Assessing BI Maturity and Developing a BI Dashboard For a Small and Medium Enterprise (SME) In Nairobi.

Case of EdPartners Africa : Nairobi Branch

Done by:

Sharon Misati - 666570

Mohammed Ali - 664514

Robinson Wachira - 667395

Lydia Masabarakiza - 665389

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Definition of Terms

Business Intelligence (BI): Refers to the technologies, processes, and practices for collecting, analyzing, and presenting data to inform business decisions. For NairobiEd Partners, BI enables data-driven solutions to challenges in educational financing (Eckerson, 2009).

BI Maturity: The sophistication level of an organization's BI practices, ranging from basic, unstructured methods to advanced, predictive analytics integrated into decision-making processes (Lahrmann et al., 2011).

Capability Maturity Model Integration (CMMI): A process improvement framework that categorizes an organization's maturity into five levels, from Initial (basic, ad hoc processes) to Optimizing (where processes are continuously improved). CMMI offers a structured approach to evaluating the organization's progress in BI capabilities.

Key Performance Indicators (KPIs): Specific, measurable metrics that track performance across various business functions. KPIs serve as benchmarks that align operational activities with broader organizational objectives and provide a means to monitor progress in achieving desired outcomes.

BI Maturity Assessment Score: A numeric and visual representation of the organization's current standing within the BI maturity model, allowing quick assessment of NairobiEd Partners' BI progression.

Gap Analysis: Visual insights highlighting the variances between current BI capabilities and desired benchmarks, supporting an actionable approach to addressing areas needing improvement.

Data Disciplines: Key BI practices, such as data management, data visualization, and analytics, ranked by relevance to prioritize NairobiEd Partners' development focus.

Executive Summary

This report is the outcome of a DSA 3050 coursework project and provides an in-depth review of the Business Intelligence (BI) maturity and the creation of a BI dashboard for NairobiEd Partners, a non-banking financial institution situated in Africa that specializes in providing financial solutions to the education sector (Osei, 2020). Founded 10 years ago, NairobiEd Partners aims to build a foundation for sustainable growth and development in education, creating a brighter future for African students (Ajayi & Omojola, 2019). The organization's approach goes beyond financial products by providing training on school and finance management, as well as curriculum development support, ensuring schools have the necessary tools to operate effectively.

This project evaluated NairobiEd Partners' current BI capabilities and outlined steps to improve its decision-making process using data-driven insights (Chen et al., 2012). The assessment covered various topics, including data collection, management, analysis, and reporting capabilities, all essential for a comprehensive BI framework. Key findings revealed limitations in data integration, analysis, and visualization that impede effective decision-making (Hwang & Choi, 2016). The study also explored NairobiEd Partners' potential to enhance operational efficiency and financial oversight through a customized BI dashboard.

Through data exploration and analysis, we identified key trends in school funding and expenditure, which helped in crafting a predictive model for future financing and expenditure management strategies. We will recommend a detailed BI report, an interactive dashboard, and a user guide to support the organization's ongoing BI development. Recommendations will focus on strengthening data governance, improving reporting accuracy, and fostering a culture of data-driven decision-making (Tiwari & Sinha, 2019).

The results of this assessment will help NairobiEd Partners advance its BI maturity, projected to enhance its ability to serve schools effectively, optimize internal processes, and contribute to the overall objective of educating the next generation of African students.

Chapter 1: Introduction

1.1 Introduction

The goal of this assessment is to evaluate NairobiEd Partners' BI maturity, emphasizing the creation of a customized BI dashboard to support their business strategy (Abeysekera, 2016). NairobiEd Partners is dedicated to increasing educational access for African schools through innovative financial solutions such as infrastructure finance, technology funding, and transportation support. With a focus on reaching over 120,000 children across 400 schools, NairobiEd operates in a data-rich environment where advanced BI tools can significantly enhance strategic decision-making (Kafle, 2021).

This analysis aims to provide insights into emerging trends, identify potential markets, and develop strategies that can enhance profitability and support sustainable growth as the organization expands into new regions (Hwang & Choi, 2016). By leveraging advanced BI tools, NairobiEd Partners can make informed decisions about its growth while maintaining operational efficiency and achieving its mission of supporting education across Africa.

Through this assessment, we will explore NairobiEd's data capabilities and highlight areas for improvement. A key focus will be on how better data integration, real-time reporting, and predictive analytics can guide NairobiEd Partners in identifying new opportunities for expansion, optimizing processes, and enhancing financial sustainability (Tiwari & Sinha, 2019).

1.2 Objectives

1. Assess Business Intelligence Maturity: Perform a thorough evaluation of NairobiEd Partners' existing BI capabilities to identify areas of strength and weakness.
2. Design a Customized BI Dashboard: Create a BI dashboard incorporating key performance indicators (KPIs) relevant to NairobiEd Partners' strategic objectives (Chen et al., 2012).
3. Streamline and automate data collection methods to improve the accuracy, efficiency, and timeliness of data gathering.

4. Implement Data Governance Practices: Develop a data governance framework to ensure the security, integrity, and quality of data in all departments (Kafle, 2021).

5. Facilitate Data Integration: Improve or recommend the development of the Extract, Transform, Load (ETL) process to consolidate data from multiple sources into a centralized data warehouse, enabling comprehensive analysis (Osei, 2020).

6. Advanced Analytics Techniques: Recommend implementing advanced analytics, including predictive modeling and machine learning, to enhance risk assessment and decision-making (Tiwari & Sinha, 2019).

7. Reporting Capabilities: Recommend real-time reporting systems to facilitate informed and timely decision-making based on current data.

8. Create interactive data visualization tools that are user-friendly and enable stakeholders to effectively explore and interpret data insights (Abeysekera, 2016).

9. Data-Driven Decision-Making: Recommend how to cultivate a culture of data-driven decision-making by providing staff with training and resources.

10. Facilitate Strategic Growth Initiatives: Recommend how to utilize BI insights to evaluate market opportunities, identify emerging trends, and assist NairobiEd Partners in expanding its services efficiently (Ajayi & Omojola, 2019).

These objectives support NairobiEd Partners' mission to enhance educational access in Africa and improve its BI capabilities.

1.3 Conclusion

Based on the evaluation of NairobiEd Partners' BI maturity, significant opportunities for improvement have been identified. While the organization demonstrates a strong commitment to utilizing data to achieve its goals, gaps in its BI capabilities hinder informed decision-making (Chen et al., 2012). The absence of an integrated BI system limits operational efficiency and compromises reporting accuracy (Hwang & Choi, 2016).

Implementing a comprehensive BI dashboard, as described in this study, would address these challenges by centralizing data, enabling real-time reporting, and fostering a culture of data-driven decision-making (Abeysekera, 2016). By adopting the recommended measures,

NairobiEd Partners can enhance its operations, maximize the efficiency of its financial services, and better meet the educational needs of African students.

Ultimately, the effective deployment of a sophisticated BI system will not only help NairobiEd Partners achieve its objectives but also serve as a valuable model for other SMEs in the education finance sector. This underscores the vital role of BI in promoting sustainable growth and development across Africa's educational landscape.

Chapter 2: Selection of the SMEs

2.1 Introduction

The goal of the study was to identify SMEs that would most benefit from BI maturity assessment and the development of customized BI solutions. In this respect, considerable research was carried out to identify organizations where huge gains can be made in terms of the operational bottom line through better decisions using data accordingly (Chen et al., 2012). Key factors considered included the SME's sector of operation, its impact on critical socioeconomic areas, and existing gaps in BI capabilities (Hwang & Choi, 2016). This approach ensured the selection of an SME that not only aligns with the objectives of this study but also offers valuable insights applicable to similar organizations across diverse sectors (Tiwari & Sinha, 2019).

2.2 Selection Process

NairobiEd Partners was selected for this evaluation due to its unique position as a non-banking financial institution committed to improving the education system in Africa (Osei, 2020). As a small to medium-sized enterprise (SME), NairobiEd Partners significantly contributes to funding essential educational features such as school infrastructure, technological advancements, and transportation systems (Ajayi & Omojola, 2019).

Key factors for selection include:

An Emphasis on Education: NairobiEd Partners focuses on the education sector, crucial for socioeconomic progress, contributing around 20% to Africa's GDP (Ajayi & Omojola, 2019).

