

## RESEARCH ARTICLE

# Impact of Teamwork on Library and Information Science Students' Academic Performance: A Study of Sant Gadge Baba Amravati University, Maharashtra

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## Abstract

The main objective of this research is to examine how teamwork affects the academic performance of students in Library and Information Science (LIS). The study targets both LIS students and faculty. Out of 244 distributed questionnaires, 197 were returned, yielding a strong 80.74% response rate adequate for analysis. Teamwork refers to tasks, activities, and group projects organized by the LIS department with support from the Knowledge Resource Center (KRC). Primary data were collected using a structured questionnaire, including a 5-point Likert scale. The data, both quantitative and qualitative, were analyzed using IBM SPSS. The Pearson Correlation Coefficient assessed the relationship between teamwork (independent variable) and academic performance (dependent variable). Regression analysis provided the coefficient of determination ( $R^2$ ), indicating teamwork's influence on academic success among LIS students at Sant Gadge Baba Amravati University, Amravati. The study also reviewed teamwork-related assignments given to students. These varied and meaningful tasks lacked a uniform pattern but encouraged diverse group participation. The research aimed to fill gaps in understanding teamwork's impact on academic outcomes. Findings showed a strong positive correlation between teamwork and academic performance. Group tasks, collaborative activities, and shared decision-making improved academic results while fostering leadership and career development.

**Keywords:** Teamwork, Teamwork Skills, Teamwork Assignments, Collaborative Projects, Library and Information Science (LIS), Knowledge Resource Center (KRC), Academic Performance, etc.

## 1. Introduction

Teamwork involves collaborative effort, effective communication, and a shared goal. When individuals come together to accomplish a common objective, their collective effort is referred to as teamwork. Katzenbach and Smith (1993) described a team as more than just a collection of individuals, emphasizing that a team generates outcomes that exceed the sum of individual contributions. They noted that effective teams produce superior results because of the combined input and synergy among members. Teamwork offers multiple advantages, including

enhanced problem-solving, greater innovation, improved creativity, better time management, and increased job satisfaction (Katzenbach & Smith, 1993). In the field of librarianship, teamwork is fundamental. Collaborative efforts among library professionals, including librarians and supporting staff, are essential for efficient library operations and service delivery. To foster these skills among students pursuing Library and Information Science (LIS), various teamwork-related tasks and collaborative projects have been embedded in the curricula of Bachelor of Library and Information Science (BLISc) and

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Master of Library and Information Science (MLISc) programs. Whipple (1987) defined collaboration as an educational approach that bridges teaching, learning, and research; helping to cultivate a more informed and interconnected academic community.

Shah and Leeder (2016) also emphasized that collaboration is a critical skill for students, especially in solving complex problems that require cooperative efforts. They argued that LIS programs should actively teach and promote collaborative practices. This perspective is supported by Bernier and Stenstrom (2016) as well as Roy and Williams (2014), who advocated for integrating teamwork training into LIS education to better prepare students for professional challenges. In both Indian and global contexts, higher education institutions have increasingly recognized the need to incorporate both hard and soft skills related to teamwork into their academic programs. In India, the implementation of the National Education Policy (NEP) 2020 has prompted institutions to restructure their curricula. As a result, more teamwork-oriented activities have been introduced to meet the evolving academic, personal, and professional requirements of students (O'Farrell & Bates, 2009b). Given this context, it is important to assess the role of teamwork in enhancing academic performance among LIS students. This research focuses on the teaching departments of Library and Information Science at Sant Gadge Baba Amravati University, Maharashtra, along with its affiliated colleges. Teamwork is frequently employed in higher education settings to improve students' ability to collaborate and function as part of a team (O'Farrell & Bates, 2009a; Rafferty, 2013; Snyder, 2009a). Beyond academic improvement, teamwork activities help students develop interpersonal awareness, emotional well-being, and cooperative skills all of which are essential in their professional lives (Snyder, 2009b).

In this study, teamwork is defined as a series of structured tasks, collaborative projects, and academic activities carried out by LIS departments. These are often organized in conjunction with institutional libraries and the Knowledge Resource Center (KRC). The primary objective of this research is to examine the impact of these teamwork efforts on the academic performance of LIS students.

