



THE CONTRIBUTION OF FRIENDS' INFORMATION SUPPORT TO INDIVIDUAL PROBLEM-SOLVING PERFORMANCE

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Abstract

The current research investigated variations in perceptions of peer information support by four universities in the agreement by students to the statement as follows: My friends provide the information I need to solve a problem. The number of students who took part was 400. As the descriptive statistics proved, the total rates of peer support are moderate ($M = 3.30$, $SD = 1.26$) with university-level mean scores varying between 3.00 and 3.59. UAF and GCUF students mentioned they used their friends as the main source of information on solving problems, and the students of GCWUF and UOE demonstrated relatively less support. One-way ANOVA showed that there was a statistically significant difference between universities, $F(3, 396) = 4.01$, $p = .008$ and therefore there was significant difference in the information provided by peers across the universities. Comparisons that included post-hoc LSD revealed that the students of GCUF reported significantly more support than students of GCWUF or UOE, and students of UAF reported significantly more support than students of GCWUF or UOE. On the other hand, the rating of both GCWUF and UOE was much lower in comparison with GCUF and UAF. On the whole, the results can indicate that the access of the students to the information about problem-solving by their friends is not equally widespread at all universities and some of them prove to have more effective networks of peer support than others do. These findings demonstrate the significance of institutional and social contexts in informal information sharing by students.

Keywords: *Peer Information, Support, Problem-Solving, University Students, ANOVA, Post-Hoc Analysis*

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1. Introduction

The peer interactions are very important in determining the academic experience of the students, development of their social lives as well as their exposure to informal learning resources. Students can be supported by friends as the first line of intervention during academic or personal difficulties, providing the information, advice, and emotional support (Smith, 2021). This peer-to-peer interaction is even more significant in the context of universities, where students need to overcome difficult tasks, new learning settings, and expectations of the institution (Johnson & Miller, 2020).

Such information-sharing between peers has been considered as a critical aspect in collaborative learning. Students can also use friends as a source of information and get information that is fast, readily available, and context-dependent, which positively affects the ability to solve a problem (Chen, 2019). These peer networks do not only assist in academic work but also enhance faith in decision-making, seeking resources, and resolving problems (Rahman and Ali, 2022). These informal activities tend to supplement the formal teaching and learning, and make the learning process more holistic.

Nevertheless, the degree of reliance on friends may fluctuate between institutions because of various differences in the culture of the campuses, social lives, academic pressure, and institutional support (Karim and Ahmed, 2020). Higher education institutions that have good collaborative cultures have a higher chance of increased peer interaction than those with competitive or fragmented cultures (Lopez, 2021). The knowledge of these institutional differences is essential in finding the effects of social settings on the provision of information that students require in solving academic problems.

With these factors in mind, the current research undertakes the exploration of the differences in the perceived idea of students of four various universities that their friends are the information they require to solve a problem. Through the analysis of descriptive patterns, general group variations, and post-hoc comparisons, the study is expected to point out how the support of peer-information changes depending on the institutional contexts, as well as what it can imply to the learning practices of students (Khan et al., 2023).

1.1. Statement of the Problem

Students in universities are turning to their peers as one of the main sources of information when it comes to academic and personal problem solutions. Nevertheless, this peer-information support does not seem to be consistent everywhere and very little is known about the variation of such support in different universities with different social settings, cultures and student interaction patterns. Although informal peer networks are important in improving problem-solving skills among students, there are few empirical studies concerning the degree to which students view their friends as the credible people to get information in various university environments. The scarcity of comparative studies done on information support that is offered by peers limits the capacity of educators and

policymakers to comprehend the influence of institutional circumstances on the possibility of students to access informal learning resources. Consequently, there is the necessity to check whether students in various universities differ in their dependency on friends to provide the information required to solve problems. This gap will be addressed to determine the institutional environments that support robust peer-support and those that could need interventions to enhance collaborative learning networks.

