Examining Employee Perceptions on the Implementation of Business Process Re-engineering: A Study in the Department of Academic Administration in a South African University

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Abstract- This study investigates the perceptions of employees regarding the implementation of a Business Process Re-engineering (BPR) program. The primary focus of the study is to examine how employees perceive the impact of BPR on their work routines and their overall assessment of the project's success. By exploring these areas, the study aims to gain a deeper understanding of how employees perceive and experience the changes brought about by the BPR initiative. To gather comprehensive insights, the study employed various research methods, such as surveys, interviews, and observations, to collect data from employees across different departments involved in providing services to the Department of Academic Administration. The study investigates whether the implementation of BPR has resulted in increased efficiency, streamlined workflows, and improved productivity, or if it has introduced challenges and disruptions to their work routines. By examining the employees' assessment of the project's success, the study provides valuable insights into the effectiveness of the BPR implementation and identifies areas of improvement or potential challenges that need to be addressed.

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I. Introduction

In today's rapidly changing business landscape, organizations face the imperative of continually monitoring and evaluating their processes to remain relevant, competitive, and efficient. Business Process Re-engineering (BPR) has emerged as a strategic approach to enhancing organizational effectiveness by scrutinizing internal processes, identifying areas for improvement, and implementing transformative changes (Pasaribu et al., 2021).

South African Higher Education Institutions (HEIs), driven by the need to respond to a dynamic environment xt and evolving customer demands, have embraced BPR along with other private sector management techniques (Swart, 2018). However, as BPR is a relatively new concept in the realm of Higher Education (HE), its proper understanding and appropriate application present challenges (Swart, 2018; Kanyane, 2023). Effective implementation of BPR requires a contextual understanding within HE and a clear vision of its potential benefits.

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The Department of Higher Education and Training (DHET) in South Africa (SA) has set goals to increase student enrollment, which has prompted universities to focus on improving their administrative processes (Boje et al., 2017). To accommodate the influx of applications, registration processes, and student administration, administrative operations have become increasingly cost-competitive, faster in cycle time, and committed to delivering superior service (Boje et al., 2017). BPR is viewed as a means to improve teaching and learning, as well as the support systems encompassing administrative operations (Boje et al., 2017).

BPR entails the fundamental redesign of existing business processes to align with new organizational directions, resulting in improved operational efficiency in terms of cost, speed, quality, and service (AbdEllatif et al., 2017; Mokone, 2011). By analyzing current processes and identifying bottlenecks and wastages, BPR seeks to achieve operational efficiency as its primary outcome.

Public higher educational institutions, including Universities of Technology (UoTs), are obligated to adhere to the Public Finance Management Act 1999 (PFMA), which promotes good corporate governance and sound financial management (Swart and Swanepoel, 2019). BPR implementation, along with other improvement methods, supports compliance with the PFMA. Furthermore, Information Technology (IT) and its governance are recognized as pillars of good corporate governance in the higher education context (Nevondwe et al., 2014).

Integration of operations based on approved procedures, as mandated by the PFMA, is crucial for effective resource utilization and the statutory management of resources within public higher education institutions (De Jager, 2000). This integration facilitates reporting and management processes for internal and external stakeholders. IT plays a central role in executing administrative operations in higher education, automating and integrating processes within academic administration (Ng'ambi et al., 2016).

The evolution of IT in higher education has progressed from automation of tasks and improved information quality to strategic partnership, system integration, and internet-based services (Ng'ambi et al., 2016; Mashabela and Pillay, 2017). The advent of e-

business, facilitated by internet access, has transformed information sharing, service delivery, and customer service in the higher education sector (Bagarukayo and Kalema, 2015). The increased investment in IT integration within administrative operations has not only improved internal processes but also fostered collaboration with external stakeholders, streamlining operations and eliminating potential disruptions (Bagarukayo and Kalema, 2015).

However, successful implementation of IT in the context of BPR requires a strategic alignment between the two (Swart, 2018). The Department of Academic Administration, which is the focus of this study, faces operational challenges related to the use of IT systems, particularly regarding workstations distributed across different locations during registration and the management of student records (Swart, 2018; Kanyane, 2023).

In light of the above, this research aims to examine employee perceptions on the impact of BPR on work routines due to the implementation of BPR in the Department of Academic Administration at a South African University of Technology (UOT). The research further explores the awareness of employees on BPR processes. By exploring employee awareness of BPR principles in higher education, analyzing the impact of BPR on their daily work routines, and investigating their perceptions of the success of the BPR process, this study contributes to a deeper understanding of BPR implementation in academic administration. The findings will inform decision-makers and stakeholders, enabling them to refine BPR strategies, enhance organizational efficiency, and foster employee satisfaction throughout the Department of Academic Administration and its associated departments. The rest of the paper is structured as follows: section 2 presents the literature review while the methodology is outlined in section 3. A discussion of the results is given in section 4 before we conclude in section 5.