## 2. Purpose and Objectives of the Research Study

### 2.1 Purpose

The purpose of the present research study is to study

the impact of teamwork on the LIS students' academic performance. To achieve the purpose of the research study following objectives were framed.

### 2.2 Research Objectives

1. To study the scope of existing teamwork assignments for Library and Information Science (LIS) students.
2. To identify and study various tasks, activities and collaborative projects run under teamwork.
3. To measure the impact of teamwork on the academic performance of LIS students.
4. To identify the correlation of teamwork and the academic performance of LIS students.

### 2.3 Research Questions

Based on the literature reviewed, the researcher formulated two important research questions to give some insight as to whether teamwork impacts student's academic performance. The following research questions were framed.

1. How the teamwork impact on student's academic performance?
2. How the individual self-reported questionnaire items would correlate with academic performance?

## 3. Reviews of the Past Studies

Teamwork is important for Library and Information Science (LIS) students. This is because the field of librarianship involves a lot of cooperation and group work. LIS departments should help students develop teamwork skills so they are ready for their future jobs. Roy and Williams (2014) said that teamwork gives students a chance to interact with others. This helps them learn better and build professional relationships. To support this, LIS departments plan group activities and projects. These are often done in partnership with the Knowledge Resource Center (KRC), which is the university's main library. Arar and Korucu (2020) found that when teachers are confident and work well together, students perform better. Communication and cooperation between teachers also help students succeed. Mandel et al. (2020) did a study using different methods. They looked at course syllabi, student evaluations, and alumni interviews. The results showed that students had better experiences when their courses included teamwork. This suggests that group assignments should be part of the MLIS course because teamwork is important in library work.

Team projects help students in many ways. They learn how to work with others, solve problems, and communicate well. Students also gain skills, knowledge, and become more productive and flexible. Hall (1996) said that teamwork is becoming more important in library work. He also looked at how students are chosen for teams, what they learn, and how teamwork is evaluated. Salas et al. (2015) found that teamwork improves communication, decision-making, and planning. These skills help people do better in complex jobs. Mandel, Moen, and Karno (2020) studied a Master's LIS program. They found courses with group projects helped students gain teamwork skills like scheduling, accountability, and communication. Alumni said teamwork assignments prepared them well for real library jobs (Mandel et al., 2020).

Jogdand and Jadhav (2022) studied how teamwork and team skills help LIS students. Their study showed that good teaching methods can prepare students for modern, team-based library jobs. Mutimba and Moi (2023) studied schools in Kenya. They found that teamwork among teachers helped students perform better. But they also said that other things might affect student performance too. Brun and Leontyeva (2021) studied schools in Russia. Gonzalez-Montesinos et al. (2021) did a similar study in Spain. Both studies showed that teamwork helps students do better. They found that teamwork works best when there is good leadership, shared goals, and joint problem-solving. Mathieu et al. (2019) reviewed many studies. They found that teamwork improves both group results and job satisfaction. Most past research focused on how teamwork works. But this current study looks at how teamwork affects the academic performance of LIS students.

## 4. Research Methodology

### 4.1 Research Design

A research design serves as a blueprint for conducting a study, guiding the selection of methods and tools for collecting and analyzing data (Creswell & Creswell, 2018). It helps in systematically addressing research

questions. This study adopted a descriptive research design to investigate the effect of one variable on another. Specifically, the focus was on measuring how teamwork (independent variable) influences the academic performance (dependent variable) of Library and Information Science (LIS) students at Sant Gadge Baba Amravati University, Maharashtra.

Descriptive designs are commonly used in educational research to observe and explain relationships between variables without manipulating them (Babbie, 2020). A survey method was employed using a structured questionnaire as the main tool for collecting primary data (Kumar, 2019). Quantitative data collected through the survey were analyzed using descriptive statistics to summarize responses, and inferential statistics to examine the relationships and significance. The Pearson product-moment correlation coefficient was used to measure the strength and direction of the association between teamwork and academic performance (Field, 2018). Additionally, regression analysis was applied to determine how well teamwork predicted academic success among the LIS students.

