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ANALYZING THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT PRACTICES AND ACADEMIC PERFORMANCE AMONG BSIS STUDENTS: A PEARSON CORRELATION STUDY

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ABSTRACT

This paper investigates the relationship between knowledge management (KM) practices and the academic performance of second-year BSIS students. The higher education institutions, like Dr. Filemon C. Aguilar Memorial College of Las Pinas, which is located at Pamplona 3, Las Pinas City, increasingly point out the importance of effective knowledge management to deliver effective learning to the students, specifically to 2nd-year BSIS students. Knowing how knowledge management practices influence academic success becomes a very relevant factor to incorporate this process into the academic activities of the students. This research focuses on how these knowledge management dimensions, including knowledge creation, storage, sharing, and application, examine their correlation with students' academic performance indicators, such as their Grade Point Average (GPA). A quantitative approach is used to gather data through questionnaires distributed to the respondents (2nd-year BSIS students). The statistical analysis provides significant explanations if there is a positive correlation between the knowledge management practices and the students' academic performance, suggesting that students who actively engage in knowledge management behaviors perform better academically. The findings prove the role of KM as a

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potential academic enhancer and point to the need for institutions to cultivate supportive environments for KM practices. We discuss suggestions for educators and policymakers to enhance student results by strategically integrating KM.

Keywords: *knowledge-management, academic-performance, grade-point-average, correlation, knowledge-creation*

INTRODUCTION

The fast-paced innovations provided to higher education and the strategic management of knowledge join together to emerge as the factors influencing students' success to their academic performance. As institutions like Dr. Filemon C. Aguilar Memorial College of Las Piñas (DFCAMCLP), located in Pamplona 3, Las Piñas City, continue to focus on academic excellence, learning the role of knowledge management (KM) in shaping students' ability and enhanced their academic performance becomes increasingly vital. The Google Workspace is the official tool and LMS of the institution. It all started to be used during the time of the pandemic, when the institution decided to shift from face-to-face modality to online modality. Ever since, the institution has utilized these tools, even after the institution decided to return to the face-to-face modality. The institution sees the advantages of using these tools and how beneficial they are to the needs not only of students but also of academic and non-academic staff of the institution. This study explores the relationship between KM practices specifically knowledge creation, storage, sharing, and application and the academic

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performance of second-year Bachelor of Science in Information Systems (BSIS) students. Integration of a quantitative research approach and utilizing Pearson correlation analysis, the study examines how active engagement in KM behaviors correlates with students' GPA. The findings will reveal a significant relationship, focusing on KM as a potential academic enhancer. These results highlighted the importance of adopting environments that support effective KM strategies and offer valuable insights for educators and institutions aiming to improve student outcomes through structured knowledge management

Hypothesis:

There is a significant relationship between knowledge management (KM) practices and the academic performance (GPA) of second-year BSIS students at DFCAMCLP.

Strength of Relationship

Very Weak Relationship - There is little to no linear relationship between the KM practices to the academic performance of 2nd Year BSIS students

Weak Relationship - A slight linear trend is observable, but it's not strong or reliable relationship between the KM practices to the academic performance of 2nd Year BSIS students

Moderate Relationship - There is a noticeable linear relationship, moderate in strength of relationship between the KM practices to the academic performance of 2nd Year BSIS students

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Strong Relationship - The two variables move closely together in a consistent direction.There is a strong of relationship between the KM practices to the academic performance of 2nd Year BSIS students.

These hypotheses align with the study's focus on examining how various components of KM influence the 2nd year BSIS students success, and they can be tested using the Pearson correlation method as stated.

METHODOLOGY

This outlines the method used in how the needed data of the study would be gathered and analyzed in order to meet the objectives and goals of the study.

Research Design

The researcher employed a descriptive research approach, gathering and applying data analysis and research questions to the study. Descriptive studies is conducted where the researcher interacts with the participants and involved them to responds to surveys or interviews to collect the necessary information. The responds of the participants is used to evaluate if knowledge management practices have a relationship to the academic performance of 2nd-year BSIS students. The purpose of descriptive research is to observe, describe, and document aspects of a situation as it naturally occurs and to collect data that will describe individuals, groups, or situations.