II. Literature Review

Factors such as changing technology, cultural issues, globalization, and cost constraints drive the need for BPR in higher education. Implementing BPR brings benefits like improved administration, enhanced customer satisfaction, increased productivity and competitive advantage. However, challenges related to organizational structure, finances, defining BPR characteristics, and misconceptions need to be addressed. Understanding these factors, benefits, and challenges is vital for successful BPR implementation, enabling institutions to optimize their administrative processes and enhance overall organizational performance. This literature review focuses on Business Process Re-engineering (BPR) in higher education,

examining factors influencing its adoption, benefits of implementation, and challenges encountered.

a) Factors Influencing Business Process Re-engineering (BPR) in Higher Education

Business Process Re-engineering (BPR) in higher education institutions is influenced by various internal and external factors, also known as drivers for BPR (Sorunke and Nasir, 2016). These factors can either facilitate or hinder the adoption and implementation of BPR initiatives.

One significant internal factor influencing BPR in higher education is changing technology. Ng'ambi et al. (2016) highlight four phases of technological changes that have impacted processes in higher education institutions. In Phase I (1996-2000), technology was primarily used to improve repetitive operations, aided by computers. Phase II (2001-2005) saw institutions focusing on building IT infrastructure and using technology to enhance teaching. Phase III (2006-2010) witnessed increased focus on IT and research initiatives to explore the benefits of technology in higher education. Finally, Phase IV (2011-2016) emphasized the emergence of social media and the integration of mobile devices in disseminating learning materials. These technological advancements have necessitated changes in operational processes and provide a basis for the adoption of BPR initiatives (Madumo and Kimaro 2021).

Growing globalization is another internal factor influencing BPR in higher education. The presence of foreign university campuses and students from diverse regions has necessitated changes in operational processes to cater to international students. Universities have had to adapt their processes to accommodate students from different geographical locations, employing online platforms and services for efficient and speedy operations. BPR plays a vital role in this regard by integrating processes and implementing services such as online verification of credentials and study permits (Ariail, 2016; Naidoo and Sibiya, 2018).

Enduring cost constraints are an internal factor that has put pressure on higher education institutions to optimize their operational processes. With the dramatic increase in student populations and decreased state funding, institutions face the challenge of providing quality services with limited resources. This constraint has led to decreased customer satisfaction, including students, staff, and other stakeholders. Customer satisfaction is a critical factor in BPR implementation in higher education, as it focuses on improving operations to ensure customer satisfaction (Chiwandire and Vincent, 2019; Sohail, Daud, and Rajadurai, 2006). BPR differentiates itself from other improvement management methods by emphasizing customer satisfaction and aligning operations with customer needs.

University strategy plays a crucial role in influencing the implementation of BPR in higher education. Strategic management and direction involve managing long-term goals of the institution, with activities distributed across senior management and various departments. University strategies can drive the implementation of BPR initiatives by setting goals and activities that departments need to undertake to achieve those goals. For example, attracting the best students may require implementing online services or streamlining operations. University strategies provide a framework for BPR initiatives and guide the alignment of operational processes with strategic goals (Bosire, 2017).

b) Benefits of Business Process Re-engineering (BPR) in Higher Education

Implementing BPR in higher education institutions offers several perceived benefits. Mulugeta (2014) and Krishna, Kassaw, and Prasad (2015) highlight improved performance in administration, enhanced customer satisfaction, increased productivity, improved coordination, and competitive advantage as some of the benefits associated with BPR implementation in higher education.

One area of concern in higher education institutions is administrative processes, where traditional working practices may not always yield the desired results (Mulugeta, 2014). BPR can address this challenge by setting standards, introducing technical factors to support desired employee output, and eliminating inefficiencies (Aldiabat, Bataineh, and Abu-Hamour, 2018). Universities can improve employee performance and overall operational efficiency by streamlining administrative processes.

In the higher education sector, student retention is a significant focus. Real-time information is crucial for providing efficient customer service to students (Jha, Jha, and O'Brien, 2019). BPR facilitates the integration of information systems, eliminating bureaucratic delays and enabling timely access to information. This improves employee productivity and customer satisfaction by providing students with a seamless registration process and access to necessary information.

