

Impacts of Knowledge Management on Proposal Win Rate, Time to Create Proposals and Utilization of Resources: An Empirical Analysis

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Abstract

Purpose: Proposal management (PM), a process that involves generating and managing proposals for contracts before presenting them to potential clients, can be enhanced and streamlined through effective knowledge management. This research paper explores the influence of knowledge management practices on Proposal win rates and resource utilization within organizations that frequently engage in Proposal management.

Design/Methodology: The study, which uses a "mixed-methods approach", presents both qualitative and quantitative evidence illustrating the importance of effective information management in boosting Proposal success, reducing proposal creation time, and optimizing resource allocation. The survey was sent to around 500 professionals and 101 responses were received. 30 interviews were conducted which provided in-depth insights about the topic. Reliability analysis and Paired T-test were conducted to test the hypothesis.

Findings: The descriptive and empirical analysis demonstrated that the implementation of knowledge management software significantly increases the win rate ($p=0.000$), reduces the "average team size" ($p=0.000$), and reduces the time to create a proposal by leveraging the reusability of data ($p=0.000$) indicating increased efficiency with tools such as Microsoft SharePoint which is the most widely leveraged tools among respondents.

Originality/Value: This study enriches existing literature by empirically demonstrating the impact of efficient knowledge management on tendering/bidding procedures, a matter of great importance to companies and members involved in these selling processes. Second, this research provides a correlation between knowledge management, win rate, time, and resource utilization which have not been studied earlier.

Keywords: Proposal Management, Knowledge Management, Tendering Process, Efficiency, Resource Utilization, Win Rate

Introduction

Proposal management (PM) is a function within Sales & Marketing, Presales to be precise (Philbin, 2008; Whitley, 2006). Management of a proposal is not only about creating and sharing a solution, product, or pricing to the customer (Wong & Goh, 2022). It involves providing a value proposition that will not only alleviate his pain points but will provide value to the customer. This includes conducting bid/no bid decisions, requirement fit analysis, creating a solution or pitching product, creating a pricing, and identifying risk and risk mitigation during project/product delivery (Lin & Chen, 2004; Philbin, 2008; Stader, 1997).

Knowledge Management is collecting and collating all the information in a central place with proper tagging so that it can be reused in future proposals. Knowledge tools, existing repositories, past proposals, and different department repositories can help build knowledge management for an organization (Philbin, 2008).

The study commences with a thorough examination of the literature on Proposal management and knowledge management, establishing a comprehensive theoretical framework that guides the research. This discussion lays the groundwork for knowing the intricate association between "Knowledge management" (KM) practices, Proposal win rates, time, and resource utilization.

This research reconnoiters the important role of knowledge management in Proposal management processes, concentrating on its impact on Proposal win rates and the utilization of resources. The goal is to unveil the dynamics and intricacies of how effectively managing

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knowledge can enhance the chances of winning Proposals and optimize resource use in organizations.

In the modern business environment, organizations frequently participate in tendering processes to secure contracts. (Kreye, Newnes & Goh, 2013) As these processes often involve substantial competition, organizations must develop strategies to enhance their chances of success. One such strategy is effective knowledge management, which includes the systematic production, distribution, and use of knowledge during the tendering process (Philbin, 2008). The importance of this practice has been underscored by numerous studies, yet

empirical evidence quantifying its impact on Proposal win rates and resource utilization remains scant.

Literature Review

Every company wants to sell its products, services, or solutions in order to grow its business and revenue. In the business world, bids and proposals are used to address demands by giving solutions and selling a company's goods or services. A proposal management process is used by businesses to facilitate, coordinate, and manage the processes required to submit proposals (Sanli, 2023).

Table 1: Definition of Proposal and Proposal Management

<i>Author(s)</i>	<i>Definition</i>
(Jaques, 2013) p. 3	"The written response document submitted by the supplier in response to the tender document is the Proposal."
(Nickson, 2003) p. 2	"A Proposal is an approach to a client in order to gain significant new or repeat business. It is also a collection of information, including a price and costs, out together often by a team to support a business case."
(Wong & Goh, 2022)	"Proposal management is an important presales process that involves not just pricing but also determining requirement fit and managing ambiguities."
(Kadre S., 2011)	"Proposal management is a vital... that provides copywriting, administration, and technical resources to the salesperson to ensure the quality of proposal documentation and presentations. ...is proposal to client that meets that client's business and cost objective, while minimizing business risks and maximizing profit margins."
(Tolmie, 2010)	"In summary, this amounts to everything from assessing whether an opportunity is worth pursuing; bringing together the necessary resources to be able to understand what an appropriate response to an RFP might look like; and then bringing together the same or additional resources to ensure the response is actually written and made good."

