Strategic Principal Leadership in Data-Driven and Value-Based School Planning: A Case Study from Indonesian Primary Education

Destisari Nurbani[1] ✉, Diding Nurdin[1], Asep Dikdik[1]
[1] Universitas Pendidikan Indonesia, Indonesia
Corresponding author: destisari.nurbani18@upi.edu

ABSTRACT

Purpose – This study investigates the leadership strategies of school principals in implementing data-driven planning integrated with religious values, addressing a critical gap in educational leadership literature. While the use of data in school planning is widely discussed, its alignment with spiritual and local cultural values remains underexplored, particularly within multicultural primary schools in Indonesia.

Design/methods/approach – A qualitative single case study was conducted at SDN Buahkapas, West Java, using an interpretive epistemology. Data collection included in-depth interviews, non-participant observations, and document analysis (e.g., Education Report Card, annual work plan). Thematic analysis, supported by NVivo software, was employed to identify, code, and visualize recurring patterns across data sources and informants.

Findings – The principal demonstrated strategic leadership through comprehensive data analysis (aided by NVivo-based word cloud and project mapping), teacher collaboration, and the integration of religious values into the school's vision—"SAKTI" (Sehat, Agamis, Kreatif, Berteknologi, dan Inspiratif). Key themes included data-driven planning (19 references), classifying priorities (17), and collaboration (13). Challenges such as limited teacher data literacy and financial constraints were addressed through reflective evaluations, capacity-building efforts, and external resource mobilization.

Research implications – Findings highlight the importance of strengthening principals' data literacy and capacity to embed spiritual values in school planning. Integrated training and teacher empowerment in data interpretation are essential to ensure contextually responsive and evidence-based school improvement. While findings are contextually rich, their generalizability is limited due to the single-case design.

Jurnal Pendidikan Islam

1. Introduction

School principals in contemporary educational environments face increasing demands to implement data-driven decision making to ensure effective school management and continuous improvement. Research published in Educational Administration Quarterly has shown that principals who successfully integrate data utilization with stakeholder engagement achieve significantly better educational outcomes than those relying solely on traditional intuitive planning approaches (Harris et al., 2022). The use of data in educational planning requires principals to possess leadership capacities that enable critical interpretation of data and its application as a foundation for school strategy formulation.

In this context, the principal, as an educational leader, holds responsibilities related to school-level educational management, including analyzing challenges, opportunities, strengths, and

weaknesses of the school, as well as formulating a comprehensive school work plan (Nurdin & Sibaweh, 2015; Sutarjo et al., 2024). These competencies constitute core aspects of educational managerial and administrative functions, encompassing planning, organizing, mobilizing, supervising, and evaluating (Engkoswara & Komariah, 2015; Niah, 2022). Accordingly, data-driven decision making aligns with the fundamental duties of school principals in ensuring that every managerial decision contributes effectively and efficiently to achieving educational goals.

Data-driven decision making is operationalized by principals in the school planning process. Effective planning involves consideration of resources, planned activities, and an analysis of the school's actual conditions based on data (Hariro et al., 2024; Nurhikmah, 2024). This process includes problem identification, strategy formulation, goal setting, and resource organization aimed at achieving educational objectives (Bantilan et al., 2023; Nurdiansyah, 2025). Within the administrative structure of education, principals are required to prepare plans that reflect the school's real conditions, as informed by data rather than assumptions. Hence, data-driven planning becomes the key to determining both short- and long-term policy directions and school development (Kemendikbud, 2019).

In preparing school plans, principals may adopt a systematic approach by collecting up-to-date data on school conditions, identifying various decision-making alternatives, and considering both internal and external factors (Muttaqin et al., 2024). To assist principals in assessing current school conditions, the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) launched the Rapor Pendidikan (Education Report) platform. This platform supports school-level education management (Kemendikbudristek, 2023). Educational achievements in Indonesian schools are evaluated through the National Assessment, comprising the Minimum Competency Assessment (AKM), the Learning Environment Survey (Sulingjar), and the Character Survey. The results of these assessments, supplemented by additional accessible data, are compiled by Kemendikbud into a downloadable institutional report card (Kemendikbud, 2024). This report card serves multiple management functions, including school planning (Harningsih et al., 2023).