Data-Driven Approach: The organization uses data to assess creditworthiness and track school performance, impacting over 1,000 educational institutions by providing tailored financial products (Hwang & Choi, 2016).

Lack of an Integrated BI System: Currently, NairobiEd Partners does not have an integrated BI system, making it difficult to optimize operations and provide real-time information (Tiwari & Sinha, 2019). This gap aligns with the goals of this research.

Choosing NairobiEd Partners allows for an examination of BI maturity within the context of SMEs, offering insights and solutions applicable to other education finance institutions, ultimately benefiting millions of students across the continent.

2.3 Conclusion

SMEs are vital drivers of innovation and socioeconomic progress, making them ideal candidates for studies on BI maturity and adoption. NairobiEd Partners exemplifies the potential of SMEs to transform sectors like education through targeted financial interventions and data-driven strategies (Hwang & Choi, 2016). However, the absence of an integrated BI system highlights a gap that limits the organization's ability to maximize its impact. This research addresses a specific organizational need by focusing on NairobiEd Partners but also provides a way in which other SMEs involved in education financing can adopt BI practices. As indicated by Chen et al. (2012), the steps suggested herein will have the effect of improving the services offered by NairobiEd Partners, while the universal relevance of BI systems in ensuring sustainable growth and improved educational outcomes throughout Africa will be evidenced.

Chapter 3: BI Maturity Assessment

3.1 Introduction

The Business Intelligence (BI) Maturity Assessment for NairobiEd Partners provides a comprehensive review of the organization's BI capabilities. It identifies areas of strength and potential for growth while offering actionable recommendations to enhance BI practices. Using the Capability Maturity Model Integration (CMMI) framework as a benchmark, the assessment focuses on critical aspects of BI such as data integration, reporting accuracy, stakeholder engagement, and technology deployment.

As a non-banking financial institution dedicated to empowering educational institutions across Africa, NairobiEd Partners operates in a data-intensive environment. Leveraging BI effectively will enable the organization to improve decision-making, optimize operations, and expand its reach to new markets. This assessment outlines the steps required for NairobiEd Partners to progress along the BI maturity curve, enhancing its ability to meet both current operational needs and long-term strategic goals (Eckerson, 2009; Lahrmann et al., 2011).

3.2 The Capability Maturity Model Integration (CMMI)

The Capability Maturity Model Integration (CMMI) framework is utilized to evaluate NairobiEd Partners' BI processes and maturity. This structured framework assesses BI capabilities across five defined levels of maturity, each representing a more advanced state of organizational readiness, data handling, and decision-making support:

Initial: At this foundational level, processes are typically ad hoc and reactive, with minimal structure or consistency across departments. BI efforts may be fragmented, and data analysis is often limited to simple, on-demand tasks.

Managed: Basic processes are in place, though they may still lack standardization across the organization. Data collection, reporting, and analysis are more organized, but significant variability persists, and insights may not yet be timely or reliably integrated into decision-making.

Defined: Processes are standardized, documented, and implemented consistently across the organization. NairobiEd Partners can rely on a structured approach to data collection and reporting, allowing for a more comprehensive view of operations and performance.

Quantitatively Managed: Processes are measured and controlled, allowing for the application of quantitative analysis to enhance decision-making. With this level, NairobiEd Partners would be capable of data-driven forecasting, incorporating insights across functions to make more accurate, predictive decisions.

Optimizing: The highest maturity level, where continuous process improvement is embedded within the organization. Real-time insights, machine learning, and AI-driven analytics would allow NairobiEd Partners to proactively identify trends, capitalize on opportunities, and mitigate risks. (Popovič et al., 2012).

NairobiEd Partners' current BI processes will be assessed against these maturity levels to establish a baseline, with targeted actions recommended to advance maturity over time. Achieving higher maturity levels is expected to enhance NairobiEd Partners' strategic agility and operational efficiency.

3.3 Assessment of NairobiEd Partners

3.3.1 BI Reporting and Insights Assessment

This assessment area examines the effectiveness of NairobiEd Partners' current reporting structures and the generation of actionable insights that inform strategic and operational decisions.

Current Practices: Currently, NairobiEd Partners uses reporting primarily for tracking financial performance, loan disbursement volumes, and customer credit histories. Reports are generated monthly and disseminated to relevant teams for analysis. These reports are crucial in evaluating school performance metrics, financial obligations, and repayment histories.

Challenges: A notable challenge in the current reporting process is the existence of data silos, where information is stored across separate databases without a unified integration framework. This lack of centralized data access impedes the organization's ability to create real-time

insights. Furthermore, visualization capabilities are limited, making it difficult for decision-makers to interpret complex data patterns quickly.

Opportunities for Improvement: Implementing a centralized reporting platform with enhanced data visualization tools will streamline data access and presentation. Integrating real-time analytics and user-friendly visualization options would allow for dynamic insights that can adapt to changing market conditions and operational needs, improving the speed and accuracy of decision-making.

3.3.2 BI Products, Services, and Technologies Assessment

This area focuses on assessing the range and effectiveness of the BI tools and technologies NairobiEd Partners utilizes to support its data-driven goals.

Existing Tools: Currently, NairobiEd Partners primarily relies on basic tools, such as Excel and other spreadsheet applications, for data handling and analysis. While functional for basic reporting, these tools limit the potential for advanced analytics, predictive modeling, and in-depth visualizations.

Technological Gaps: The absence of advanced BI platforms, such as data warehousing and visualization solutions (e.g., Power BI, Tableau), restricts NairobiEd Partners' ability to scale analytics and reporting efforts. This lack of advanced tools hinders the organization's capacity for centralized data integration, high-level data processing, and complex analysis.

Recommendations: NairobiEd Partners would benefit from investing in comprehensive BI platforms capable of supporting data warehousing, enhanced data integration, and real-time analytics. BI tools like Tableau, Power BI, or an integrated data management system would not only improve reporting efficiency but also allow the organization to derive deeper insights, critical for operational and strategic decision-making.

3.3.3 BI Practice Performance Measurement

This assessment focuses on the metrics NairobiEd Partners uses to evaluate the performance and impact of its BI initiatives, ensuring alignment with strategic goals.

Current KPIs: Presently, NairobiEd Partners' KPIs include metrics like loan disbursement volumes, repayment rates, customer demographics, and operational efficiency. These KPIs provide valuable snapshots of financial performance but do not extend to predictive metrics or advanced analytics, limiting foresight into future trends.

Assessment: NairobiEd Partners' current performance measurement approach is largely descriptive, capturing historical data without incorporating predictive analytics. This limits the organization's ability to forecast future demand, model outcomes, or engage in scenario-based planning.

Suggested Improvements: Incorporating predictive KPIs such as customer lifetime value, market penetration rate, and trend analysis into NairobiEd Partners' BI framework would enable a more forward-looking perspective. Such KPIs would allow the organization to anticipate changes in market dynamics, enabling proactive responses and strategic agility.

3.3.4 Stakeholder Engagement and Collaboration in BI

Effective BI implementation depends on active engagement from stakeholders and collaboration across departments, ensuring BI insights are both understood and utilized.

Current Engagement: Stakeholders at NairobiEd Partners engage with BI insights mainly through monthly reports and quarterly performance meetings. However, engagement with BI initiatives remains uneven, with certain departments more actively involved than others, leading to inconsistent understanding and utilization of BI insights.

Challenges: The varied levels of data literacy across departments pose challenges in creating a cohesive, data-informed culture. Without consistent training or cross-departmental collaboration, valuable insights may be underutilized, limiting the impact of BI efforts.

Enhancements: Regular BI training sessions, hands-on workshops, and the introduction of accessible BI dashboards would help standardize data literacy across NairobiEd Partners. By fostering an environment of cross-departmental collaboration, stakeholders would become more comfortable interpreting and acting on BI insights, thus enabling a unified approach to data-driven decision-making.

3.4 Conclusion

The BI maturity assessment presents very good opportunities that can be leveraged in the improvement of NairobiEd Partners' BI practices in addition to aligning them with the strategy of the organization. The identified gaps in data integration, reporting accuracy, and engagement of stakeholders offer a leeway for the organization to move from its prevailing state of BI maturity to a high state characterized by predictive analytics and capability for real-time decisions.