The above Table 1 provides definitions of Proposal Management provided by various authors. Because of its knowledge-concentrated features, complexity, usage of remote resources and teams, and emphasis on both repurposing and development of new information, Proposal management was viewed as a viable topic to investigate for the usage of knowledge management (Tolmie, 2010).

The Proposal manager is the captain of the ship. The Proposal manager brings together various stakeholders to first qualify the proposal and then build a winning

proposal with the help of different functions like delivery, Subject matter expert, product owner, architect, legal, contracts, HR, and others (Philbin, 2008). It is a collaborative effort and cannot be achieved working in siloes.

"Knowledge Management" (KM) is the process of effectively managing an organization's knowledge artifacts. (Rodrigues & Mathew, 2019) Leveraging an active Knowledge Management system or process has shown to benefit companies in terms of enhancing performance, making faster decisions, and learning (Liebowitz, 1999).

Table 2: Knowledge Management Definitions

<i>Author(s)</i>	<i>Definition</i>
(Girard & Girard, 2015)	"Knowledge management (KM) is the collection of methods relating to creating, sharing, using and managing the knowledge and information of an organization."
(O'Dell & Grayson, 1998)	"Knowledge Management is therefore a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance."

Author(s)	Definition
(Macintosh, 1999)	“Knowledge management involves the identification and analysis of available and required knowledge assets and knowledge asset related processes, and the subsequent planning and control of actions to develop both the assets and the processes so as to fulfil organizational objectives.”
(Hernandez, Liang, Prescott, & Kirch, 1999)	“KM is a newly emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the firm, including knowledge creation, codification, sharing, and how these activities promote learning and innovation.”
(Knowledge Management IT Process Wiki, 2014)	“Knowledge Management aims to gather, analyze, store and share knowledge and information within an organization. The primary purpose of Knowledge Management is to improve efficiency by reducing the need to rediscover knowledge.”

The above Table 2 provides definitions of Knowledge Management which are adapted from (Girard & Girard, 2015).

Organizations employ a wide range of knowledge management techniques and practices to identify, develop, depict, share, and facilitate the adoption of what they know and how they know it. These methods and practices frequently entail the development, storage, and propagation of knowledge using information technology (IT) systems such as databases and networks.

Knowledge management is especially important in the context of Proposal management or proposals. Proposal management entails developing proposals for contracts and overseeing the submission process to potential clients. A solid knowledge management system can help to increase the process’s efficiency and effectiveness. One of the most important ways to accomplish this is to use knowledge from previous Proposals to inform future ones, determining which techniques were successful and which were not, and using this information to better future Proposals.

Proposal management (PM) has been examined from a “knowledge management” viewpoint by “(Apostolou & Mentzas, 2003)”. Their research indicated that best practices in tendering can be enhanced through regular evaluations of the Proposal process. This requires the active involvement of Proposal management specialists to consolidate their perspectives into effective practices. To complement this, appropriate information systems and technologies, such as shared discussion boards and databases, should be provided to aid in the maintenance and extension of the tendering knowledge base. It is important to note that a significant portion of this knowledge may be implicit rather than explicit, as discussed in “(Barney, 1991)”.

Apostolou and Metzas acknowledge the challenges associated with collating inferred knowledge in Proposal management and Proposal best practices. This recognition highlights the difficulties that numerous organizations face when attempting to improve their corporate knowledge databases, systems and related management procedures “(Coff, 2006)”.

It encompasses several key activities (Brown, 2023):

- *Knowledge Creation:* This includes developing and documenting new knowledge derived from the experiences and insights gained during the tendering process. This might involve creating templates for proposals, documenting successful strategies, past performances, case studies, reusable proposal content, graphics, or recording lessons learned from unsuccessful Proposals.
- *Knowledge Storage:* Properly archiving and categorizing knowledge is crucial for easy retrieval and application. This could involve creating databases or repositories that store relevant information such as past Proposals, competitor analysis, pricing strategies, and customer preferences.
- *Knowledge Sharing:* This involves ensuring that relevant knowledge is accessible and easily shared among team members. This can be facilitated through intranet portals, regular meetings, training sessions, or collaborative platforms.
- *Knowledge Application:* This is the process of leveraging stored and shared knowledge to inform decision-making in the tendering process. This could involve using past data to inform pricing strategies, using past Proposal templates and content to craft new proposals and case studies, or applying lessons learned from previous Proposals to current ones.