### 4.2 Target Population and Participants

The population is the group of people, objects, or events that a researcher wants to study (Creswell & Creswell, 2018). A sample is taken from this group to understand and make general conclusions about the whole population. In this study, the population included students and teachers from the Department of Library and Information Science (LIS) at Sant Gadge Baba Amravati University, Amravati, and its affiliated LIS colleges. There were 200 students enrolled in the BLISc. and MLISc. programmes during the 2024-2025 academic year. Out of these, 50 students were from the university's own department, and 150 students were from affiliated colleges. In total, 14 teachers participated in the study. This included 2 permanent and 12 contributory (part-time) faculty members. To gather more views, questionnaires were also sent to former students (alumni). Their responses helped to answer the research questions. Table-1 shows the detailed information about all the participants in this study.

**Table 1.** Information of participants

Types of Respondents	Population	Questionnaire distributed	Response received	Total Respondents % (N)
LIS students	200	180	153	85%
Ex-students	50	50	30	60%
Teachers	14	14	14	100%
<b>Total</b>	<b>264</b>	<b>244</b>	<b>197</b>	<b>80.74%</b>

Source: Computed from the Survey Data

A total of 180 questionnaires were distributed to current Library and Information Science (LIS) students, out of which 153 responses were received, resulting in a response rate of 85%. Additionally, 50 questionnaires were sent to former LIS students, of which 30 were returned, yielding a response rate of 60%. A 100% response rate was obtained from the faculty members of the LIS departments. The overall response rate for the study was 80.74%, which is considered satisfactory. In survey-based research, a response rate above 50% is generally accepted as adequate for analysis and interpretation (Babbie, 2020; Nulty, 2008). In the present study, both quantitative and qualitative data were collected. The quantitative data were analyzed using IBM SPSS Statistics software to assess trends, relationships, and statistical significance (Field, 2018).

## 5. Results

### 5.1 Demographic Information of Respondents

A total of 197 responses were received in the present survey. The respondents were distributed in three categories i.e. LIS students, ex-students and faculty members of the teaching department of LIS. In the LIS students' category, 41.83% were male participants while 58.17% were female. In the ex-students' category, 70% were male and 30% female participants, while in the teacher category, 57.14% and 42.86% were male and female. The transgender response is zero. It is seen that female participants are more in the LIS student category, while in other categories, male responses dominate the females in percentage. The demographic information of the respondents is shown in Figure-1.

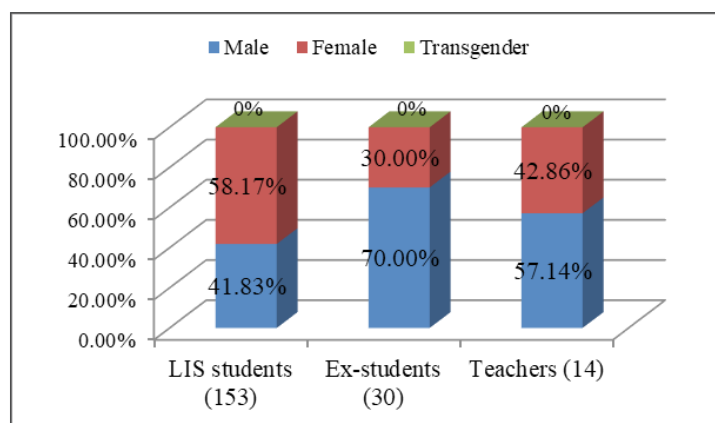


Figure 1. Demographic Information of Respondents

### 5.2 Teamwork Assignments and Participation of LIS Students

Teamwork assignments involve students collaborating in groups to complete tasks, projects, or assignments. These assignments aim to foster collaboration, problem-solving, and the development of teamwork skills. Successful teamwork assignments often involve clear roles, communication, and shared responsibility. A suitable teamwork assignment for Library and Information Science (LIS) students could involve designing and implementing a community outreach project for the library, fostering collaboration and real-world application of library skills.

For LIS students, the teamwork assignments are structured by having various collaborative projects and team-building activities. These assignments can take many forms: collaborative projects and functional teams. The assignments are categorized as discussion of forums, interviews of the students, peer evaluation, presentation, projects/group projects, role

play activities and some written activities which are mentioned in Table-2.

### 5.3 Tasks, Activities, and Collaborative Projects run under Teamwork for LIS Students

Effective teamwork and collaboration play an important role in the students' learning process. Tasks, activities, and collaborative projects help enhance various student skills. The Library and Information Science (LIS) Department of Sant Gadge Baba Amravati University, Maharashtra, organizes teamwork-based activities in collaboration with the Knowledge Resource Center (KRC).