These will, in turn, go a long way toward enhancing both operational efficiencies and enabling NairobiEd Partners to respond proactively to emerging trends and emerging market demands through improved BI practices. Advanced tools like Power BI and appropriate data governance frameworks will provide the organization with actionable insights, optimizing resources to serve better its network of educational institutions.

The increased maturity of BI will locate new opportunities for expansion to other areas of the region, with sustainable growth, reinforcing NairobiEd Partners' mission of supporting education across Africa. Further, by embedding the culture of data-informed decision-making, it will be better equipped to handle the complexities that mark the educational finance landscape and assure long-term impact and success.

Chapter 4: Data Identification and Analysis

4.1 Introduction

Identifying and analyzing the most relevant data sources are fundamental to understanding NairobiEd Partners' market position and areas of growth. This process involves categorizing internal and external data sources, conducting exploratory analysis, and highlighting key trends and patterns that can inform expansion strategies and operational enhancements.

4.2 Identification of Relevant Data Sources

A thorough inventory of relevant data sources, both internal and external, is essential for comprehensive BI capabilities:

Internal Data: This includes customer demographics, loan data, repayment histories, customer engagement metrics, and operational costs. Internal data sources provide insight into the performance of NairobiEd Partners' products and services, offering metrics that inform financial stability and customer satisfaction.

External Data: Market research reports, competitor analysis, socioeconomic indicators, and educational performance data from government databases are relevant external sources. External data sources help NairobiEd Partners position itself within the market, providing insights into potential growth areas and competitor strategies.

Data Gaps: Current limitations include the lack of integrated, real-time data, and the availability of external datasets that could enhance NairobiEd Partners' ability to make market-specific predictions. (Eckerson, 2009).

4.2 Data Exploration and Analysis

Exploratory data analysis (EDA) is conducted to uncover hidden patterns, correlations, and trends. EDA findings are expected to guide NairobiEd Partners in optimizing loan disbursement strategies, enhancing customer retention, and identifying market opportunities. Statistical

methods, visualization tools, and data modeling techniques are recommended to provide NairobiEd Partners with valuable insights that align with its expansion objectives.

4.3 Conclusion

Effective data analysis grants NairobiEd Partners a competitive advantage; after all, the organization takes away critical insights from its analysis and turns them into strategic actions that help optimize operations and introduce newer avenues of growth. It applies internal data, including loan performance and customer demographics, in addition to external market research, to develop offerings that serve educational institutions better.

Addressing current data gaps, including the incorporation of real-time data and access to third-party predictive data sets, will further strengthen NairobiEd Partners' analytics. This will give it better forecasting, risk management, and further understanding of how the markets function. Equipped with such enhancements, NairobiEd Partners will be better placed to make proactive, data-driven decisions that help further their mission of empowering schools across Africa.

Strong data analysis underpins the development of innovative financial services, enabling NairobiEd Partners to scale their impact without losing operational efficiency. With more developed analytics, the organization will be in a position to indicate points of high potential for expansion and adapt to a constantly changing market environment toward sustainable growth. Thus, further maturation of data practices at NairobiEd Partners will lead it to remain among the key leaders in the educational finance sector for long-term success and societal impact.

Chapter 5: BI Report and Dashboard Design

5.1 Introduction

The following section presents the design and functionality of a Business Intelligence (BI) dashboard developed in Power BI for NairobiEd Partners. Power BI was chosen for its robust capabilities in data visualization, real-time reporting, and ease of integration with diverse data sources. This dashboard provides key insights to support NairobiEd Partners' strategic decision-making, facilitating comprehensive data analysis and empowering the organization to make informed, data-driven decisions.

5.2 Power BI for Dashboard Reporting

Power BI offers a flexible and dynamic platform for dashboard reporting, perfectly suited for NairobiEd Partners' BI needs. Its advanced visualization capabilities, real-time data refresh options, and interactive dashboards enhance accessibility, making it an ideal choice for BI reporting. Power BI's compatibility with multiple data sources ensures that NairobiEd Partners can seamlessly integrate its existing data, creating a unified platform that fosters collaboration across departments. As NairobiEd Partners' BI needs expand, Power BI's scalability allows for increasingly sophisticated analytics, reinforcing its adaptability for future growth.

5.3 Functionality of the BI Dashboard

The Power BI dashboard for NairobiEd Partners encompasses several key components, each serving to provide a complete view of the organization's BI strategy, performance, and areas for enhancement. Each section is designed to offer real-time insights, easily interpretable by stakeholders.

5.3.1 Component 1: BI Maturity Assessment Score

Purpose: Displays NairobiEd Partners' current BI maturity score to give a comprehensive overview of BI development status.

Functionality: A gauge or heatmap visual in Power BI shows maturity levels (e.g., from Initial to Optimizing), color-coded for quick assessment. This visual enables stakeholders to instantly recognize the organization's BI strengths and growth opportunities.

5.3.2 Component 2: Gap Analysis Charts

Purpose: Highlights gaps between current and target BI capabilities, supporting targeted improvement efforts.

Functionality: Power BI's bar or radar charts compare actual performance against goals, covering areas like data governance and reporting accuracy. These charts aid NairobiEd Partners in quickly identifying high-impact gaps to address.

5.3.3 Component 3: Activities to Reach Target State

Purpose: Provides a clear list of actionable activities necessary to progress to target BI maturity levels.

Functionality: A Power BI table or list organizes activities by priority and completion status. It visually displays each action's progress, categorized by BI area, allowing stakeholders to monitor BI development comprehensively.

5.3.4 Component 4: Data Disciplines Rank of Importance

Purpose: Ranks the importance of various data disciplines, emphasizing key areas aligned with NairobiEd Partners' objectives.

Functionality: Power BI heatmaps or ranked tables display data disciplines by their strategic importance, guiding NairobiEd Partners on areas to focus resources, such as data integration and visualization.

5.4 Conclusion

The Power BI dashboard serves as a holistic BI tool, offering dynamic insights into NairobiEd Partners' BI maturity. With interactive capabilities, real-time updates, and flexible visuals, the

dashboard enhances the organization's ability to make data-driven decisions, track BI maturity progress, and monitor actionable metrics, keeping stakeholders informed and engaged.

Chapter 6: Implementation Plan

6.1 Introduction

This implementation plan provides a roadmap for NairobiEd Partners to effectively integrate the Power BI dashboard and fully leverage BI for enhanced decision-making and strategic growth. Each phase includes specific actions, timelines, and milestones to ensure a structured, efficient BI system rollout.

6.2 Phase 1: Initial Assessment and Planning

Objectives: Define BI priorities and assess the current data environment.

Actions:

1. Engage stakeholders for BI goal alignment.
2. Document and assess data sources and quality.
3. Establish a baseline BI maturity level using CMMI criteria.

Timeline: Month 1

6.3 Phase 2: Power BI Setup and Data Integration

Objectives: Set up Power BI as the main reporting and analysis platform.

Actions:

1. Configure Power BI with data connections from key data sources.
2. Consolidate data into Power BI for unified reporting.
3. Test data flow and connectivity for smooth dashboard functionality.

Timeline: Months 2–3

6.3 Phase 3: Data Governance and Quality Assurance

Objectives: Establish protocols for data quality and governance.

Actions:

1. Develop policies on data accuracy, security, and access.

2. Implement quality controls for consistent data.

3. Train staff on data management best practices.

Timeline: Months 4–5

6.4 Phase 4: Dashboard Design and Development

Objectives: Build and refine the Power BI dashboard based on user needs.

Actions:

1. Develop interactive dashboard components.

2. Conduct stakeholder testing to optimize functionality.

3. Update the design based on feedback for enhanced usability.

Timeline: Months 6–7

6.5 Phase 5: Training and Stakeholder Engagement

Objectives: Equip staff with the skills to utilize Power BI and make data-driven decisions.

Actions:

1. Hold Power BI training sessions for key users.

2. Provide resources like user manuals and guides.

3. Schedule regular BI reviews for ongoing stakeholder engagement.

Timeline: Months 8–9

6.6 Phase 6: Continuous Improvement and Monitoring

Objectives: Establish continuous improvement protocols for sustained BI performance.