Knowledge management, within the context of Proposal management or proposal development, is the systematic approach to capturing, organizing, and utilizing the collective knowledge and experience of an organization to improve the efficiency, accuracy, and success rate of its bidding processes. A well-implemented KM strategy can enhance performance, foster creativity, and enable organizational learning when equipped with the correct tools (Zendesk, 2023).

Case Study of Effective Knowledge Management

Adapted from a study conducted and published by (Saxena & Karkhanis, 2015).

Atos, a leader in IT and digital services companies' sales representatives had visited a potential customer and marketed their Application Management (AM) services. The customer requested that they respond with a proposal the following day. While this was a one-time event, the Proposal and Deal Solution team rose to the challenge of providing the customer with a full-fledged proposal in less than 24 hours.

The knowledge management system (KMS) proved to be a godsend for the teams, who were able to respond to the customer within 24 hours by repurposing the knowledge assets housed in the global database with its easy-to-navigate taxonomy. In general, up to 60% of Proposal response content is available in the KMS, resulting in up to 40% time savings when responding to client RFPs compared to last year.

Apart from the potential value that technologies like generative Artificial Intelligence can bring in department of functions wise use cases, Information technology has the potential to create and bring value to an entire company or institutions by transforming internal KMS (Chui et al., 2023).

Effective knowledge management can provide several benefits to the tendering process. It can improve the efficiency of Proposal development, reduce turnaround time, increase the accuracy of proposals, and potentially enhance the win rate of Proposals by leveraging past experiences and insights. Knowledge management can also foster a philosophy of unceasing learning and enhancement within the organization, as individuals and

teams are encouraged to share, apply, and learn from collective knowledge.

In an increasingly competitive and complex bidding environment, effective knowledge management can provide a significant strategic advantage by enabling organizations to learn from their past, adapt to the present, and prepare for the future. Therefore, understanding and implementing knowledge management practices in Proposal management is of utmost importance to organizations aiming for continuous growth and success. It has been observed that knowledge management affects win rate, time, and resource utilization; however, there is no empirical study has been conducted to prove its significant impact. This study will try to study the association between "knowledge management" and its effect on "win rate", "time", and "resource utilization".

Research Purpose and Objective

The purpose is to examine and quantify the impact of effective knowledge management practices on the win rates of Proposals, time spent by stakeholders on creating proposals, and the utilization of resources in the Proposal management process. The study aims to offer a robust empirical analysis that explores the correlation between knowledge management and Proposal outcomes, ultimately providing insights that could help organizations optimize their proposal management strategies and resource utilization.

Objectives of the Research

- To conduct a comprehensive literature review on Proposal management, Knowledge management, and knowledge management in Proposal management.
- To collect and examine data from organizations that engage in Proposal management to study the impact of their knowledge management practices on Proposal outcomes (win rate), time reduction, and resource utilization.
- To identify specific knowledge management tools that are mostly used in the industry.
- To contribute to the academic literature on Proposal management by providing a comprehensive empirical study of the effect of knowledge management on Proposal outcomes and resource utilization.

Significance

Practical Significance

From a practical standpoint, this study delivers actionable insights for professionals involved in business development, sales enablement, and proposal management. As organizations increasingly seek efficiency and agility in competitive bidding environments, this research helps them understand how investing in structured KM repositories and practices can yield measurable benefits.

Specifically, the findings:

- Help organizations optimize resource allocation by quantifying the reduction in manpower and time due to KM systems.
- Demonstrate how KM tools contribute to higher proposal win rates, thus directly impacting revenue.
- Provide guidance on implementing and standardizing KM systems to improve bid quality and reduce redundancy.
- Inform policy and strategy development at both the enterprise and industry levels.
- In essence, the study not only contributes to academic knowledge but also serves as a decision-making tool for leaders aiming to enhance operational effectiveness in proposal management.