Teamwork provides a platform where students can share their knowledge, ideas, and strengths, leading to a deeper understanding of the subject. During their BLISc. and MLISc. programmes, students participate in a variety of teamwork activities. These include conducting literature reviews and user surveys at the KRC. Compiling subject-wise or special



bibliographies of library books is also a collaborative task assigned to students. Some students participate in training programmes where they provide formal instruction and support to new users of the KRC. Additionally, training on OPAC and WEBOPAC is offered to library users as part of the teamwork initiative. Uploading images of KRC events and digital

content on the library portal is another collaborative project, suitable for students with digital content creation skills. Table-2 presents the current status of the tasks, activities, and collaborative projects carried out under teamwork for LIS students at Sant Gadge Baba Amravati University.

**Table 2.** Tasks, activities and collaborative projects run under teamwork for LIS students

Tasks, activities and collaborative projects	NA	VL	SW	MH	VM	$\chi^2$ Value
Acquisition of new books	17	25	33	49	73	7.33
Analyzing library usage data	26	12	51	47	61	6.69
Bar-coding and RFID tag installation	53	12	33	29	70	6.78
Cataloguing library collection	37	39	29	33	59	8.91
Compilation of various bibliographies	37	51	27	37	45	8.12
Conducting a literature review	55	49	9	33	51	8.81
Conducting a user survey	12	61	11	32	81	6.36
Creating a digital resource guide	26	52	27	45	47	5.96
Creating library newsletter	37	39	29	33	59	8.91
Creating library video and various event videos	55	13	15	29	85	5.71
Developing a library marketing campaign	32	46	11	40	68	6.89
Developing library outreach programme	30	32	37	51	47	5.97
Developing library website section and library app	43	22	30	37	65	6.65
Fostering skills in information organization, communication, and project management	53	12	33	29	70	6.78
Reference and periodical section work	55	49	9	33	51	8.81
Training of OPAC & WEBOPAC to library users	11	45	36	40	65	7.78
Uploading images and digital content on library portal	25	16	34	47	75	6.23
<b>N=197 Average <math>\chi^2</math> Value =7.21</b>						

**Source:** Computed from the Survey Data  $d.f. = (2-1)(5-1) = 4$   $\chi^2_{0.05}$  at 4 d.f. = 9.49 (\*NA: Not at All, VL: Very Little, SW: Some What, MH: Much, VM: Very Much)

From Table-2, it is seen that there are various activities conducted under the teamwork of the LIS students. The activities consist of various tasks, such as acquiring acquisition of new arrivals, analyzing library usage data and cataloguing library collections etc. The students complete this task jointly and enjoy the learning process. The total calculated value of  $\chi^2$  ( $\alpha=0.05$ , d. f. = 4) is 7.33, 6.69, 6.78, 8.91, 8.12, 8.81, 6.36, 5.96, 8.91, 5.71, 6.89, 5.97, 6.65, 6.78, 8.81, 7.78, and 6.23 respectively. The obtained  $\chi^2$  values are less than the critical value. It is also seen that these calculated  $\chi^2$  values range between the lower 5.71 to the highest 8.91. This seems to assume that most of the participants participated in the tasks, activities and collaborative projects.

The average value of all the tasks, activities and collaborative projects run under teamwork for the LIS students of Sant Gadge Baba Amravati University, Maharashtra i.e.  $\chi^2$  is 7.21 which is less than the

critical value ( $\alpha=0.05$ , d. f. = 4) 9.49. The average chi-square ( $\chi^2$ ) value of 7.21 across all activities indicates meaningful participation and variance in student responses. These results suggest that teamwork is actively integrated into the LIS curriculum and plays a crucial role in building practical, collaborative, and professional skills among students. It is found that tasks, activities and collaborative projects run under teamwork for LIS students are useful and varied. Hence, it is seen that there is no similarity in activities and teamwork covers various types of assignments for the students.

#### 5.4 Impact of Teamwork on the Academic Performance of LIS Students

Teamwork consists of groups of people collaborating with each other to achieve a common goal, leveraging individual strengths and skills for a more effective and efficient outcome or products. It significantly

benefited the students. The academic performance of the students is enhanced with the help of teamwork tasks, activities and projects. It fosters collaborative learning and develops essential life skills. In the teaching department, students work together, learn to communicate effectively, and solve learning problems

creatively. Ultimately, they lead to a more engaging and enriching learning experience. Table-3 shows the impact of teamwork on the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra.