Actions:

1. Monitor KPIs to measure the dashboard's impact.

2. Periodically reassess BI maturity levels and adjust strategies.

3. Collect ongoing feedback to refine Power BI usage.

Timeline: Starting Month 10 and ongoing

Chapter 7: Dashboard Overview

7.1 Introduction

To give EdPartners an idea of the growth of their business outside Kenya, a Power BI-generated dashboard was built. This dashboard enables us to analyze the following:

Loan Trends in the Kenyan Market: Provides insight into the best-performing loan types and the amount of defaulted loans.

Customer Repayment Behavior: Understanding the customers' repayments allows for identifying risks and assessing the likelihood of loan defaults.

Expanding into Other Countries: The dashboard utilizes data from multiple countries to show those markets where EdPartners Africa could expand its business.

7.2 Country Analysis for Market Expansion

We provide an analysis of key factors in selected countries in an assessment of various markets for the expansion of EdPartners throughout Africa. This is to find the regions where EdPartners will establish a competitive presence and serve valuable financial services to educational institutions. The following are discussed in this analysis:

1. **Competitor Analysis:** Looks at the existing institutions in each country that finance school infrastructure.

2. **Market Size and Regulation Environment:** Identifies the size of the education market, the demand for education services, and the regulation environment pertaining to entry. Schooling System: An overview of the system of education, compulsory years of schooling, and policies on access.

3. **Current Asset Funding Models:** An investigation of methods utilized by schools in each country in funding infrastructure and other key assets.

Below are the analyses of the selected countries: Algeria, Ghana, and Nigeria. The profile of each country will attempt to highlight the market landscape to enable EdPartners to assess which of the regions best fit their strategic expansion goals.

7.2.1 Algeria

1. Competitor Analysis

The greater part of the education industry in Algeria is subsidized by the government, especially in the public schools. However, some private institutions exist and, therefore, depend on tuition fees as a source of revenue. Therefore, compared to the high government involvement in this industry, there is less dependence on private financial institutions in Algeria to finance schools. Primary education continues to be a budgetary priority, and Algeria's expenditure on education is among the highest in Africa as a percent of GDP. This dependence on state funding makes access to the sector for private financiers very rare. (Oxford Business Group , Generis Global Legal

Services)

2. Market Size and Regulatory Environment

The education market of Algeria is considered substantial, where the number of primary school students was about 4.7 million in the latest statistics. The government considers basic education very important for all citizens, lasting for nine years, and has hence imposed strict regulations on access. Private education has been limited owing to licensing requirements. Public schools are resourceless and overcrowded. It is for this reason that expansion programs have been started by the government to facilitate more class space. The regulatory procedures focus on equity concerns. Bureaucratic barriers make private investment rather slow. (Oxford Business Group, Generis Global Legal Services , ETF)

3. Schooling System

The school system in Algeria includes basic education, which is compulsory and nine years in length, comprising primary and lower-secondary education. Preceding this is three years of secondary schooling. Education is free; virtually all schools have a national curriculum handled centrally by the Ministry of National Education. There are mechanisms for quality assurance; the public schools are often too full and underserved . (Generis Global Legal Services , Statista)

4. Current Asset Funding Methods

In Algeria, the main funding of school assets is government-supported, especially in cases where there are public schools. Tuitions are entertained in private schools, but these cannot shoulder high costs due to financial restraint, thus handicapping them from making adequate improvements in infrastructure. The government allocations are to build new schools and reduce overcrowding in primary education; hence, an implication that regulations allowing alternative forms of private financing can bridge the gap . (Oxford Business Group , Academicus)

7.2.2 Ghana

1. Competitor Analysis

Ghana's education sector is financed by both the government and private contributors. The GETFund allocates money to public institutions to cover costs, whereas a limited number of private contributors, including NGOs and microfinance organizations, provide either loans or grants to enhance the quality of the schools. Private financial institutions are more involved in Ghana than in Algeria, offering some sort of competition to EdPartners in the private funding market . (Power BI Report)

2. Market Size and Regulatory Environment

The market size in Ghana is promising, considering the rapid growth of young students. The Government of Ghana considers education a priority and provides free basic education, recently extending tenure to cover secondary education without tuition costs. The regulatory structure allows for private sector participation in Ghana, although there is still a need to address problems around infrastructure and resource allocation. GETFund and other government initiatives support equity of access, but there are still gaps that private financiers could fill . (Power BI Report)

3. Schooling System

The Ghanaian schooling system involves six years of primary education, with a further three years in each junior and senior high school. Recent emphasis on free and compulsory basic education by the government means that enrolment is on the rise, and this also presents opportunities for growth in support infrastructure and educational materials. The regulatory frameworks encourage partnerships with private providers to be able to meet such rising

demands set. (Power BI Report)

4. Funding Methods

Most especially, Ghanaian schools in the public system look up to the government for funds, routed through the GETFund and other national education schemes. The rest depend on loan finance or non-repayable grants from NGOs and microfinance. Many schools in the countryside still suffer from infrastructure shortages, reflecting the opportunity for EdPartners to support underserved areas with targeted financing solutions. (Power BI Report)

7.2.3 Nigeria

1. Competitor Analysis

The market in Nigeria is filled with several private financial institutions and non-governmental organizations that finance educational projects. These are, by all means, competitive markets. Organizations such as LAPO Microfinance Bank provide loans for education, while NGOs have actively supported private and public schools through grants. This might work either to their advantage or disadvantage in the Nigerian market. (Power BI Report)

2. Market Size

Nigeria boasts one of the largest market sizes in Africa, with a demand-driven high by the country's increasing young population. The regulatory environment is supportive of private sector participation; however, there is considerable ease associated with policy consistency and bureaucratic delays. For example, the government of Nigeria encourages private partnerships to address infrastructural challenges in education; hence, substantial opportunities exist for financing institutions. (Power BI Report)

3. Schooling System

The Nigerian system encompasses six years of primary, three years of junior secondary, and three

years of senior secondary schooling. Policies geared toward universal basic education have improved enrollment, particularly in urban centers. Rural schools, however, are at a disadvantage in terms of resources, and the role of public-private partnerships becomes important in

addressing these shortfalls. (Power BI Report)

4. Current Asset Funding Methods

There is funding from different sources including government programs, private financiers, and NGOs. The schools access funds meant for infrastructure either through educational loans or grants. Despite the high private sector involvement, the rural schools have usually experienced difficulties in raising funds, therefore creating a niche for support targeting private institutions like EdPartners. (Power BI Report)

7.3 Data Used in Analysis

Together with the datasets mentioned above, we added some key datasets for in-depth analysis: loan data, repayment data, and country data.

Loan Data: This comprises the entire detailed data with regard to loans offered by EdPartners, loan types, interest rates applied, and loan tenure, among other variables. An analysis of this data was paramount in assessing the current loan performance and the financial position of EdPartners over the last couple of years.

Repayment Data: This data set will provide a holistic and current view of the repayment of the loans: the exact date when the loan is due for repayment, the status of the loan, whether it be current, defaulted, overdue, or paid off, or the expected amount of repayment. Such data will allow EdPartners to identify schools that are at high risk since these have shown negative signs in historical patterns, and further build their risk assessment process.

Country Data: This dataset represents countries to which EdPartners might expand. Focusing on primary school education, the variables to utilize include median age, size of population, number of primary schools, corporate tax rate, and ease of setting up a business. The data is very important for analyzing viability of expansion and hence ideal countries for EdPartners.

7.4 Dashboard Pages and Key Insights

Structuring has been done for these five key pages: Insights, Market Expansion Analysis, Education and Infrastructure Assessment, Loan Overview, and Repayment Behaviour and Risk.

7.4.1 Insights

This is where the key findings of our analysis will be showcased, to aid in the data-driven decisions for EdPartners. These insights are designed so that they would help EdPartners achieve business objectives and inform the strategic roadmap.

Figure 1: Insights from the overall analysis.

7.4.2 Market Expansion Analysis

This page covers the initial analysis of ten countries that are potential expansion targets for EdPartners. Key metrics such as corporate tax rates, primary schools, and median age were examined based on the country level to determine the viability of each country for the expansion.

These metrics may provide a basic foundation for determining which locations present a more attractive business climate along with a very lucrative market.