Academic Significance

This research makes a meaningful academic contribution by addressing a noticeable gap in the literature regarding the measurable impacts of Knowledge Management (KM) on critical performance metrics—such as proposal win rate, time efficiency, and resource utilization—within the context of bid/proposal management in the IT industry. While KM has been studied extensively in broader organizational and operational contexts, its specific influence on proposal development and bid functions remains underexplored, especially through empirical, statistically validated frameworks.

This study:

- Offers a theory-driven conceptual framework linking KM practices with proposal performance outcomes.

- Applies quantitative analysis (e.g., regression, paired t-tests) to assess the strength and nature of these relationships.
- Enhances the literature by contributing context-specific insights from the Indian IT sector, which is globally significant but underrepresented in KM-related bid research.

Research Methodology

Research Design

A research design is a method for testing the hypotheses or responding to the questions that sparked the investigation in the first place (Pinsonneault & Kraemer, 1993).

This study's research methodology combines exploratory and descriptive approaches to aid an understanding of the effect of knowledge management on Proposal win rates and resource utilization.

Qualitative procedures, such as in-depth interviews, are utilized in the exploratory phase of the research to get an initial grasp of the function of knowledge management in Proposal management. This phase is critical for identifying essential themes, issues, and concepts connected to Proposal management and knowledge management practices. It also aids in determining how these practices affect Proposal-win rates and resource utilization. The insights gained during this phase aid in the formulation of hypotheses and the planning of the succeeding descriptive phase.

Following the exploratory phase, the descriptive phase of the research takes a more systematic approach. To examine the hypotheses established in the exploratory phase, this phase primarily uses quantitative approaches such as surveys and statistical analyses. The goal is to provide a thorough and accurate account of how knowledge management practices affect Proposal win rates and resource utilization. This step entails gathering data from a bigger and more representative sample of Proposal management specialists. The data is subsequently analyzed statistically in order to draw significant findings and insights concerning the study problem.

Overall, this mixed-method research design facilitates a thorough study of the research topic, combining the depth of qualitative insights with the precision of quantitative

data to provide a holistic understanding of the role and impact of knowledge management in Proposal management.

The data gathering procedures for this study endeavor comprised contacting 101 respondents. It is assumed that they were professionals in these fields inside their organizations.

Primary Data

Primary data was collected through a combination of in-depth interviews, focus groups, and online surveys, allowing for a diverse range of insights to be gathered from industry professionals involved in Proposal management.

The in-depth interviews were used to gain a nuanced understanding of the experiences and perspectives of professionals who play key roles in the Proposal management process. To encourage respondents to offer detailed experiences and perspectives, open-ended questions were used. Depending on the practicality and preference of respondents, these interviews were performed face-to-face, over the call, or via virtual digital platforms. These interviews allowed for detailed exploration of how knowledge management practices are executed in their companies, and how these practices impact their Proposal win rates and resource utilization.

Finally, online surveys were used to gather information from a larger and more demonstrative sample of Proposal management professionals. Questionnaires/surveys were employed as the major data collection tool. Responses were gathered via Google Forms and a printed form. Closed-ended questions were included in the survey which were designed to capture measurable data on subjects such as the average time spent on each Proposal, win rate, and variations in these metrics post-knowledge management deployment. These surveys included a range of questions designed to measure the prevalence of different knowledge management practices, the perceived impact of these practices on Proposal win rates and resource utilization, and the factors influencing the implementation of these practices.

Secondary Data

Secondary data collection was carried out through an extensive review of existing literature on the topic, which

includes industry reports, academic research papers, case studies, and white papers. This review served to provide a broad context for the study, outlining the current state of knowledge management in Proposal management and proposal processes, and identifying the gaps and opportunities for further research.

Various reports, published literature, and search engines such as JSTOR, ResearchGate, Google Scholar, Shodhganga, and EBSCOhost (to name a few) were used to source relevant literature. Criteria for inclusion in the review were articles written in English, and specifically addressing the topic of knowledge management in Proposal management or proposal processes.

The secondary data provided critical insights into the theoretical frameworks, methodologies, and findings of previous studies, offering a foundation for the primary research. Moreover, it illuminated trends and challenges in the field, contributing to a better understanding of the practical implications of knowledge management in Proposal management.

Population

Industry professionals such as Proposal and Sales experts, and senior management who play significant roles in Proposal development and tendering processes, comprised the population for this study.