**Table 3.** Impact of teamwork on the academic performance of LIS students

Statement	SA	AG	NE	DA	SD	Mean	Std. Dev.
Added values to students	30.70%	16.30%	19.30%	14.00%	19.70%	2.33	0.622
Assist to develop self-confidence	20.20%	28.10%	11.70%	19.80%	20.20%	3.39	0.699
Help to solve troubles in events and handle conflicts situation	30.90%	09.10%	22.00%	28.70%	9.30%	4.48	0.722
Improve communication skills and interaction with others	41.20%	11.30%	12.25%	22.75%	12.50%	2.36	0.678
Improve creative and logical thinking	29.60%	31.50%	08.70%	18.30%	11.90%	3.37	0.697
Improve quality of learning activities and process	41.80%	22.60%	08.20%	12.80%	14.60%	4.38	0.701
Increase spirit of cooperation and commitment on educational events	29.15%	19.50%	10.75%	20.75%	19.85%	2.35	0.629
The administration of the teaching departments promotes teamwork among the students and inspired them to do teamwork task, activities and projects	20.20%	28.10%	20.20%	19.80%	11.70%	3.39	0.699
The teaching departments organizes team building activities regularly	29.60%	31.50%	11.90%	18.30%	08.70%	2.31	0.620
The teamwork of the teachers has enhanced students' academic success	30.90%	30.00%	09.30%	20.70%	9.10%	4.44	0.712
<b>Average/Composite Mean</b>						<b>3.28</b>	<b>0.677</b>

**Source:** Computed from the Survey Data (\*SA: Strongly Agree, AG: Agree, NE: Neutral, DA: Disagree, SD: Strongly Disagree)

The participants agreed that the teamwork added value to the students (Mean=2.33, SD=0.622). Most of the participants agreed that the teamwork activities assist to develop self-confidence within them. This teamwork helps to solve problems in events and handle conflict situations (Mean=4.48, SD=0.722). It is seen that the overall impact of teamwork on the academic performance of LIS students is positive. It improves communication skills, interaction style, creative and logical thinking and also improves the quality of learning activities and process. 29.15% of participants strongly agreed that teamwork increases the spirit of cooperation and commitment to educational events. Also, 20.20% of participants strongly agreed that the administration of the teaching departments promotes teamwork among the students and inspires them to do teamwork tasks, activities and projects. It is seen that 11.70% of participants strongly disagreed with the statement (Mean=3.39, SD=0.699). 29.60% and 31.50% of participants strongly agreed and agreed that the Library and Information Science teaching departments of Sant Gadge Baba Amravati University,

Maharashtra organized team building activities regularly. The teamwork of the teachers has enhanced students' academic success (Mean=4.44, SD=0.712). On the other hand, 9.10% of respondents disagreed that the teamwork of the teachers has enhanced students' academic success.

The composite mean of 3.28 and standard deviation of 0.677 indicate a generally positive view among students about the impact of teamwork, though the extent of agreement varies across specific dimensions. Activities fostering communication, conflict resolution, and enhanced learning are particularly valued. However, there is variability in how consistently team activities are organized or how much they are seen to add direct academic value. The total average mean for all 10 teamwork statements was 4.44 which indicated that there was teamwork and these teamwork activities positively influenced the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra.

### 5.5 Correlation for Teamwork and the Academic Performance of LIS Students:

The Pearson Moment correlation coefficient is used to identify the relation between teamwork and academic performance of LIS students. The calculation of

the scores using the correlation coefficient was one for teamwork as the independent variable and the academic performance of LIS students as a dependent variable. Table-4 shows the relationship between dependent and independent variables.