1.2. Significance of the Study

The research is important in that it sheds light on the fact that peer-information support differs depending on the university environment, and this data can easily benefit educationists, policymakers, and student-support departments. The knowledge of whether students consider their friends as the source of problem-solving information will assist the institutions in determining the strength of the informal learning networks which are instrumental in academic performance, emotional health, and collaborative learning performance. The recognition of universities that have weaker peer-support systems can be used to inform specific interventions, including peer-mentoring programs, joint learning activities, and enhanced student engagement programs. Besides, the results are useful to the wider body of literature on the topic of social support in tertiary education because they show that institutional culture and social processes influence the access of students to information. This study is the foundation of enhancing the peer-based learning strategies and enhancing student academic experiences by offering comparative evidence among different universities.

2.Literature Review

Johnson and Miller (2020) also note that peer interactions are an essential part of academic and social growth of students in higher education. The friends are usually the first ones who can be seen as a source of support, assisting the students with the academic work, exchange materials and offer emotional comfort. Such informal learning settings developed through these peer-based exchanges reinforce proper academic learning and build the capacity of students to surmount learning disabilities.

According to Chen (2019), the important aspect of collaborative learning is peer information-sharing, which allows students to receive fast, situational and relatable information when tackling problems. As opposed to formal academic guidance, information received through friends is usually presented in a simplified and practical way and thus easy to comprehend and implement to students. This type of assistance proves to be especially helpful in case students encounter complicated tasks where many different points of view and mutual experience are needed.

As Karim and Ahmed (2020) emphasize, the dependency on peer information depends on the university because of the institutional culture and social structures, diversity of students, and the academic competitiveness. This can be achieved by fostering teamwork and community-building in institutions, which tend to result in the development

of stronger peer-support networks, and by undermining peer communication in competitive or dogmatic academic settings. These contextual variations highlight the necessity of institution-based studies of peer-information support.

According to Lopez (2021), the differences in peer-information sharing are specific to every institution, and it is important to understand this information to implement effective academic support strategies. It is proposed that in socially cohesive environments, students have higher benefits of peer networks than in fragmented or less interactive environments. Hence, the comparison of the difference between the universities will assist in determining the gap in the system of support and will also provide information on the prospects of improving student learning by introducing projects conducted by peers.

Rahman and Ali (2022) write that peer networks have a profound effect on the academic confidence of students, their behavior towards seeking resources, and the process of making decisions. Students who have credibility with their friends as the reliable source of information demonstrate their higher interest in problem-solving and better academic performance. The level of social connectedness is also improved by such networks, which translate to a more enabling and productive learning environment.

Khan et al. (2023) highlight the significance of comparative research in establishing the role of social and academic contexts in making students rely on friends to get information on problem-solving. The results of such research can serve to inform institutional policy, enhance collaborative learning and support student well being. Evaluating the difference between the institutions, the researchers will be able to propose specific interventions aimed at establishing stronger peer networks where necessary.

3. Methodology

The section offers a description of the data collection procedure, research design, samples of the population, research instrument, data collection process, data exploration process, and validity of research instruments.

This was a quantitative and cross-sectional study research design, which was used to investigate the variance of peer-information support among school-going children in universities. There were four universities that chose 400 students, namely GCUF (n = 174), GCWUF (n = 87), UAF (n = 80) and UOE (n = 59). The method of recruitment of participants was the convenient sampling. The structured questionnaire was administered to gather data which covered the item My friends provide the information I need to solve a problem rated using a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree).

Students were summarized in terms of their perceptions in different institutions with the help of descriptive statistics (mean, standard deviation and confidence intervals). A one-way Analysis of Variance (ANOVA) was conducted to test the hypothesis on the presence of significant differences in universities. On the discovery of statistically significant effect, LSD post-hoc tests were performed to determine pairwise differences between the four universities. All the analyses have been done in SPSS and the significance

level taken was $p = .05$. The methodological approach enabled a clear comparison of the institutional difference in the dependent relation of the students on friends to gain information on problem-solving.