Sampling Method

The research employed a purposive sampling technique, a non-probability sampling method widely used in exploratory and applied research. In this approach, respondents were selected based on specific criteria relevant to the study's objectives, namely, their active involvement in bid/proposal management, sales, or knowledge management roles within IT organizations.

Purposive sampling was selected due to:

- The specialized nature of the topic.
- The limited number of experts familiar with both knowledge management systems and proposal processes.
- The need for practical insights from professionals directly involved in relevant functions.

Sample Size

The sample size of 101 experts from companies with a revenue of more than \$10 million or 25 personnel was considered. Large organizations have a more organized Proposal management process and the resources to devote in Knowledge Management. Moreover, as the study was business-to-business, it was difficult to recruit more respondents. Given the confidential and proprietary nature of many organizations’ Proposal management processes, gaining information and access to key decision-makers willing to provide in-depth perspectives was a laborious and difficult task.

Hypothesis

The primary hypotheses are:

- *H1*: Effective knowledge management in Proposal management and proposal processes significantly increases the Proposal win rates.
- *H2*: “Implementation of knowledge management” in Proposal management and proposal processes

leads to more efficient utilization of Team members.

- *H3*: “Implementation of knowledge management” in Proposal management and proposal processes leads to time savings.

These hypotheses are based on the assumption that knowledge management plays a vital role in the efficiency and success of Proposal management and proposal processes. The first hypothesis (H1) seeks to establish a positive relationship between knowledge management and Proposal win rates. The second hypothesis (H2) explores “the impact of knowledge management” on resource utilization within Proposal management and proposal processes. The third hypothesis (H3) explores “the impact of knowledge management” on time savings.

Data Analysis

The gathered data was organized and aggregated using Microsoft Excel. “Statistical Package for the Social Sciences” (SPSS) is a powerful tool for sophisticated statistical and data analysis, which was used in this study, and aided in the reliability analysis and paired t-tests.

Table 3: Results of Respondent Created by the Author

<i>Variable</i>	<i>Response</i>	<i>Frequency</i>	<i>Percentage</i>
Respondent Role	CEO/COO/CXO	8	8%
	Director	45	45%
	Manager	42	42%
	Consultant/ Analyst	5	5%
	Independent Coach	1	1%
Respondent Years of Experience	20+ years	21	21%
	Between 16 - 20 years	22	22%
	Between 11 - 15 years	29	29%
	Between 6 - 10 years	20	20%
	Less than 5 Years	9	9%
Company Revenue in Millions (M)	\$101M to \$500M	12	12%
	\$11M to \$100M	17	17%
	\$501M to \$1 Billion	2	2%
	\$1 to \$10M	1	1%
	Less than \$10M	8	8%
	More than \$1 Billion	50	50%
	Not Available	11	11%

Variable	Response	Frequency	Percentage
Average Deal Size in Millions (M)	\$101M to \$500M	12	12%
	\$11M to \$100M	17	17%
	\$501M to \$1 Billion	2	2%
	\$1 to \$10M	1	1%
	Less than \$10M	8	8%
	More than \$1 Billion	50	50%
	No response	11	11%
Do you use Structured Knowledge Management	Yes	90	89%
	No	11	11%

Data were gathered from 101 professionals involved in Proposal management. The above Table 3 shows a description of the respondents for this study. Based on the role, Respondents include 8% of top management such as the CEO, COO, and founders of the organizations, 45% at the Vice president and director level; and 42% at the managerial level. Based on the years of experience, 21% of the respondents have more than 20 years of experience, 22% have more than 16 years of experience and 29% have more than 6 years of experience. We can say that 72% of the respondents have more than 10 years of industry experience which shows that they have enough experience of what is Proposal management, and knowledge management and have the depth and breadth of experience required to substantiate this study. Based on the company revenue, 50% of the companies have more than \$1 Billion in revenue and 14% have more than \$100 Million in revenues which shows this companies have enough resources to focus on Knowledge management. 89% of the respondents confirmed that they use a structured knowledge management approach and are suitable to be part of this study.

Win Rate

Reliability Analysis

A “reliability analysis” was carried out, and the “Cronbach’s alpha” value is 0.905 as shown in Table 4 below. It signifies that the metrics employed in this investigation are internally consistent enough. This score runs between 0 and 1, with a higher number indicating better reliability.