Figure 2: Market Expansion Analysis

7.4.3 Education and Infrastructure Analysis

This page analyzes the educational and infrastructural environment of the countries that could potentially be expanded. As the mission of EdPartners is to provide financing to primary schools for improvements, we analyzed data such as the quality of the school infrastructure, technological access, and transportation options available. Based on such an analysis of the factors listed above, we were able to identify which country most needed improvement in education and would therefore have more demand for the services of EdPartners.
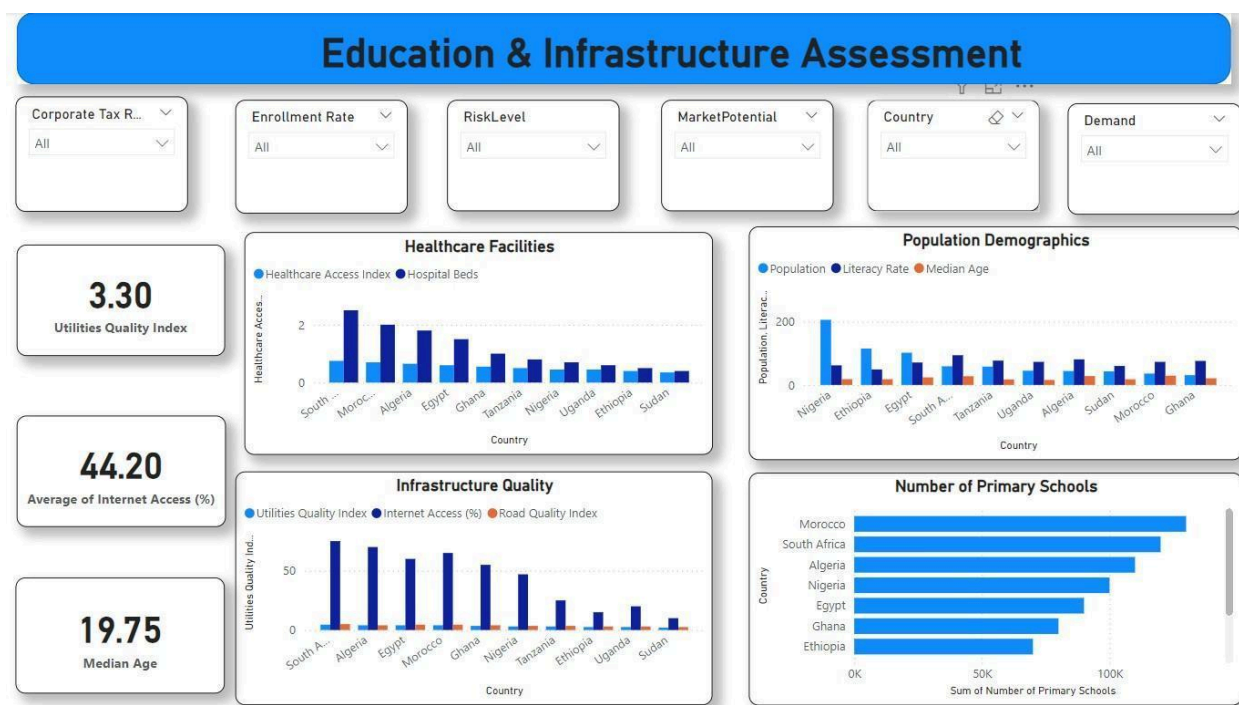
Figure 3: Education and Infrastructure assessment

7.4.4 Loan Overview

This dashboard represents the performance of loans, showing trends across variables like the type of loan, interest rate, location, repayment period, and amount of loan. This will help in identifying what kinds of loans are doing well, the right time for loan tenure, and the most active period for loan disbursement, hence assisting EdPartners in informed adjustments in their offerings accordingly.
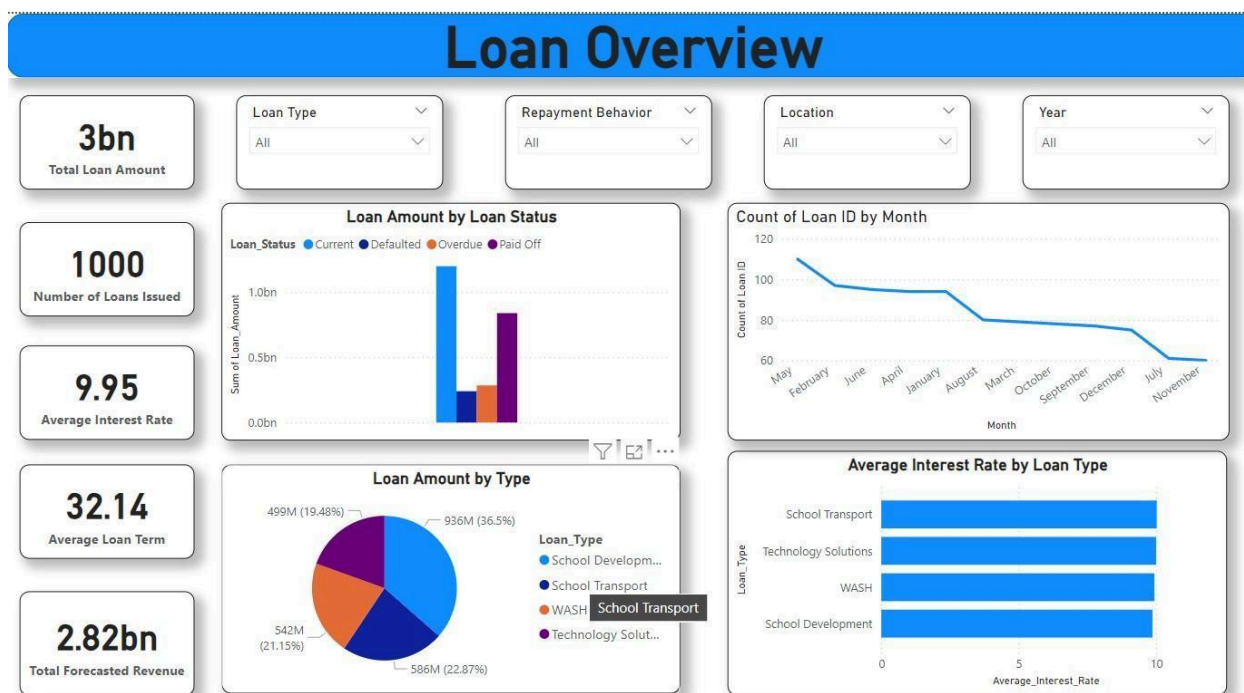
Figure 4: Loan Overview

7.4.5 Repayment Behaviour and Risk

The current annual rate of defaults for EdPartners loans stands at approximately 10% of their loans. This page attempts to identify some signals of probable default by schools to EdPartners, providing them with the ability to properly manage risks well in advance. By discovering which factors are responsible for defaults, EdPartners will be in a better position in terms of risk assessment when considering new clients to minimize its future risk.
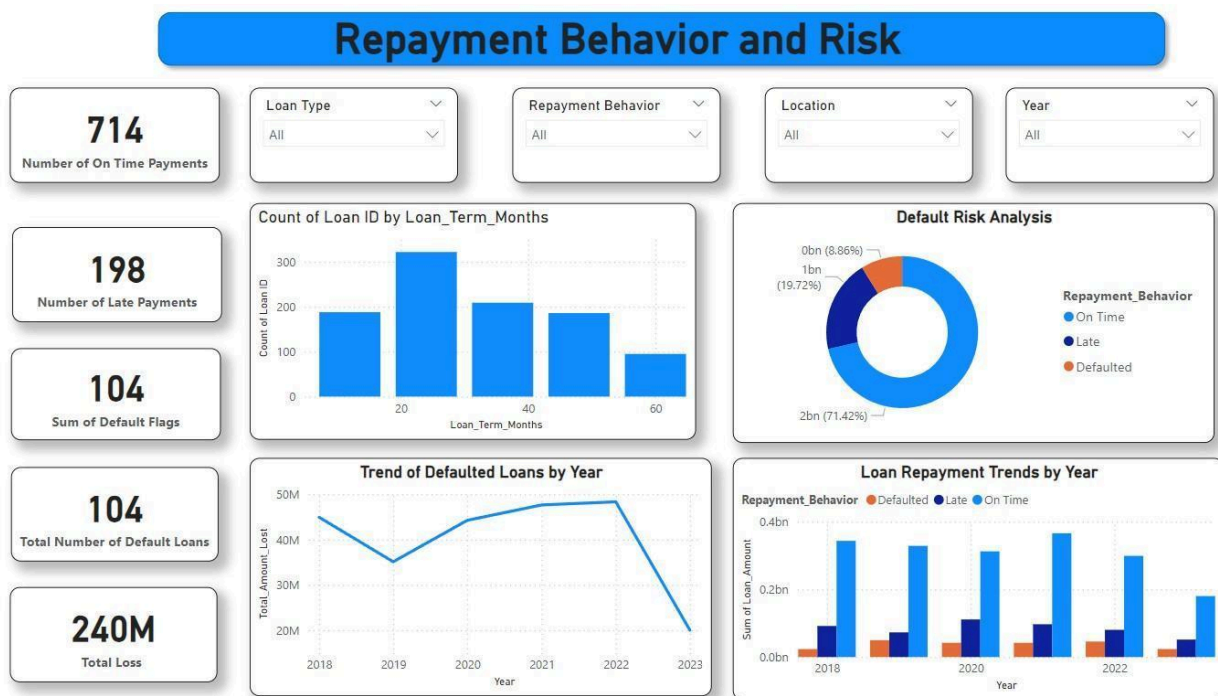
Figure 5: Repayment Risk and Behaivour

