversity in the group and no diversity within the out-ties within

one's academic network. However, the coefficient, -0.770, signifies that such a situation has a negative impact on CGPA .i.e. one-unit increase in such interaction will lead to a decrease in the CGPA by 0.77 (Table 5).

Table 5 Parameter Estimates

Dependent Variable: CGPA

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	5.801	.170	34.050	.000	5.463	6.139
Log_lnacd_nbtwns	-.055	.297	-.185	.854	-.643	.534
[Cat_UI_DI=1.00]	.769	.333	2.309	.023	.108	1.430
[Cat_UI_DI=2.00]	.483	.266	1.818	.072	-.044	1.010
[Cat_UI_DI=3.00]	0[a]	.	.	.	.	.
[UI_Outties=.00]	.556	.227	2.445	.016	.105	1.007
[UI_Outties=1.00]	0[a]	.	.	.	.	.
[Cat_UI_DI=1.00] * [UI_Outties=.00]	0[a]	.	.	.	.	.
[Cat_UI_DI=2.00] * [UI_Outties=.00]	-.770	.363	-2.120	.036	-1.491	-.050
[Cat_UI_DI=2.00] * [UI_Outties=1.00]	0[a]	.	.	.	.	.
[Cat_UI_DI=3.00] * [UI_Outties=.00]	0[a]	.	.	.	.	.
[Cat_UI_DI=3.00] * [UI_Outties=1.00]	0[a]	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

*Stands for the interaction between the two mentioned variable

The pairwise comparison shows that the lower level within the variable UI_DI is significantly different from the medium level and the high level (p-values are: 0.041 and 0.002). However, the medium level and the high level are not significantly different (p-value is 0.688). This clearly shows that the impact of the lower level diversity (based on the undergraduate institute) on CGPA is different from that of the impact of medium level and high level. However, the same cannot be said for the differences between the impact of medium level and high-level diversity on CGPA (Table 6).

Linear regression was also run to cross-check the findings of ANCOVA results. The dependent variable was CGPA and five independent variables were taken: the two independent variables taken in ANCOVA, the covariate taken in ANCOVA, the interaction between the first independent variable and the covariate, and the interaction between the second independent variable. The regression results are reported in Table 7.

Table 6 Pairwise Comparisons

Dependent Variable: CGPA

(I) Cat_UI_DI	(J) Cat_UI_DI	Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Difference[d]	
					Lower Bound	Upper Bound
1.00	2.00	.930[*,b,c]	.370	.041	.029	1.832
	3.00	1.214[*,b,c]	.345	.002	.374	2.055
2.00	1.00	-.930[*,b,c]	.370	.041	-1.832	-.029
	3.00	.284[b,c]	.285	.688	-.410	.978
3.00	1.00	-1.214[*,b,c]	.345	.002	-2.055	-.374
	2.00	-.284[b,c]	.285	.688	-.978	.410

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. An estimate of the modified population marginal mean (I).

c. An estimate of the modified population marginal mean (J).

d. Adjustment for multiple comparisons: Sidak.

Table 7 Descriptive Statistics

	Mean	Std. Deviation	N
CGPA	6.172037	.9209673	108
Cat_UI_DI	2.4815	.64824	108
UI_Acd_Outties	.4537	.50017	108
Log_Inacd_nbtwns	.1789	.28942	108
UI_DI_nBTWNS	.1540	.26891	108
UI_OUTTIES_nBTWNS	.1052	.22265	108

As found in ANCOVA output, the regression output also gives the same results. The variable UI_DI has been found to be significant. While the other variables: Diversity within Outties within the academic network (UI_Acd_Outties), the centrality within the academic variable (Log_Inacd_nbtwns), and the interaction between these variables are non-significant. However, the interaction between the Cat_UI_DI variable and the Outies variable is significant and negative, which is in line with the findings of ANCOVA output (Table 8, Table 9).

Discussion

The result of this study offers interesting results. Before we delve into the discussion about the results, it becomes important to discuss the two main important dimensions underlying diversity: *social category diversity* and *information or functional diversity* (Jackson, 1992; Jehn et al., 1999; Milliken & Martins,

Table 8 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.094	.361		19.676	.000		
	Cat_UI_DI	-.302	.143	-.212	-2.116	.037	.879	1.137
	UI_Acd_Outties	-.339	.263	-.184	-1.293	.199	.436	2.293
	Log_Inacd_nbtwns	-.245	.410	-.077	-.599	.551	.534	1.872
	UI_DI_nBTWNS	-.105	.422	-.031	-.249	.804	.584	1.712
	UI_OUTTIES_nBTWNS	.390	.627	.094	.622	.535	.386	2.589

a. Dependent Variable: CGPA

Table 9 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.381	.115		55.496	.000		
	Cat_UI_DI_Outties	-.173	.063	-.257	-2.743	.007	1.000	1.000

a. Dependent Variable: CGPA

1996; Tsui et al., 1992). The social categorization perspective says that depending upon the similarities and differences, people tend to categorize themselves and others into groups. Based on some perceived similarity, people form in-groups, where the members of in-groups are trusted more and are thus favored more (Tajfel & Turner, 1986; Turner et al., 1987). According to this perspective, homogeneous groups will perform better (Jehn et al., 1999; Murnighan & Conlon, 1991; Simons et al., 1999). The informational or functional perspective says that when people from different background come together, they bring with themselves diverse set of skills, knowledge, and perspectives which can lead to expansion of resources at hand and thus will lead to higher performance (Cox et al., 1991; Jehn et al., 1999). Van Knippenberg et al. (2004) argued that the social categorization perspective emphasizes relational aspects more while the information/decision-making perspective focuses on task-related aspects of group processes.