BPR can also lead to increased productivity by redesigning processes and eliminating unnecessary steps in the value chain. Harb and Abazid (2018) highlight the benefits of process design, which combines a group of processes to increase productivity and eliminate silo approaches to administrative work. By implementing BPR, universities can improve coordination, communication, and automation of processes such as student registration.

c) Challenges in Business Process Re-engineering (BPR) Implementation in Higher Education

Implementing BPR in higher education institutions is not without its challenges. Bosire (2017) emphasizes the gap between formulating strategic programs like BPR and realizing the desired results. Challenges may arise during the implementation phase, such as failing to meet deadlines or facing budget constraints, which hinder the achievement of desired outcomes.

The hierarchical organizational structure prevalent in higher education institutions guides the roles of administrators, leading to prolonged decision-making and duplication of processes (Chetty and Pather, 2015). BPR, in contrast, promotes a flat structure that encourages limitless information sharing and efficient communication. However, implementing such a cultural shift can be challenging within the existing organizational framework, especially in the Hinger Education sector.

Cost is another significant challenge in initiating BPR projects. Public sector organizations, such as universities, may struggle to secure funds for implementing BPR, leading to implementation difficulties and potential setbacks in achieving desired outcomes. Financial constraints can hinder the ability to invest in the necessary changes and improvements like latest Information Systems.

A lack of commonly accepted characteristics and definitions of BPR poses a challenge for organizations undertaking BPR initiatives (Bhaskar and Singh, 2014). Different interpretations of BPR can lead to confusion and misalignment with the intended goals. It is crucial to define and understand BPR accurately to avoid costly mistakes and ensure that projects meet the necessary characteristics of BPR.

In some sectors, BPR is viewed as a management fad, which may create skepticism and a lack of interest among senior managers (Dell'Aquila, 2017). Misconceptions about BPR, such as it being a tool for staff layoffs or automation, can further hinder its acceptance and successful implementation in higher education. Employees, through organized labour, may resist its implementation as they may consider it a tool for reducing labour- their members.

Transformation priorities within South African universities add complexity to BPR implementation. SA has undertaken transformation initiatives from the inception of democracy, with the need for reconstruction and transformation, along with limited resources, creates competing demands for funding and prioritization (Mokoena and Dhurup, 2016). Improving administrative capabilities becomes essential for universities to enhance their competitive edge and navigate the challenges of resource allocation effectively.

Furthermore, a lack of guidance and common methodology specific to BPR in higher education institutions poses challenges (Harb and Abazid, 2018). The absence of shared experience-based knowledge and accepted standard procedures complicates planning, evaluation, and successful implementation of BPR projects in higher education.

III. Methodology

a) Research Design

The research design employed in this study was a mixed-methods approach, combining quantitative and qualitative data collection and analysis methods. This approach allowed for a comprehensive understanding of employee perceptions and experiences regarding the implementation of Business Process Re-engineering (BPR) in the Department of Academic Administration.

b) Population and Sample

The population of interest consisted of 110 employees working in various departments that provide different services to the Department of Academic Administration at the South African University of Technology. From this population, a sample of 60 respondents was selected to participate in the study. The sample was chosen using convenience sampling, taking into consideration the availability and willingness of employees to participate in the research.

c) Data Collection Instruments

Surveys: A survey questionnaire was developed to collect quantitative data from the participants. The questionnaire included closed-ended questions that measured employee awareness of BPR principles, the impact of BPR on their work routines, and their perceptions of the success of the BPR process. Likert-scale items and demographic questions were also included in the survey.

Interviews: Semi-structured interviews were conducted with a subset of participants to gather qualitative data. The interviews provided an opportunity for participants to elaborate on their experiences, perceptions, and challenges related to BPR implementation in the Department of Academic Administration.

d) Data Collection Procedure

Surveys: The survey questionnaires were distributed to the selected participants either in an electronic format or in printed copies, depending on their preference. Participants were given a specified time frame to complete the surveys, and reminders were sent to ensure a satisfactory response rate. Those who responed submitted their completed questionnairs, some sent them electronically whiles others dis no in person.

Interviews: A purposive sampling technique was used to select participants for the interviews. The interviews were conducted in a face-to-face or virtual format, based on the participants' availability and preferences. Each interview was audio-recorded with the consent of the participants, and detailed notes were taken during the interviews to capture key insights and responses.

e) Data Analysis

Quantitative Data: The quantitative data collected through the surveys were analyzed using descriptive statistics. Measures such as means, frequencies, and percentages were calculated to summarize the responses and identify patterns or trends.