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The researcher will use survey methods to evaluate if KM practices have a relationship to the academic performance of the 2nd-year BSIS students based on KM awareness, KM in academic activities, the impact of knowledge management on academic performance, and the perceived relationship between knowledge management and academic success.
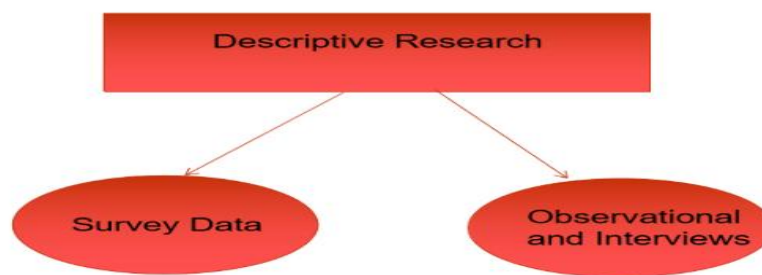
Participants

The participants of this study are 2nd-year BSIS students who used knowledge management practices and utilized tools such as the Google Workspace. The sample consists of 152 enrolled 2nd-year students under the program of Bachelor of Science in Information System(BSIS) and consist of 5 sections.

Section 2	19 students
Section 3	41 students
Section 4	30 students

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Section 5	39 students
Section 6	23 students
Total	**152 Students**

Data gathering:

The data collection process will involve multiple sources:

Survey—an instrument used to distribute to BSIS students to gather responses and information prior to their use of knowledge management practices and the result of their academic performances.

Interview—The researcher will conduct interviews with people with knowledge and experience in the study. Most interviews are non-formal.

Internet. The World Wide Web is the most powerful tool for retrieving information from all corners of the planet. The researcher made use of this advantage in getting all the needed information, supporting facts, and guidelines that were needed in the study. Website addresses were listed in the appendices for reference purposes.

Observation. Keen observation can be a useful tool in gaining partial knowledge. The researcher will apply this tool to the students who are the main participants in this study by

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means of their experiences in using the knowledge management practice in their academic activities.

Project Performance Metrics

This metrics used to analyze the relationship of knowledge management practice to the academic performance of 2nd year BSIS Students.

- **KM Awareness.** This metric evaluates how familiar students are with the concepts, tools, and practices of knowledge management.

- **KM in Academic Activities**. This measures how often and effectively students incorporate KM practices in their academic work.

- **Impact of KM on Academic Performance.** This assesses the relationship between KM engagement and students' GPA

- **Perceived Relationship Between KM and Academic Success.** This measures students' belief in the effectiveness of KM in improving their academic outcomes.

Data Analysis :

The collected data will be analyzed using the following steps:

- **Weighted Mean** was used to determine the weight of the frequencies observed on the gathered data. The researcher will employ this statistical method. The following table is the corresponding interpretation of the gathered weighted means.

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Weighted Mean Value Corresponding Interpretation

4.21-5.00 Strongly Agree(SA)

3.41-4.20 Agree(A)

2.61-3.40 Uncertain(U)

1.81-2.60 Disagree(D)

1.00-1.80 Strongly Disagree(SD)

The Pearson Correlation Coefficient is a statistical method used to measure the relationship or association between two continuous variables. The value of correlation coefficient varies +1 and -1 , a value of + and - 1 indicates the perfect degree of association of two variables while correlation that goes value 0,the relationship between two variables will be weaker.

r-value	Strength of Relationship
r < 0.30	None or Very Weak Relationship
0.30 < r < 0.50	Weak Relationship
0.50 < r < 0.70	Moderate Relationship
r > 0.70	Strong Relationship

Table 1. Pearson Correlation Strength of the r-value

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In this case, the second year BSIS students currently used knowledge management practice to their academic task will assess the relationship of this practice to their academic performance based on KM awareness, KM in academic activities, the impact of knowledge management on academic performance, and the perceived relationship between knowledge management and academic success.The weighted mean of the participants responds based on its level will be measure based on the strength of the relationship between the level and the outcome of the academic performance of the second year BSIS students in their current enrolled course.

Pearson Correlation Coefficient

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

Figure 1. Pearson Correlation Coefficient

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RESULTS AND DISCUSSION

The information gathered was presented, analyzed and interpreted from the instruments used as conducted in this study. The survey questionnaires was given to the respondents in order to analyze the relationship of knowledge management practice to the academic performance of 2nd year BSIS. These questionnaires were tabulated, computed using the Pearson Correlation analysis, documented to determine the feasibility and effectiveness of the research.

The questions were grouped and analyzed based on KM awareness, KM in academic activities, the impact of knowledge management on academic performance, and the perceived relationship between knowledge management and academic success and their Academic performance(Final Grade in current enrolled course) will be computed by the use of Pearson Correlation.

The results were presented in tabular form as well in a textual form intended for comprehension.