7.5 Inisights gotten from the Dashboard

Among the ten countries studied, Morocco is recommended as a country of choice for the next phase of EdPartners expansion based on the following reasons:

Morocco-A Priority Market

1. School Population: Morocco is highly populated, falling within the school-going age; this goes to show that the demand for loan facilitation for the development and upgrade of facilities within Morocco is very high. Therefore, Morocco presents an ideal market in which EdPartners can avail financial support to accommodate needs.

2. Large Network of Primary Schools: Out of the 10 countries assessed, Morocco boasts the highest number of primary schools, thus providing a wide market for the services offered by EdPartners. A larger school base simply presents an opportunity for EdPartners to build a sizeable clientele base in Morocco.

3. Favorable Tax Environment: Morocco enjoys a moderate rate in comparison with different regions, and hence, EdPartners would have lower levels of tax burdens. This cost-effective tax structure allows for the assurance of more sustainable operations and profitability.

Type of Loan in Demand

Of all the four loan products offered at EdPartners, School Development Loans have been in the highest demand. This evidences that most schools seek finance for purposes of infrastructure and development, hence in line with EdPartners' mission of improving educational facilities.

Loan Repayment Trends

The loan repayment trends in EdPartners, in the present moment, are encouraging, depicting a good reliability on the part of clients:

- Default Rate: The default rate stands at 8.86% of loans, a risk rate within reasonable limits.
- On-time Repayment: 71.42% of the loans are repaid on time, reflecting good payback behavior.
- Late Payments: 19.72% of loans are repaid late. However, since more than 90% of loans are eventually repaid, EdPartners can enjoy a sound payback environment.

These repayment trends signify that EdPartners can safely continue to expand, since most loans get repaid and a majority of those being repaid do so on time. Morocco thus carves out an excellent opportunity for EdPartners due to its strong demand for development loans, favorable tax conditions, and a reliable repayment landscape.

7.6 Conclusion

The dashboard and the insights gotten from the dashboard will be used to help and ensure Edpartners makes data driven decisions which will make their business grow and give them insights on how to expand to other African countries

Chapter 8: User Documentation and Manual

8.1 Introduction

Welcome to the User Manual for the NairobiEd Partners Business Intelligence (BI) Dashboard! This guide will help you understand and use the BI Dashboard, an essential tool designed to help us make smart, data-based decisions as we support schools across Africa.

The dashboard allows us to see real-time data that helps us understand key numbers, trends, and important details. With this information, we can plan better, improve our services, and reach our goals more effectively. Whether you're working in loans, finance, or management, this dashboard will help you see what's happening and make decisions based on data.

This manual is here to make sure every team member can use the dashboard with ease. It walks you through each section, explains what each chart and number means, and shows you how to adjust the filters to view specific data. It will also give you some pointers on understanding the data so that you can make informed decisions.

Whether you're checking loan repayments, assessing which markets to expand into, or simply reviewing operational data, this guide will show you how to get the most out of the BI Dashboard. Follow the steps here to find the information you need, understand it, and use it to help NairobiEd Partners make an even bigger impact on education in Africa.

8.2 Goals of this Manual

1. **Introduce You to the Dashboard**

   This manual explains each part of the dashboard so you'll know what's on each page and why it's there.

2. **Make the Data Clear**

We'll guide you on how to read and understand the charts and numbers, so you can use the data to make good decisions.

3. **Support Data-Driven Decisions**

This manual will help you use the data in a practical way to improve how we work and achieve better outcomes.

4. **Simplify the Dashboard**

Clear instructions will help you learn how to filter, adjust, and export data to fit your needs.

8.3 Dashboard Sections

This manual follows the main parts of the BI Dashboard:

Insights

This pages gives an overview of the inighst that we got after analyzing NairobiEd Partners data.

Market Expansion Analysis

This page helps you see where NairobiEd Partners could expand. It shows details like the number of primary schools, literacy rates, corporate tax rates, and how easy it is to start a business in different areas.

Education & Infrastructure Assessment

Here, you'll find data on things like healthcare, population demographics, and quality of utilities in different countries. This helps us understand where there might be a demand for our services.

Loan Overview

This part provides details about NairobiEd's loan portfolio, such as the rate of loan disbursements, default rates, and the demographics of our clients.

Repayment Behavior and Trends

This page shows patterns in how loans are repaid, which helps us assess risk levels and financial performance for schools we support.

Each section comes with easy-to-follow instructions, showing you how to use filters to see specific data views. This manual also includes helpful tips and best practices to ensure you get accurate and useful insights.

8.4 How to Use this Manual

1. **Follow the Steps**

   Use the step-by-step instructions as you go through each part of the dashboard, so you can understand the main charts and numbers.

2. **Understand the Data**

   Read the tips on how to interpret the data, which will help you know what the numbers mean and how they relate to your work.

3. **Customize Data Views**

   Learn how to use filters to see specific data, like a particular country, risk level, or time period.

4. **Real-Life Examples**

   We've included some examples to show how different roles at NairobiEd Partners can use the BI Dashboard in practical ways.

By the end of this guide, you should feel comfortable accessing, analyzing, and interpreting the data on the BI Dashboard. This will help you play a key role in making sure NairobiEd Partners achieves its mission of expanding educational opportunities and providing financial support to schools across Africa.

8.5 Navigation and Filters

Filters

On the left side of each section, you'll find filters that let you customize the data displayed. These filters include options like **Country**, **Market Potential**, **Risk Level**, **Corporate Tax Rate**, and **Enrollment Rate**.

Example: If you want to see data for a specific country, use the **Country** filter. If you're interested in high-potential markets, use the **Market Potential** filter.

Interactive Charts

You can interact with the charts by hovering over data points to see more details. Clicking on parts of the charts will also let you drill down into specific information, showing trends and providing deeper insights.

8.6 How to Export and Share Reports

To make sharing and analyzing data easier, you can export or share the dashboard information with your colleagues.

Exporting the Dashboard

To export data, click on the 'Export' option at the top. You can export the dashboard as a **PDF**, **PowerPoint**, or **Excel** file. This is useful if you want to share a snapshot of the data or include it in presentations and reports.

Sharing the Dashboard

You can share the dashboard directly with team members by clicking on the 'Share' option at the top. This allows you to email the dashboard link or share it through **Microsoft Teams**, making collaboration straightforward and efficient.

Chapter 9: Feedback and Evaluation

9.1 Introduction

In ensuring NairobiEd Partners fully utilizes the benefits of the BI dashboard, it's critical to adopt a methodical approach to performance evaluation, while also gathering a comprehensive range of feedback from the entire team. The goal here is to gain a well-rounded understanding of the dashboard's efficacy, determine if it's meeting current operational needs, and identify areas where refinements can maximize value over time.

9.2 Feedback and Evaluation Mechanisms

User Feedback Collection

Regularly obtaining insights from the users themselves is an invaluable step to guarantee the dashboard remains practical, relevant, and attuned to team expectations. To facilitate this, it's advisable to conduct periodic surveys and user interviews, with specific focus points on elements such as ease of use, relevance of data presented, and perceived accuracy of information. These surveys could be supplemented by open-ended feedback sessions or workshops that invite team members to discuss their experiences, challenges, and suggestions openly. This direct and sustained interaction with users is instrumental in ensuring the dashboard stays aligned with

evolving business needs, particularly as NairobiEd's operational landscape changes (Chen et al., 2012). By investing time in listening to the team's voices, the dashboard can continue evolving as an integral tool that effectively supports day-to-day decision-making and strategic planning (Hwang & Choi, 2016).