Qualitative Data: The qualitative data obtained from the interviews were transcribed and analyzed using thematic analysis. The transcripts were coded, and themes and patterns related to employee perceptions, experiences, and challenges regarding BPR implementation were identified.

f) Ethical Considerations

Ethical approval was obtained from the relevant university research ethics committee before data collection. Authorisation was also secured through proper channels from the research site to conduct the study. Participants were informed about the purpose of the study, their rights to confidentiality and voluntary participation, and provided their informed consent before participating in the research.

IV. Results

The results obtained from the data analysis will be discussed in three main sub-headings: employee awareness of the broad principles of Business Process Re-engineering (BPR), employee perception of the impact of BPR on their daily routines, and employee perception of the success of the BPR initiative. These aspects provide a comprehensive understanding of employees' perspectives and experiences related to BPR implementation.

a) Employee Awareness

The results of the employee awareness of the Business Process Re-engineering (BPR) implementation project have important implications for the success and effectiveness of the project in the Department of Academic Administration. The finding that only 44.90% of the respondents were aware of the project indicates a significant lack of communication and consultation during the implementation process. This lack of awareness among most employees (55.1%) raises concerns about the potential resistance and challenges that may arise during the project. Insufficient consultation and awareness creation can hinder employee buy-in and engagement, affecting the overall success of the BPR initiative.

However, it is encouraging to note that among those who were aware of the project, there was

unanimous agreement (100%) on the need for BPR implementation. This suggests that the employees who were aware recognized the necessity for change and embraced the implementation of BPR. Their agreement on the need for BPR indicates a positive attitude towards the project and a willingness to support the change process. This finding aligns with the concept of employee championship, which is crucial for the successful implementation of BPR. Employees who champion the project can contribute positively by actively participating, providing honest feedback, and advocating for the necessary changes.

The results also reveal varying levels of familiarity with the term 'BPR' among employees. While 22.40% possessed expert knowledge, 26.50% had no knowledge, and 49.0% had some knowledge, indicating a mixed level of understanding. This finding suggests the need for clearer communication and training on BPR concepts and principles. Enhancing employees' familiarity with the term 'BPR' is important to ensure a shared understanding and facilitate effective collaboration during the implementation process. It also highlights the importance of providing adequate resources and training to empower employees with the necessary skills and knowledge to contribute meaningfully to the BPR project.

Another significant finding is that the majority of respondents (63.27%) did not witness information being gathered by the BPR team to understand the shortcomings of the old system. This raises concerns about the analysis phase of the project, as a comprehensive understanding of current processes and challenges is crucial for effective re-engineering. Insufficient information gathering can result in incomplete identification of process bottlenecks and hinder the development of effective solutions. It underscores the importance of conducting thorough analysis and involving employees, in particular those that are part of the project, in the process to ensure a comprehensive understanding of the current system and its limitations.

In summary, employee awareness has implications for the effective implementation of the BPR project. Addressing the lack of awareness, enhancing familiarity with BPR concepts, ensuring comprehensive information gathering, and aligning perceptions of success are crucial for overcoming potential challenges and maximizing the positive impact of BPR in the Department of Academic Administration. By addressing these implications, the project can gain stronger employee support, improve communication and collaboration, and ultimately achieve the desired organizational efficiency and effectiveness.

b) Perception of the Impact of Business Process Re-Engineering on Work Routines

The results of the employee perception of the impact of Business Process Re-engineering (BPR) on their work routines reveal several significant findings with important implications.

Firstly, 36.7% of respondents reported that they are able to do their work easily, indicating improved operational processes in the Department of Academic Administration. This finding suggests that BPR implementation has enhanced efficiency and streamlined work tasks. The implication of this improvement is increased productivity and potentially reduced workload for employees. It also indicates that the employees feel that re-engineered processes have eliminated bottlenecks and inefficiencies, allowing employees to carry out their work more smoothly and effectively.

The finding that 34.7% of respondents witnessed an increase in online services is particularly significant in today's digital age. The implementation of BPR has led to the availability of online services, reducing costs and time required for various tasks. This has implications for cost savings, as fewer resources are needed for manual processes, and time savings, as employees can access services and information using online platforms instead of engaging in time-consuming physical interactions. The increased availability of online services also enhances convenience and accessibility for employees and stakeholders, improving customer satisfaction and organizational competitiveness.

The positive impact on corporate governance, with 18.4% of respondents reporting improved reporting, signifies the effectiveness of BPR in enhancing reporting processes. This has implications for compliance with regulatory requirements, timely and accurate reporting, and improved transparency in organizational operations. By streamlining reporting procedures and standardizing reporting practices, BPR implementation enables departments and by implication the university to meet statutory reporting deadlines, achieve greater financial and operational reporting accuracy, and optimize resource utilization. Furthermore, the reduction in paper and stationery costs is an additional benefit of improved reporting processes.