With the Education Report Card, schools can design more targeted school plans that reflect the actual school situation based on accurate data (Nurbani et al., 2024). However, limited principal competencies in data and digital literacy pose significant challenges. Many principals lack proficiency in data analysis tools, resulting in underutilization of available data for educational planning and evaluation (Ming et al., 2024; Rohmah et al., 2025). Moreover, data-driven planning also faces challenges related to cultural, linguistic, and student diversity. A study in the International Journal of Emerging Technologies in Learning emphasizes that data utilization in education management must include evaluation indicators that are culturally sensitive and analytic methods that are objective to avoid bias (Wang, 2023).

Several studies have emphasized the importance of the principal's role in cultivating religious culture in primary schools as part of students' character development (Idayani & Bahrun, 2023; Ilmi & Sholeh Muhamad, 2021). These studies highlight principals' strategies of employing value-based Islamic managerial approaches in educational programming. However, such approaches remain largely normative and fail to link these programs with education data analysis as a foundation for school planning. Conversely, a study by Athanatou illustrates how a data-driven decision-making model can enhance program effectiveness through teacher perception analysis and digital assessments. Nonetheless, this study does not address the integration of spiritual or local values within educational planning frameworks.

Given these circumstances, a gap exists in the literature regarding the integration of data-driven planning, school leadership strategies, and the application of spiritual values in primary schools. Within Indonesia's multicultural educational context, a planning model is needed that is not only data-based but also aligned with spiritual and local cultural values. Preliminary studies have shown that the principal

at SDN Buahkapas developed the school's vision and mission based on educational goals, school characteristics, and data analysis. The school's vision is represented by the acronym SAKTI (Sehat, Agamis, Kreatif, Berteknologi, dan Inspiratif). One of its core values is religiosity, which serves as a normative foundation for cultivating a spiritual and religious school culture. Through data analysis, the principal fulfills their managerial role as a school administrator in planning based on Islamic educational management principles.

Implementing a vision that integrates religious values into data-based school planning demonstrates strategic leadership practice consistent with Islamic educational management principles. Data-driven planning that incorporates religious values into the school's vision reflects both modern managerial principles and Islamic values on tadbīr (planning). In management, tadbīr is defined as thorough planning prior to action, considering objectives, methods, and potential consequences (Badriyah & Kamaludin, 2023; Lutfi, 2023; Nasution, 2019). This forms the foundation for further examining the leadership strategies employed by principals in managing school planning in a holistic and values-based manner.

Accordingly, this study aims to explore the principal's leadership role in data-driven school planning and the integration of religious values into the school's vision, mission, and planning. Two interrelated objectives guide this investigation. First, to identify and analyze specific leadership strategies used by the principal in implementing data-driven planning that integrates religious values within the context of Indonesia's culturally diverse education system. Second, to examine the challenges faced by the principal and analyze adaptive strategies developed to overcome obstacles while maintaining the effectiveness of school planning.