Table 2

Summary Responses of Second Year BSIS Students' in

Level of Knowledge Management Awareness

ITEM	Weighted Mean

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Q1. I am familiar with the concept of Knowledge Management (KM) and its practices.	**3.6645**
Q2. I actively engage in sharing academic resources and knowledge with my peers.	**4.1974**
Q3. I used Knowledge Management tools (e.g., online databases, collaborative platforms) to assist in my academic learning	**4.0724**
Q4. I believe that the ability to effectively manage and organize knowledge is essential for academic success.	**4.5789**
Q5. I often collaborate with classmates to exchange knowledge and resources for assignments or projects.	**4.26312**

Table 3

Result of the Relationship of knowledge management practice of

Second Year BSIS Students to their Academic Performance

Level of Knowledge Management Awareness

r-value	Strength of Relationship
r < 0.30	None or Very Weak Relationship
0.30 < r < 0.50	Weak Relationship
0.50 < r < 0.70	Moderate Relationship
r > 0.70	Strong Relationship

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Section	Average Grade	Average Mean	Pearson Correlation R-value	Strength of Relationship
2	89	4.0210526		
3	90.43902439	4.2243902		
4	89.20689655	4.4137931	0.554728065	
5	85.61538462	3.9846154		MODERATE RELATIONSHIP
6	89.17391304	4.0869565		
Total Average	88.68704372	4.1461616		

Based on the above table, the overall result of the correlation of the KM practices to their academic performance based on KM awareness with a total average mean grade of 88.687 and an R-value of 0.554728065 makes the strength of the relationship moderate. Across Sections 2 to 6, a moderate and consistent pattern exists in which better-performing students (based on their grades) also tend to achieve higher scores in the secondary metric, which may be GPA or an evaluation score. The Pearson R-value of 0.5547

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confirms that this moderate, positive relationship is strong enough to suggest a connection,

but it is not definitive.

Table 3

Summary Responses of Second Year BSIS Students' in Level of Knowledge Management in Academic Activities

ITEM	Weighted Mean
Q1. Knowledge Management practices, such as sharing resources and collaborating on projects, have improved my academic performance.	4.48
Q2. I frequently use online knowledge-sharing platforms (e.g., forums, group chats, shared drives) to enhance my academic work.	4.07
Q3. The integration of Knowledge Management tools in my courses has positively affected my ability to understand the subject matter	**4.22**
Q4. My professors encourage the use of Knowledge Management practices to facilitate academic learning.	**4.24**

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Q5. I believe that Knowledge Management practices, such as proper information organization, help me perform better in my assignments and exams.	4.46

The questions were distributed to BSIS students who utilize to use knowledge management practice to their academic activities. The survey used to gathered data and computed the mean and standard deviation to the responds of the respondents in terms of the relationship of KM practices to the academic performance of the students are computed based on the statistical treatment stated. The following are the discussion of results features.

The results were presented in tabular form as well in textual from intended for comprehension.

Table 4

Result of the Relationship of knowledge management practice of

Second Year BSIS Students to their Academic Performance

Level of Knowledge Management in Academic Activities

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r-value	Strength of Relationship
r < 0.30	None or Very Weak Relationship
0.30 < r < 0.50	Weak Relationship
0.50 < r < 0.70	Moderate Relationship
r > 0.70	Strong Relationship

Section	Average Grade	Average Mean	Pearson Correlation R-value	Strength of Relationship
2	89	4.2		
3	90.43902439	4.3415		
4	89.20689655	4.4552	0.690998347	
5	85.61538462	4.1436		MODERATE RELATIONSHIP
6	89.17391304	4.3391		
Total Average	88.68704372	4.2959		

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Based on the above table, the overall result of the correlation of the KM practices to their academic performance based in Academic Activities with a total average mean grade of 88.687 and an R-value of 0.690998347 makes the strength of the relationship moderate. The R-value of 0.6910 indicates a moderate to strong positive linear relationship, This means that as the Average Grade increases, the Average Mean tends to increase as well.There is a moderate to strong positive relationship between Average Grade and Average Mean which confirms that this moderate, positive relationship is strong enough to suggest a connection, but it is not definitive.