Performance Metrics Tracking

Beyond qualitative feedback, it is equally important to examine how team members engage with the dashboard through quantifiable metrics. Research emphasizes that tracking user interaction metrics, such as the time spent on dashboards and frequency of access, provides critical insights into user behavior and the overall value derived from the system (Hwang & Choi, 2016). This involves closely monitoring various usage parameters, including the specific filters or views users interact with most frequently (Tiwari & Sinha, 2019). By observing these engagement patterns, organizations can identify the most valuable features and sections, guiding future enhancements to prioritize these high-impact areas (Popovič et al., 2012).

For example, if certain filters or visualizations are disproportionately utilized, it signals their importance to users and underscores the need for further development or optimization to boost their utility (Chen et al., 2012). These metric-based insights complement qualitative user feedback by providing a data-driven perspective, contributing to a holistic understanding of the dashboard's role within NairobiEd Partners. The combination of qualitative and quantitative analysis ensures that strategic adjustments are well-informed and aligned with user needs and organizational goals (Marsh, 2020).

Evaluation of Dashboard Impact on Business Processes

Ultimately, the effectiveness of the BI dashboard lies in its ability to positively influence NairobiEd's business processes and outcomes. To gauge this, a multi-faceted evaluation that considers both quantitative and qualitative indicators is recommended. Quantitative metrics, such as reduced report generation times and quicker access to pertinent data, are key in demonstrating how the dashboard streamlines operations and enhances workflow efficiencies (Popovič et al., 2012). Studies have shown that these tangible improvements not only lead to immediate task efficiency but also foster long-term performance gains (Tiwari & Sinha, 2019).

Conversely, qualitative assessments—such as team members' confidence in making data-driven decisions—highlight the impact on decision quality and strategic alignment (Hwang & Choi, 2016). Feedback that reports smoother communication and coordination due to shared insights is instrumental in capturing the broader organizational benefits of the BI dashboard (Chen et al., 2012). Such qualitative indicators are essential for understanding how the dashboard integrates into the daily operations and strategic processes of NairobiEd Partners.

Together, these measurements offer a comprehensive view of how the BI dashboard not only supports immediate tasks but also strengthens NairobiEd's capacity to achieve its strategic objectives with greater agility and precision (Marsh, 2020). This balanced approach ensures that the dashboard continues to be a valuable tool for fostering data-driven decision-making within the organization.

Chapter 10: Recommendations

10.1 Introduction

To remain competitive and responsive to its dynamic operational environment, NairobiEd Partners must continuously evolve its BI capabilities. This section outlines strategic recommendations for enhancing dashboard functionalities and supporting long-term growth.

10.2 Future Recommendations

To further amplify the impact and effectiveness of NairobiEd's business intelligence capabilities, it is essential to explore a range of strategic enhancements that can add depth, dynamism, and precision to the decision-making landscape. With NairobiEd's ongoing growth trajectory and the increasingly complex data demands this growth entails, these recommendations aim to not only address current needs but to future-proof the dashboard for evolving business challenges and opportunities.

1. **Real-Time Data Integration**

   As NairobiEd expands its operations, staying agile and responsive becomes critical. Real-time data integration stands as a pivotal enhancement to meet this need, allowing the dashboard to reflect live information across key metrics, whether from operational, financial, or external data sources. By accessing up-to-the-minute data, NairobiEd can make more informed, relevant, and timely decisions, which are essential for staying competitive in a fast-moving industry. Real-time data empowers decision-makers to identify emerging trends, spot potential issues before they escalate, and adapt strategies quickly, thereby positioning NairobiEd to navigate complex environments with a higher level of accuracy and confidence. This level of responsiveness can significantly enhance the dashboard's role in supporting tactical and strategic decisions, aligning it even closer with NairobiEd's operational goals.

2. **Enhanced Predictive Analytics**

To transform the dashboard into not just a reactive tool, but a proactive one, incorporating predictive analytics capabilities can be immensely beneficial. By integrating machine learning models specifically designed to analyze patterns and make predictions regarding key areas—such as loan repayment risks, shifts in market demand, and customer behavior—NairobiEd can gain forward-looking insights that go beyond historical data analysis. Predictive analytics would enable the team to anticipate potential challenges, capitalize on emerging opportunities, and adjust business strategies well in advance. This not only elevates the level of insight the dashboard can offer but also deepens NairobiEd's ability to strategically navigate market complexities and optimize resource allocation, ensuring that data-driven planning remains one step ahead of operational demands.

3. **Advanced Data Visualization Tools**

The addition of more sophisticated visualization options can transform the dashboard from an analytical tool to an intuitive decision-support system that caters to varying levels of data familiarity across the team. Visual elements like geographic heat maps, scatter plots, and trendlines, for instance, can present complex data patterns in a highly interpretable format, allowing users to quickly grasp insights without extensive data expertise. These advanced visualizations can help bring to life relationships and trends that might otherwise go unnoticed in traditional data tables or charts, making data analysis more accessible and impactful. For a diverse team such as NairobiEd's, which may include varying roles and data needs, these tools can bridge the gap between raw data and actionable insights, thereby enhancing the accessibility and utility of the dashboard for all users.

4. **User Training and Support Infrastructure**

To ensure that all team members can make the most out of the BI dashboard's growing functionality, a dedicated focus on user training and support will be essential. Regular training sessions can familiarize staff with newly introduced features, advanced tools, and best practices for data analysis, thereby maximizing both user confidence and efficiency. Beyond periodic training, establishing a support infrastructure—such as a

helpdesk or a designated point of contact for more complex inquiries—can further assist users in troubleshooting, navigating advanced features, and leveraging the dashboard's full potential. This proactive approach to user support ensures that as NairobiEd's BI capabilities expand, every team member can confidently and effectively engage with the dashboard, reinforcing a data-driven culture throughout the organization.

5. **Focused Expansion into Morocco**

Tap into the High School Population: With the high population attending schools in Morocco, EdPartners should focus on these schools in highly concentrated areas. This way, the company is assured of targeting high-demand areas to facilitate the process of providing loans.

School Development Loans: Target Marketing Campaigns at Infrastructural and Facility Demands in Schools in Morocco.

6. **Better Brand Visibility and Networking**

Relationship Building: Since Morocco has the maximum number of primary schools, the relationship can be networked to connect EdPartners with schools in every urban and rural region. Partnerships with associations of school heads or Government Ministries of Education may lock in the relationships and improve the reach for EdPartners.

Leverage School Infrastructure Growth: This would avail the chance for the development of schools through partnering with local governments, which might offer incentives towards improvement of school facilities.

7. **Optimize Tax Advantage**

Utilize Morocco's Favorable Tax Environment: The level of taxation, though moderate, in Morocco is quite positive. This is something EdPartners must continue to capitalize on by investing in long-term projects, reducing operation costs, and improving profitability.

This can be furthered by the utilization of tax incentives on their investments within education-oriented projects as another strategy for cost reduction.

8. **Continue and Enhance Loan Repayment Strategy**

Default Rate Monitoring and Reduction: With an acceptable default rate of 22.35%, EdPartners should ensure that loan education is enhanced or more flexible repayment options are offered, or additional structured reminders are implemented in order to avoid defaults as much as possible.

On-time Repayments: The current on-time repayment rate stands at 71.42%. EdPartners would strive further to facilitate timely loan repayments through incentives or banking tie-ups that offer easier repayment mechanisms.

Focus on Late Payments: The 19.72% of late payments shall be studied for common factors, such as school size or region, and solutions such as customized repayment plans may be advised for these institutions that cannot pay on time.

9. **Local Market Knowledge**

Cultural and regional tailoring: EdPartners shall have to ensure that loan products and terms are culturally and regionally relevant. This may be done by varying the quantum of loans, or the duration, or even cycles of repayments, in order to make these match the financial cycle in schools in Morocco.

Education for Schools on Loan Products: Create information resources or workshops regarding the benefits and processes of school development loans. This would raise demand and reduce barriers among schools unfamiliar with EdPartners' services.