2. Methods

This study employed a qualitative research design using a single case study approach grounded in interpretive epistemology to explore the leadership strategies employed by the school principal in implementing data-driven planning processes that integrate spiritual values. Qualitative research enables a comprehensive understanding of participants' experiences and perspectives within their natural context (Sidiq & Choiri, 2019; Waruwu, 2023). A descriptive type of case study was used to describe an intervention or phenomenon in the field and requires the researcher to initiate the study with a descriptive theoretical framework (Baxter & Jack, 2015). This approach is well-suited to address questions related to the constraints faced by principals and the strategies employed in preparing school plans. Figure 1 below presents the research methodology framework used in the study.
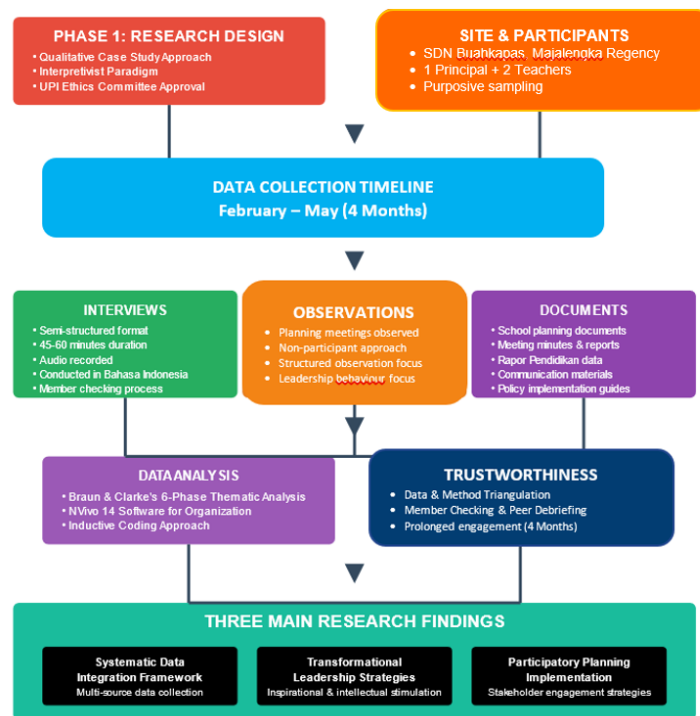
Figure 1: Research Methodology Framework and Data Collection Process

Figure 1 illustrates the comprehensive research methodology framework, including participant selection criteria, activity schedule, data collection process, data analysis procedures, and data credibility stages. The study was conducted at SDN Buahkapas, Majalengka Regency, West Java, selected through purposive sampling based on specific criteria, including the use of the Rapor Pendidikan (Education Report) in school planning processes, the integration of religious values into the school's vision, mission, and programs, principal and teacher involvement in planning activities, and accessibility that ensured school leadership's willingness to participate in the research.

Participants were selected using purposive sampling to ensure that those involved played an active role in the school planning process. The primary participant was the school principal, who had six years of experience in educational leadership and demonstrated expertise in implementing data-driven planning that integrated religious values into the school's vision, mission, and programs. Secondary participants consisted of two teachers actively involved in the school planning process, with teaching experience ranging from five to fifteen years.

Data collection utilized a triangulation technique, involving observation, interviews, and documentation (M Husain et al., 2023; Sugiyono, 2022). Data were collected over a four-month period from February to May 2025. In-depth interviews were conducted with the principal, while semi-structured interviews were conducted with secondary participants (teachers), using guides developed based on the research objectives and elements of the data-driven planning process. Individual interviews lasting 45–60 minutes were conducted in the principal's office environment, recorded digitally, and conducted in Bahasa Indonesia. Observations were carried out using non-participant techniques focusing on the principal's role during the school planning process. Document analysis involved the comprehensive collection of documents related to school planning, such as the school vision and mission statements, annual work plans, strategic plans, interpreted data reports from the Education Report Card, and meeting minutes.

The study employed thematic analysis, a qualitative analysis method aimed at identifying, analyzing, and reporting patterns (themes) that emerge from the data (Lochmiller, 2021). Data analysis followed the six-phase thematic analysis approach, selected for its systematic and rigorous nature in identifying, analyzing, and reporting patterns in qualitative data while maintaining flexibility for the development of emerging themes (Braun & Clarke, 2022). The process involved familiarization with the data through verbatim transcription and initial reading, generation of initial codes via systematic line-by-line inductive coding, theme development by organizing codes into potential themes, reviewing and refining themes by assessing internal homogeneity and external heterogeneity, defining themes by developing clear definitions for each theme, and producing the final report through integration with existing literature and theory.