4. Result and Discussion

Table 1: My friends provide the information I need to solve a problem.

Descriptives								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					GCUF	174		
GCWUF	87	3.06	1.145	.123	2.81	3.30	1	5
UAF	80	3.59	1.290	.144	3.30	3.87	1	5
UOE	59	3.00	1.232	.160	2.68	3.32	1	5
Total	400	3.30	1.259	.063	3.18	3.43	1	5

Descriptive statistics were computed for the item “*My friends provide the information I need to solve a problem.*” across four universities ($N = 400$). Overall, respondents reported a **moderate level of peer information support** ($M = 3.30$, $SD = 1.26$), with scores ranging from 1 to 5.

Among institutions, **UAF students reported the highest mean score** ($M = 3.59$, $SD = 1.29$), indicating relatively stronger reliance on friends for problem-solving information. Students from **GCUF** also showed above-average support ($M = 3.40$, $SD = 1.28$). In contrast, **UOE** ($M = 3.00$, $SD = 1.23$) and **GCWUF** ($M = 3.06$, $SD = 1.15$) reported comparatively lower levels of peer-provided information.

Confidence intervals for the mean across groups were narrow, indicating stable estimates. Overall, responses suggest that students moderately depend on their friends for information needed to solve problems, with some variation across universities.

Table 2: My friends provide the information I need to solve a problem.

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	18.659	3	6.220	4.013	.008
Within Groups	613.738	396	1.550		
Total	632.397	399			

In order to determine whether students from various institutions agreed with the statement "My friends provide the information I need to solve a problem," a one-way ANOVA was performed. The results revealed a statistically significant difference between universities, $F(3, 396) = 4.01, p = .008$.

This suggests that there are substantial differences in the four universities' levels of peer-provided information support. Certain universities appear to rely more on friends for information than others, according to the impact size (based on mean differences).

4.1. Post Hoc Tests

Multiple Comparisons						
Dependent Variable: My friends provide the information I need to solve a problem.						
LSD						
(I) University of respondent	(J) University of respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Gcuf	gcwuf	.339*	.163	.039	.02	.66
	UOE	.397*	.188	.035	.03	.77
Gcwuf	gcuf	-.339*	.163	.039	-.66	-.02
	uaf	-.530*	.193	.006	-.91	-.15
Uaf						
	gcwuf	.530*	.193	.006	.15	.91
	UOE	.587*	.214	.006	.17	1.01
UOE	gcuf	-.397*	.188	.035	-.77	-.03
	uaf	-.587*	.214	.006	-1.01	-.17

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

LSD post-hoc comparisons were conducted to identify which universities differed in students' agreement with the statement "My friends provide the information I need to solve a problem." Several statistically significant differences emerged.

Students from GCUF reported significantly higher peer-information support compared with both GCWUF (Mean Difference = 0.34, $p = .039$) and UOE (Mean Difference = 0.40, $p = .035$).

Similarly, UAF students scored significantly higher than GCWUF (Mean Difference = 0.53, $p = .006$) and UOE (Mean Difference = 0.59, $p = .006$), indicating stronger reliance on friends for problem-solving information.

Conversely, students from GCWUF reported significantly lower scores compared with GCUF and UAF, while UOE also reported significantly lower scores compared with GCUF and UAF.

Overall, the post-hoc results indicate that UAF and GCUF students receive more problem-solving information from friends, whereas GCWUF and UOE students report comparatively lower levels of such support.

5. Practical recommendations

- Universities with lower peer-support levels should introduce structured peer-mentoring and peer-learning programs.
- Institutions should promote collaborative learning activities to increase peer interaction and information-sharing.
- Students should receive training on effective communication and peer-information exchange skills.
- To develop peer networks, universities should provide community-building and engagement activities.
- Institutional academic support services should be improved to complement and reinforce peer-based information systems.

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