Based on some perceived similarity, people form in-groups, where the members of in-groups are trusted more and are thus favored more.

A commonly held assumption is that diversity in a group leads to better results as it brings different perspectives and different resources within the group, which can lead to better performance. The findings of the study contradicts as well as extend that assumption by arguing the effects of diversity in a group on students' performance is contextual in nature. For example, in the context of educational institutions where a relative grading system-student's grades are determined by comparing them against their peers - is used to evaluate student's performance, different kinds of dynamics come into play. In the context of the institute where the present study is being done, the academic curriculum is rigorous since the beginning of the course. The two years' course is divided into six terms. Each term consists of three months and is packed with quizzes, projects, mid-term, end-term, etc. (every quiz, project, exam contributes to CGPA). By the time people become friends; generally, one and a half term is over. The grades of the first term are important not only psychologically and academically, but also professionally as their placements for internship start in the second term, and they have only first-term grades to show in the placements. In such a hectic and loaded schedule, one cannot afford to miss on the extra academic resources, which help in enhancing the level of CGPA. So, the moment they enter the campus, they try to interact with their seniors from their undergraduate institute to take guidance from their one year experience on the campus and how they can deal with the academic pressure. Since most of the students come from an engineering background, where the senior-junior relationship is stronger than any other background, it leads to the formation of cliques based on undergraduate institutes.

In such a competitive scenario, where people can get a lower grade by the gap of one mark, it is not only important to have resources relevant for a good CGPA but it becomes more important to have it confidentially because even if twenty percent of students get hold of it, it can lead to an overall grade drop. So, secrecy about having relevant information becomes more important, and thus, the seniors pass on the information and relevant materials to their juniors from previous institutes and suggest them to keep it among themselves (people from the same undergraduate institute background). This clearly explains the negative effect of diversity in one's group (based on the undergraduate institute) on one's CGPA. Therefore, higher diversity or higher value of UI_DI will have a negative effect on CGPA as seniors from different undergraduate institutes prefer to share the relevant material, information or help the juniors from the same institute. Therefore, we can see from the results also that a lower level of diversity (UI_DI; level =1) has a positive effect on CGPA. This phenomenon also explains why the medium level of diversity in the group but no diversity in the outties (as found in the ANCOVA output that the interaction between the diversity within the group (Cat_UI_DI) and diversity within the out-ties of one's academic network (UI_Outties) was significant (0.036) at the level, when there is medium level diversity in the group and no diversity within the out-ties within one's academic network) has a negative effect on CGPA as people can get hold of material from their seniors or acquaintances from their undergraduate institute but being a part of even a medium level diverse group can result in sharing those material with the people of different undergraduate institute which can led to the spread of the relevant sources (given that now everyone is connected with each other through mail, Whatsapp, Facebook) and thereby, decreasing their CGPA. Therefore, the results signify that a lower level of diversity within the group or network based on undergraduate institute leads to better CGPA. We can infer that in this context, the social categorization perspective is dominant and is leading a better performance for people who are a part of the homogeneous group. In this case, homogeneity is based on the undergraduate institute. So, people who are coming from the same undergraduate institute form are a part of a clique and take help from their seniors. If they share the relevant and needed information (for better academic performance) with people of different groups, it leads to a negative impact on CGPA.

The present study extends the knowledge on impact of diversity in a group by highlighting that the impact is contextual in nature and depends upon multiple factors. The study has implications for teachers and teaching pedagogy. Generally, teachers, while giving out group-assignments, attempt to make a diverse group to ensure a better learning from peers. However, the findings of the study indicate that teachers intending to ensure better peer-learning should consider other contextual factors to leverage the benefit of diversity quotient. If the teachers intend to enhance the informational diversity factor in a group, they should

rely on creative and unique assignments that requires students to rely on other learnings rather than gathering the resources from their seniors. The teaching pedagogy repeating similar kind of courses and assignments every year indirectly nudges students to interact with their seniors, thereby requiring them to network within a specific social category. Adding to that, if the institute follows relative grading to evaluate its students' performance, it creates an atmosphere of secrecy, where one person having access to critical resources would attempt to keep it within its network. The idea is to ensure a few people have an edge over others in the assignments and exams, thereby, ensuring better grades.

Proposition 1a: In the context of relative grading evaluation, the teachers intending to ensure informational or functional diversity, should provide more creative and unique group assignments or projects.

Proposition 1b: In the context of absolute grading evaluation, the teachers intending to facilitate social category interaction could rely on repeating similar course assignments or projects.

The present study aims to augment nuances to the assumption that diverse group ensures better performance. The study has limitations as it was carried out in the institute which follows relative grading evaluation. Future attempts can study the impact of diversity in different groups to understand how the diversity in students' networks impacts their performances. Also, the present study was performed over 107 management students distributed in 20 groups. Future studies could also increase the group size to see whether the findings remain same or varies with changing groups.

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