The data analysis approach was inductive, with categories and themes developed progressively from field data. The analysis process included open coding, categorization, and thematic abstraction using qualitative data analysis software (NVivo). The researcher sought to capture patterns and meanings that naturally emerged from participants' narratives and field observations. To ensure the integrity of findings, a validation process was conducted through peer discussion, allowing for collaborative review of codes and themes.

The interview and observation guides used in this study underwent expert review by researchers in the field of educational leadership. To ensure data credibility, the researcher conducted member checking by providing interview transcripts to informants for accuracy confirmation, ensuring that the interpretations captured by the researcher aligned with the intended meanings of the participants. In addition, peer debriefing was conducted with academic advisors to critically examine the data analysis process and provide feedback on the findings. An audit trail was systematically compiled in the form of documented research processes, including field notes, interview transcripts, coding procedures, and data interpretation outcomes.

NVivo software was employed throughout the analysis to organize qualitative data, conduct coding, manage nodes or emerging themes, explore inter-data relationships, generate visualizations such as word clouds and project diagrams, and facilitate triangulation and audit trails, as all steps were digitally recorded. Steps taken using NVivo included importing interview transcripts, observations, and documents; marking quotations with thematic codes; categorizing codes into themes or nodes; and creating visualizations such as word clouds and project maps to examine interconnections among qualitative data elements such as themes, cases, data sources, relationships among themes or informants, and coding results.

3. Results

3.1. Word Frequency

From the data analysis conducted using NVivo, the researcher obtained word frequency results. The word frequency analysis aimed to identify the most frequently occurring words within the research data imported into the NVivo software. This analysis yielded both a table of word frequency results and a word cloud visualization (Mortelmans, 2025). Table 1 below presents the outcomes of the word frequency query in NVivo.

Table 1. Word Frequency Query Results

Word	Length	Count	Weighted Percentage (%)
school	6	103	007
planning	8	48	003
principal	9	46	003
teachers	8	38	002
interview	9	12	001
report	6	12	001
analysis	8	11	001
results	7	11	001
environment	11	9	001
learning	8	9	001

Table 1 presents the ten most frequently occurring words in the research data. The table includes the columns "word," "length," "count," and "weighted percentage." The "word" column lists the words that appeared in the dataset. The "length" column shows the number of characters in each word. The "count" column records the frequency with which each word appeared. The "weighted percentage" column displays the weighted frequency of each word, adjusted for size and contextual density within the data.

Based on the table, several key findings emerged:

a. The word *"school"* appeared most frequently, with 103 occurrences, making it the word with the highest character count and weighted percentage (0.07%). This indicates that the central discourse in the data revolves around the school context.

b. The words *"planning"* and *"principal"* appeared 48 and 46 times, respectively, indicating that school planning and the principal's role are significant and frequently discussed topics.

c. The word *"teachers"* appeared 38 times, confirming that teacher involvement is a notable issue in the dataset.

d. Other words such as *"interview," "report," "analysis," "results," "environment,"* and *"learning"* appeared with lower frequencies but still reflect the methodological and thematic context of the study.

In addition to the word frequency table, the NVivo software also produced a visual representation in the form of a word cloud. Figure 2 below shows the word cloud visualization, in which the words *"school," "principal," "planning,"* and *"teachers"* are displayed more prominently than others. This suggests that these terms represent the central themes of the research.
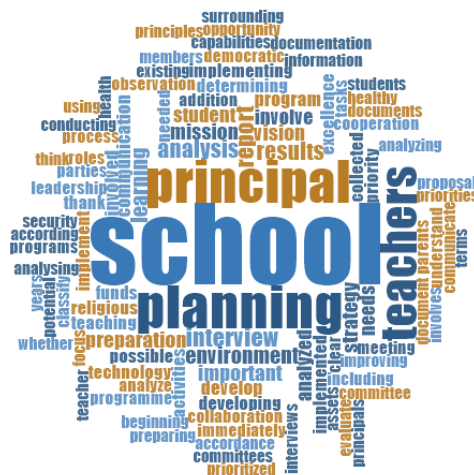
Figure 2: Principal's Leadership Role Word Cloud