Table 4: Reliability Analysis for Win Rate Created by the Author

“Cronbach’s Alpha”	“N of Items”
0.905	2

A “reliability analysis” using “Cronbach’s alpha” was performed to assess the internal consistency of the survey tool employed in this research. This type of analysis is important because it determines how closely related the survey items are and whether they effectively measure the same underlying concept. In essence, it evaluates the reliability of the questionnaire and its ability to produce consistent results over time. A reliable instrument strengthens the trustworthiness of the results, thereby enhancing the credibility and reliability of the study’s findings (Kite & Sinha, 2023).

Paired T-Test

The collected data was analyzed using the “paired t-test”, a statistical method employed to compare the means of two populations in the context of correlated samples. This particular test is valuable for evaluating whether enhancements made to a business process yield advantages. It allows for the comparison of performance measurements before and after implementing updates, assuming the data follows a normal distribution. By pairing set of responses from a single participant, we were able to explore the effectiveness of Proposal management and knowledge management within the same organization.

Applying the “paired t-test” aimed to ascertain whether the utilization of knowledge management in Proposal management had a significant influence on organizational

performance, as indicated by the survey parameters. This test helped determine whether the observed improvements (or losses) were statistically significant or merely a result of random variation.

The “paired t-test” is used to compare the means of two related groups to determine whether there is a statistically significant difference between them. According to the null hypothesis, the average difference between the paired samples is expected to be zero. If the p-value obtained from the test is less than the chosen significance threshold

(commonly 0.05), the null hypothesis is rejected, suggesting a meaningful difference exists between the groups (Kite & Sinha, 2023).

Participants were requested to provide their win rates prior to and following the implementation of knowledge management. Each set of responses reflected an individual’s experience before and after the adoption.

The author rejects Null Hypothesis for Hypothesis 1 (H1) as the “paired t-test” generated a “p-value” of 0.000 as shown in Table 5 below:

Table 5: Paired T-Test for Win Rate Created by the Author

Pair 1	“Paired Differences”				“t”	“df”	“Sig. (2-tailed)”
	“Mean”	“Std. Deviation”	“Std. Error Mean”	“95% Confidence Interval of the Difference”			
				“Lower”			
-17.050	11.998	1.194	-19.418	-14.681	-14.281	100	.000

Utilization of Resources

Reliability Analysis

The Cronbach’s alpha score is 0.724 in the Table 6 below which shows data is consistent and reliable.

Table 6: Reliability Analysis for Resources Created by the Author

“Cronbach’s Alpha”	“N of Items”
0.724	2

Paired T-Test

The participants were requested to provide the average number of resources or team members involved in the proposal both before and after the implementation of knowledge management. By conducting a paired t-test on this data, the resulting analysis revealed a p-value of 0.000, as presented in Table 7.

Consequently, the author rejects the Null Hypothesis for Hypothesis 2 (H2) based on this statistically significant p-value.

Table 7: Paired T-Test for Resources Created by the Author

Pair 3	“Paired Differences”				“t”	“df”	“Sig. (2-tailed)”
	“Mean”	“Std. Deviation”	“Std. Error Mean”	“95% Confidence Interval of the Difference”			
				“Lower”			
.360	.811	.081	.199	.521	4.442	99	.000

Time Spent on Proposal

Reliability Analysis

“Cronbach’s alpha” score is 0.954 as shown in Table 8 below which shows data is consistent and reliable.

Table 8: Reliability Analysis for Time Spent Created by the Author

“Cronbach’s Alpha”	“N of Items”
0.954	2

Paired T-Test

Participants were asked to provide information regarding the time spent on creating the proposal before and after the implementation of knowledge management. Utilizing

a paired t-test on this data, the analysis resulted in a p-value of 0.000, as presented in Table 9.

Therefore, based on this statistically significant p-value, the author rejects the Null Hypothesis for Hypothesis 3 (H3).

Table 9: Paired T-Test for Time Spent Created by the Author

Pair 2	"Paired Differences"					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	"95% Confidence Interval of the Difference"				
				Lower	Upper			
	12.812	23.913	2.379	8.091	17.533	5.385	100	.000

Findings

The research findings, derived from thematic analysis of qualitative data and quantitative data, underscore the criticality of knowledge management in Proposal management. The study reveals that effective knowledge management practices can significantly enhance Proposal-win rates, optimize the utilization of resources, and reduces the time required to create a proposal.