10. **Continuous Improvement and Adaptation**

Market Response Monitoring: Because this is a new market, the ideal situation is to keep one's fingers on the pulse regarding loan uptakes and trends in repayment, market demands, and reactions to the offered services. In view of this, one can quickly engage in the modification of strategies to solve problems.

Gradual Scaling: First focus on targeting potentially resourceful regions or school districts, then gradually scale it nationally. This gradual scaling will ensure that EdPartners is better equipped to manage their risk while scaling operations.

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Appendices

Appendix A

DSA 3050 Project Assignment Letter

SUMMER SEMESTER 2024

DSA 3050 A Business Intelligence Class

INSTRUCTOR: Dr. Mursi

DATE: 31st October 2024

Due Date: Week 9

DSA 3050 Project Assignment

<u>To Whom it May Concern</u>

My name is **……………………………** **and** I am a student in the DSA 3050 A Business Intelligence class at USIU, Fall Semester 2024 under the instruction of Dr. Mursi. I am writing to introduce you to an exciting opportunity for ………………………….. **(Company Name)** to benefit from our academic project, which focuses on assessing and enhancing business intelligence (BI) capabilities for Small and Medium Enterprises (SMEs) in Nairobi.

As part of our coursework, we have been tasked with identifying an SME to collaborate with in a real-world BI project. The objectives of this project are to assess the current BI maturity of your organization, provide a comprehensive report with actionable recommendations, and develop a custom BI dashboard tailored to your specific business needs.

Project Benefits:

1. **BI Maturity Assessment:** We will conduct a thorough assessment of your current BI practices, data management, and reporting capabilities using recognized BI maturity models.

2. **Comprehensive Report:** Based on our assessment, we will provide a detailed report highlighting strengths, areas for improvement, and strategic recommendations to advance your BI maturity.

3. **Custom BI Dashboard:** Our team will design and develop a BI dashboard that addresses your key performance indicators (KPIs) and provides actionable insights to enhance decision-making processes within your organization.

4. **Implementation Support:** We will assist in the implementation of the BI dashboard and provide training to ensure your team can effectively use the tool.

This collaboration is not only a valuable learning experience for us as students but also offers your organization a unique opportunity to leverage advanced BI solutions at no cost. Our goal is to deliver a practical and impactful BI tool that you can integrate into your operations to drive business growth and efficiency.

We would be honored to work with …………………….. (Company Name) on this project and contribute to your BI journey. Should you be interested, we would like to schedule a meeting at your earliest convenience to discuss this opportunity in more detail and answer any questions you may have.

Thank you for considering this collaborative opportunity. We look forward to the possibility of working with you and contributing to the success of ………………………………..

Warm regards,

Instructor's Contact Information

Dr. Mursi

Instructor, DSA 3050 A Business Intelligence

USIU

jmursi@usiu.ac.ke

0710469003

Appendix B

BI Maturity Assessment Survey for EdPartners Africa

BI Maturity Assessment Survey for SMEs

Section 1: General Information

1. Company Name: Ed Partners Africa

2. Industry: Educational Industry

3. Number of Employees: 20 - 30

4. Your Role/Position:

5. Date: November 14, 2024

Section 2: Business Intelligence (BI) Strategy

1. Do you have a formal BI strategy in place?

  - [ ] Yes

  - [ ] No

    ✔ [ ] In Progress

2. How well do you think your company uses data to make decisions?

  - [ ] Not at all

  - [ ] Occasionally

    ✔ [ ] Frequently

- [ ] Always

3. What are the main goals of your BI initiatives?

(e.g., cost reduction, customer insights, operational efficiency, etc.)

• **Data-Driven Decision Making**: Empower leadership with insights for more informed, strategic decisions.

• **Market Expansion**: Identify growth opportunities and new regions for educational financing.

4. Do you have KPIs or metrics tracked regularly using BI tools?

✔ [ ] Yes

- [ ] No

Section 3: Data Management and Usage

1. What types of data do you collect and analyze (e.g., sales, customer data, operational data)?

• **Loan and Financing Data**: Tracks funding disbursement, repayment trends, and school performance.

• **Customer Data**: Captures insights on schools served, demographics, and engagement metrics.

2. Where is your business data stored?

- [ ] Spreadsheets (e.g., Excel, Google Sheets)

- [ ] On-premise databases

✔ [ ] Cloud-based storage

- [ ] Other: _____

3. How often do you update or review your data?

- [ ] Daily

- [ ] Weekly

 ✔ [ ] Monthly -
[ ] Annually
- [ ] Rarely/never

4. How would you describe the quality of your data (accuracy, completeness, and consistency)?

- [ ] Poor

- [ ] Fair

 ✔ [ ] Good

- [ ] Excellent

Section 4: Technology and Tools

1. Which BI tools or platforms (if any) do you currently use?

- [ ] Excel/Google Sheets

 ✔ [ ] Power BI

- [ ] Tableau

- [ ] Google Data Studio

- [ ] Other: _____

- [ ] None

2. How satisfied are you with your current BI tools?

- [ ] Very Dissatisfied

- [ ] Dissatisfied

   ✔ [ ] Neutral

- [ ] Satisfied

- [ ] Very Satisfied

3. Do you have automated processes to generate reports or dashboards from your data?

   ✔ [ ] Yes

 - [ ] No

4. How easily can employees access data and insights needed for decision-making?

 - [ ] Very Difficult

 - [ ] Difficult

   ✔ [ ] Neutral

 - [ ] Easy

 - [ ] Very Easy

Section 5: People and Skills

1. How many employees are responsible for managing and analyzing your data? Currently only 2

2. What level of expertise do your employees have in data analysis and BI tools?

 - [ ] None

 - [ ] Beginner

   ✔ [ ] Intermediate

- [ ] Advanced

3. Do you provide BI or data analysis training for your employees?

  - [ ] Yes

  - [ ] No

    ✔ [ ] In progress

4. How involved is top management in data-driven decision-making?

  - [ ] Not involved

  - [ ] Somewhat involved

    ✔ [ ] Highly involved

Section 6: Processes and Culture

1. How would you describe your organization's approach to decision-making?

  - [ ] Mostly intuitive (based on gut feeling)

  - [ ] Mostly data-driven

    ✔ [ ] Balanced (both data and intuition)

2. How frequently do you use BI reports/dashboards in business meetings?

  - [ ] Never

  - [ ] Sometimes

    ✔ [ ] Often

  - [ ] Always

3. What challenges do you face in adopting BI solutions in your organization?

(e.g., lack of resources, lack of skills, technology limitations, etc.)

- **Limited Resources**: Budget constraints affect technology investments.
- **Skill Gaps**: Insufficient BI expertise hinders effective tool usage.
- **Data Integration Issues**: Disparate data sources make consolidation difficult.

4. How open is your organization to embracing new BI tools and technologies?

  - [ ] Not open

  - [ ] Somewhat open

     ✔ [ ] Very open

Section 7: BI Outcomes and Impact

1. What positive outcomes have you experienced from implementing BI (if applicable)?

(e.g., increased sales, better decision-making, cost savings, etc.)

- **Improved Decision-Making**: Data insights have led to more informed, strategic choices.
- **Enhanced Efficiency**: Automated reporting has saved time and reduced manual workload.

2. On a scale of 1-10, how would you rate the overall impact of BI on your company's performance? A 9

3. In which areas would you like to see improvements with the help of BI?

(e.g., forecasting, customer insights, inventory management, etc.)

Forecasting: It enhances the accuracies in predicting trends and demands.

Customer Insights: A more profound understanding of customers' needs and behaviors.

Operational Efficiency: Find bottlenecks and enable workflow optimization.

Market Development: Identify high potential markets for growth.

Financial analysis: Improve Budgeting and Profitability monitoring.

Section 8: Additional Information

1. What do you think could improve your organization's use of data and BI?

Data Integration Systems: Integrate the data across all departments for better and quicker access.

BI training programs impart all necessary skills to team members for using BI tools.

Reporting: Automated and real-time reporting to speed up the process of insights.

Improved Data Governance: Better accuracy, security, and consistency of data.

Custom Dashboards: Personalize dashboards with departmental KPIs and objectives.

2. Would you be interested in receiving further BI training or consulting services?

   ✔ [ ] Yes

 - [ ] No