**Table 4.** Correlation for teamwork and the academic performance of LIS students

Teamwork	Academic performance of LIS students
Personal Correlation	.630**
Sig. (2-tailed)	.001
N	197

\*\*Correlation is significant at the 0.002 level (2-tailed).  $r = 0.630$ ,  $N = 197$ ,  $P < .01$

Table-4 shows the correlation between teamwork and the academic performance of LIS students. It is found that there is an association that is strongly positive i.e.  $r=.630$   $N=197$   $p<.01$ ) between the influence of teamwork and the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra. It has also been found that organizational teamwork can have a significant impact on students' performance. In the collaborative projects of teamwork, the cooperation between students and team leaders can improve communication, coordination, and decision-making, which can improve students' performance in complex teamwork activities. The findings support the idea that teamwork activities

such as collaborative learning, team-based projects, and group problem-solving have a meaningful and beneficial effect on the academic outcomes of LIS students.

### 5.6 Regression Analysis for Teamwork and the Academic Performance of LIS Students:

To show the level of influence of team work and whether it is a significant predictor of the academic performance of LIS students of Sant Gadge Baba Amravati University, Amravati, a coefficient of determination ( $R^2$ ) using regression analysis was used. The regression analysis is calculated and given in table-5.

**Table 5.** Regression analysis for teamwork and the academic performance of LIS students

Model Summary				
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	.630*	.612	.532	.461

\* Predictors: (Constant), Teamwork

Table-5 shows the regression analysis for teamwork and the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra, where the R value is at .0630 which shows a strong positive influence of teamwork on the academic performance of LIS students.  $R^2$  shows .612 on variations in the academic performance of LIS students caused by teamwork tasks, activities and projects. The regression analysis reveals that teamwork is a

significant predictor of academic performance among LIS students. The moderately high  $R^2$  value suggests that teamwork accounts for a considerable portion of students' academic success. These results reinforce the value of integrating collaborative and team-based learning practices in LIS education. To measure significant predictors of the academic performance of LIS students, an ANOVA test was done. The ANOVA test is shown in Table-6.

### 5.7 ANOVA of Teamwork and the Academic Performance of LIS Students

**Table 6.** ANOVA of teamwork and the academic performance of LIS students

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.78	1	51.78	108.226	.000**
	Residual	88.142	196	.449		
	Total	139.922	197			

\* Dependent Variable: Academic performance of LIS Students

\*\* Predictors: (Constant), Team work

From Table-2 it is seen that,  $[F(1, 196) = 108.226, P < .05]$  which clearly indicates that teamwork influences the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra. A significant predictor has therefore been realized in this case and influences seen. The ANOVA results validate that the regression model is statistically significant. This confirms that teamwork is an effective predictor of academic success among LIS students, as the variation in academic performance is significantly accounted for by teamwork-related activities. It has been found that teamwork influences the academic performance of LIS students of Sant Gadge Baba Amravati University, Maharashtra.

## 6. Conclusions

This research study explored the role of teamwork in influencing the academic performance of Library and Information Science (LIS) students at Sant Gadge Baba Amravati University, Maharashtra. The findings showed a positive correlation between teamwork and academic performance. Team-based tasks, collaborative projects, and group activities had a strong and beneficial impact on student learning. Teamwork helped students build self-confidence, manage conflicts, and develop communication and problem-solving skills, which are vital in their future careers as librarians and information professionals (Mathieu et al., 2019; Salas et al., 2015). A strong correlation coefficient ( $r=0.630$ ) confirmed that teamwork significantly improved students' academic outcomes. Communication, interaction, and the quality of learning also improved due to effective teamwork. The LIS department should encourage collaboration among faculty in lesson planning and curriculum development to further enhance team-building among students. This approach supports a cooperative learning environment and helps build trust among Knowledge Resource Center (KRC) staff. Teamwork also increases students' participation in educational events such as seminars, workshops, and conferences (Jogdand & Jadhav, 2022).

Collaborative learning is especially beneficial in professional Master's programmes, as it allows students to share their experiences and learn from each other (Oliveira et al., 2011). The study also found that both the LIS department and affiliated colleges promote teamwork and regularly organize team-building activities. Students took part in initiatives like developing outreach programmes and training users in OPAC and WEBOPAC. These experiences

helped them build leadership and professional skills. Overall, teamwork including shared goals, joint decision making, and collaborative tasks played a key role in the academic success and career readiness of LIS students (Brun & Leontyeva, 2021; Gonzalez-Montesinos et al., 2021). Hence, it is concluded that teamwork tasks, activities, collaborative projects, cooperative decision-making, shared objectives, and successful teamwork techniques were crucial for LIS students to achieve their career goals and enhanced leadership qualities.

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