The finding that 24.5% of respondents witnessed changes to job positions resulting from BPR implementation has implications for employee roles and responsibilities. BPR often leads to automation and redefinition of tasks, which can impact job positions and require employees to adapt to new roles. This highlights the importance of change management and providing support to employees during the transition period. Organizations need to ensure that employees receive the necessary training and resources to effectively perform their new roles. Additionally, clear commu-nication and alignment of expectations are essential to

minimize any potential resistance or confusion arising from changes in job positions.

The respondents' perception of daily routine changes due to BPR implementation indicates positive outcomes. Rapid problem response, facilitated work processes, empowered front-line employees, improved information sharing, and increased openness in decision-making are all positive impacts of BPR. These findings have implications for organizational agility, employee empowerment, and improved collaboration. BPR enables departments to respond promptly to challenges and changes, empowers employees to make decisions within their roles, and enhances communication and information flow. These aspects contribute to organizational resilience, employee engagement, and the ability to adapt to evolving demands.

In conclusion, the results highlight the positive impact of BPR on employee work routines in the Department of Academic Administration. The implications of these findings include increased productivity, cost savings, enhanced customer satisfaction, improved corporate governance, optimized resource utilization, and organizational agility. These findings underscore the importance of effective BPR implementation, including clear communication, change management strategies, training, and support for employees. By capitalizing on the benefits of BPR and addressing any challenges, organizations can achieve operational excellence, foster a culture of continuous improvement, and drive sustainable success.

c) Perceived Completeness of the Project

Of the interviewed employees, 55% of respondents felt that the BPR project was incomplete, while 45% believed it was complete. This highlights a significant disparity in perceptions among the employees. This discrepancy suggests differences in expectations, milestones, or criteria for measuring the project's success.

The implications of this finding are twofold. Firstly, it underscores the importance of clear communication and shared understanding among team members regarding the goals and milestones of the BPR project. Misalignment in expectations can lead to confusion, frustration, and a lack of motivation among employees, hindering the progress and success of the project. Therefore, it is crucial for project leaders and managers to effectively communicate the project's objectives, desired outcomes, and the criteria by which success will be measured. This will help ensure that all team members have a common understanding of what constitutes project completion and success.

Secondly, addressing the divergent views and aligning expectations is vital to foster a sense of shared purpose and enhance collaboration among team members. When employees have different perceptions of the project's progress, it can create divisions and hinder effective teamwork. By facilitating open and transparent communication, project leaders can encourage dialogue, address concerns, and clarify misunderstandings that may exist. This will help build trust and alignment among team members, fostering a cohesive and collaborative environment that is essential for the successful completion of the BPR project.

Ultimately, by addressing the disparities in perceptions and aligning expectations, organizations can enhance employee engagement, increase motivation, and promote effective teamwork. This, in turn, can contribute to the successful completion of the BPR project and its overall impact on organizational efficiency and effectiveness.

V. Conclusion

The findings of this study provide valuable insights into employees' perceptions towards implementing Business Process Re-engineering (BPR) in Higher education. The results highlight important implications for the successful execution of BPR projects and the impact on employee work routines. The first set of findings emphasizes the need for improved employee awareness and communication during the BPR implementation process. The lack of awareness among a majority of employees raises concerns about potential resistance and challenges that may arise. It is crucial to address this issue through effective communication and consultation, ensuring employees understand BPR's purpose, goals, and benefits. Creating a sense of awareness and engagement among employees is essential for their buy-in and active participation in the change process. Furthermore, the findings highlight the importance of addressing employee familiarity with BPR concepts and processes. Providing training and resources to enhance their understanding may contribute to their meaningful involvement. This emphasizes the significance of investing in employee development and ensuring they possess the necessary skills and knowledge to contribute effectively to the BPR initiative. The second set of findings reported on the perceived impact of BPR on employee work routines. Improved operational processes, increased availability of online services, enhanced corporate governance, and changes to job positions demonstrate the benefits of BPR implement-tation. This positive perception leads to increased productivity. However, the findings also highlight the challenges and disparities in perceptions around the project's success within the project team. In conclusion, the findings underscore the importance of effective BPR implementation, including communication, training, change management, and collaboration. By addressing the implications highlighted in the findings, organi-zations can enhance employee engagement, optimize

operational processes, and achieve sustainable improvements in performance. BPR allows higher education institutions to adapt to changing environments, improve customer satisfaction, and position themselves as leaders in the competitive landscape. This will lead to the achievement of strategic goals for Higher Education institutions. Future research should focus on further exploring the impact of BPR in higher education and identifying strategies to overcome implementation challenges for maximum effectiveness in the South Africa.

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