Out of the total respondents, 90% use structured knowledge management. It takes a lot of investment and resources to build and maintain structured knowledge management and hence organizations with enough resources spent time and money to create it. Smaller companies cannot afford to create and manage structured knowledge management.

- **Win Rate:** The analysis resulted in a "p-value" of 0.000, which falls below the standard significance level of 0.05. This suggests a statistically significant difference in win rates before and after the adoption of knowledge management. Therefore, it can be concluded that implementing knowledge management has substantially improved the win rates of companies that utilize it.
- **Time Savings:** The analysis produced a "p-value" of 0.000, which is below the 0.05 threshold, signifying a statistically significant difference in the time taken to create a proposal before and after the implementation of knowledge management. Hence, we can conclude that because of knowledge management time spent on the creation of proposals

has been greatly reduced.

- **Reduced Resources and Increased Efficiency:** The analysis yielded a "p-value" of 0.000, which is below the 0.05 significance threshold, indicating a statistically significant change in the number of team members involved in proposal development before and after implementing knowledge management. This suggests that the adoption of knowledge management has reduced the number of resources needed, pointing to enhanced efficiency and lower personnel requirements per proposal.

65% of the respondents use Microsoft SharePoint and 11% use the company's internal tool. Other tools used were Dropbox, Google Drive, and Qvidian. Microsoft has the edge over other tools as it provides SharePoint in addition to its MS Office suites as part of Office 365 package. It offers a range of features and benefits that support effective collaboration, information sharing, Search and discovery, security and permission, integrations with other Microsoft tools, workflows and automation, scalability, and document management. Companies using Google Suites generally use Google Drive.

Limitations of the Research

This paper outlines the implications of the findings for both theory and practice and proposes future research in this area. It calls for further exploration of the different dimensions of knowledge management in Proposal management and their differential impacts on Proposal success and resource use.

In every research study, there are invariably some limitations, and acknowledging these is an important part of the research process. Here are some potential limitations of the study on the impact of knowledge management on Proposal management and proposal processes:

- *Sample Size and Composition:* If the sample size is small (e.g., 101 professionals and 30 in-person interviews), the study's findings may not represent larger population of professionals in the field of Proposal management. The sample's composition could also be a limitation if it does not adequately represent the diversity of roles, industries, or geographical locations in the field of Proposal management.
- *Reliance on Self-Reported Data:* A significant portion of the study is based on self-reported information, including estimates of time saved through the use of a knowledge management system. Such data may be prone to bias, as respondents could either exaggerate or undervalue their actual time savings.
- *Limitations of the Measures:* The measure of time saved is a broad estimate, and it might not capture the nuances of how the use of a knowledge management system impacts efficiency and productivity. For instance, quality of work, stress levels, and the ability to meet deadlines might also be important factors to consider.
- *Lack of Control Group:* If there is no control group (i.e., a group of professionals who do not use a knowledge management system), then it could be challenging to determine the true effect of using a knowledge management system.
- *Potential Confounding Variables:* There may be other variables not accounted for in the study that could influence the outcome. These could include the size of the company, the industry, the experience level of the professionals, etc.

Conclusion

The study concludes by emphasizing the strategic value of investing in knowledge management for organizations involved in Proposal management. It also provides practical recommendations for organizations aiming to enhance their Proposal-win rates, reduce time in creating

proposals and optimize their resource utilization through better knowledge management.

Our findings provide strong evidence that the use of a structured centralized Knowledge Management repository is significantly associated with time savings in Proposal management and proposal processes. This suggests that organizations can potentially enhance their efficiency and productivity in these areas through the implementation and utilization of such knowledge management systems. However, as with any study, these results should be interpreted in light of the study's limitations, and further research is needed to confirm these findings and explore the mechanisms underlying this association.

Future Research

While this study highlights the positive impact of structured centralized Knowledge Management (KM) repositories on proposal efficiency, several avenues remain open for future exploration. First, longitudinal studies could examine how sustained KM practices affect proposal success over time, providing insights into long-term ROI. Second, qualitative case studies could explore the cultural and behavioral factors influencing KM adoption and utilization. Lastly, future research could investigate the integration of KM with emerging technologies such as AI-driven content libraries and real-time collaboration tools to assess their incremental value in bid and proposal management.

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Conflict of Interest

The author declares that there are no known financial or personal conflicts of interest that could have influenced the outcomes or interpretation of this research.

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