Table 5

Summary Responses of Second Year BSIS Students' in

Level of Impact of Knowledge Management on Academic Performance

ITEM	Weighted Mean
Q1. Using Knowledge Management tools helps me complete assignments more efficiently.	4.355263158
Q2. I perform better in group projects due to effective Knowledge Management practices like collaboration and knowledge-sharing	4.302631579

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Q3. I feel that applying Knowledge Management strategies has directly contributed to improving my grades	4.355263158
Q4. The exchange of knowledge with peers has positively impacted my understanding of complex academic concepts	4.434210526
Q5. The use of Knowledge Management practices has made my study process more organized and effective	4.401315789

Table 6

Result of the Relationship of knowledge management practice of

Second Year BSIS Students to their Academic Performance

Level of Impact of Knowledge Management on Academic Performance

r-value	Strength of Relationship
r < 0.30	None or Very Weak Relationship
0.30 < r < 0.50	Weak Relationship
0.50 < r < 0.70	Moderate Relationship
r > 0.70	Strong Relationship

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Section	Average Grade	Average Mean	Pearson Correlation R-value	Strength of Relationship
2	89	4.178947368		
3	90.43902439	4.336585366		
4	89.20689655	4.427586207		
5	85.61538462	4.143589744	0.683964863	
6	89.17391304	4.32173913		MODERATE RELATIONSHIP
Total Average	88.68704372	4.281689563		

Based on the above table, the overall result of the correlation of the KM practices to their academic performance based on the Impact of Knowledge Management on Academic Performance with a total average mean grade of 88.687 and an R-value of 0.683964863 makes the strength of the relationship moderate. This demonstrates a moderate positive correlation between student grades and their mean scores and total averages further support that students are performing well, with minor variation across sections.

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Table 7

Summary Responses of Second Year BSIS Students' in

Level of   Perceived Relationship Between

Knowledge Management and Academic Success

ITEM	Weighted Mean
Q1 . I believe that effective Knowledge Management practices have a strong positive impact on my academic performance.	4.210526316
Q2. There is a clear connection between the use of Knowledge Management tools and my academic success	4.223684211
Q3. I think my academic performance would decline if I did not engage in Knowledge Management practices (e.g., sharing resources, collaboration).	4.282894737
Q4. I believe that students who apply Knowledge Management practices perform better academically than those who do not.	4.447368421

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Table 8

Result of the Relationship of knowledge management practice of

Second Year BSIS Students to their Academic Performance

Level of   Perceived Relationship Between

Knowledge Management and Academic Success

r-value	Strength of Relationship
r < 0.30	None or Very Weak Relationship
0.30 < r < 0.50	Weak Relationship
0.50 < r < 0.70	Moderate Relationship
r > 0.70	Strong Relationship

Section	Average Grade	Average Mean	Pearson Correlation R-value	Strength of Relationship
2	89	4.144736842		
3	90.43902439	4.365853659	0.562541968	
4	89.20689655	4.318965517		

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5	**85.61538462**	4.185897436		
6	**89.17391304**	4.206521739		MODERATE
Total Average	**88.68704372**			RELATIONSHIP
		4.244395039		

Based on the above table, the overall result of the correlation of the KM practices to their academic performance based on the perceived relationship between knowledge management and academic success with a total average mean grade of 88.687 and an R-value of 0.562541968 makes the strength of the relationship moderate. This shows a moderate positive linear relationship between students' grades and their mean scores in Section 2 to Section 6. A Pearson R-value of 0.563 suggests that as grades increase, the mean score tends to increase too, but the relationship is not strong or perfect. It shows a moderate positive correlation between average grade and average mean. The overall scores are relatively high and consistent, implying uniform academic performance across sections.

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Summary of Findings, Results and Conclusion

The findings of the investigated study are based on the relationship between knowledge management (KM) practices and academic performance, analyzing data of 2nd-year BSIS Section 2 to Section 6. The metrics include the average grade, average mean, and Pearson correlation coefficient (R-value). Each of the areas of KM practice was proven correlated with 2nd-year BSIS students' academic performance have a moderate relationship with KM practice areas that influence the learning outcomes of the students.

The four KM dimensions indicate a moderate positive correlation with academic performance. The strongest correlation was in KM in Academic Activities with R = 0.6910. This suggested that engaging in KM activities has a big influence on the academic performance of the students. The Impact of KM on Academic Performance (R = 0.6840) also indicated a moderate to strong connection. Lastly, the weakest correlation, though still moderate, was seen in KM Awareness (R = 0.5547) and Perceived Relationship (R = 0.5625). This proves that simply being aware of KM is helpful but less impactful compared to active engagement. Overall, the average grade remains consistently high (88.687) across sections, with minimal variation, showing that students are generally performing well.

The findings suggest that knowledge management practices are moderately associated with better academic performance. There is a consistent pattern: students who perform well academically tend to score higher in KM-related assessments, whether through awareness, engagement, or perceived value. On the other hand, while the correlation is not strong enough to imply causation, it is sufficient to suggest a meaningful connection that warrants further

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exploration. Educational institutions may benefit from integrating and promoting KM practices,

particularly within academic activities, as they show the strongest link to student success.

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