From the word frequency table and word cloud visualization, several analytical meanings can be derived as a foundation for the subsequent stages of data analysis. The high-frequency words—*school, planning, principal,* and *teachers*—represent the central theme of the study, namely the school principal's leadership in the context of educational planning. This word frequency data assisted the researcher in identifying major topics for coding and thematic development in the qualitative data analysis. The findings also served as an initial trigger for thematic exploration and supported the validity of content interpretation in the data.

3.2. Project Map

The project map illustrates the network of relationships among data sources, thematic codes, and informants (cases) in this qualitative study. This data visualization demonstrates how various elements are interconnected through the thematic coding process in NVivo. The resulting diagram shows how the collected data were coded into specific themes, which were then categorized for further analysis (Mortelmans, 2025). Figure 3 presents the project map visualization of the qualitative research data.
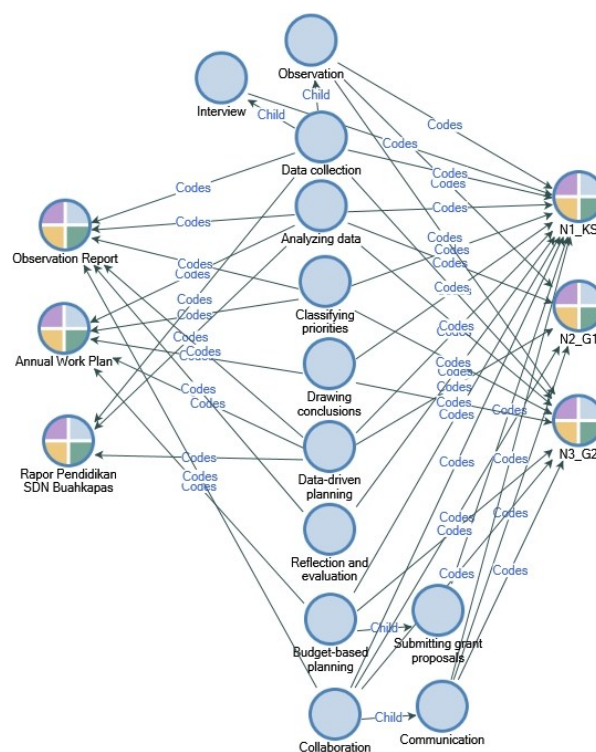
Figure 3: Project Map Diagram of the Principal's Leadership Role in School Planning

The key components in the project map diagram include data sources, represented as circles with pie chart icons; thematic nodes, represented as central circles; and informants (cases). The data sources included in the analysis are field observations, the school's annual work plan, the interpreted Education Report Card, and interview transcripts. The main thematic codes that emerged from the coding process include: *data collection*, *analyzing data*, *classifying priorities*, *drawing conclusions*, *data-driven planning*, *reflection and evaluation*, *budget-based planning*, and *collaboration*. Informant data (cases) include N1_KS (principal), N2_G1 (Teacher 1), and N3_G2 (Teacher 2), each of whom was coded and associated with the themes discussed during the interviews.

The Rapor Pendidikan (Education Report) and observation data were coded under several themes, such as *data collection*, *analyzing data*, and *classifying priorities*, indicating that these documents served as foundational references for analysis and decision-making in school planning. The principal (N1_KS) was strongly connected to all major themes, underscoring the principal's central role in the data-driven planning process. In contrast, the teacher informants were more closely associated with the themes of *collaboration*, *communication*, and *reflection*, reflecting their participatory roles in the data-driven planning process.

In addition to the project map visualization, the thematic coding also yielded a crosstab query showing the correlation between data sources and informants with each coded theme. Table 2 presents the results of this crosstab query.

Table 2. Crosstab Query

Theme/Code	N1_KS	N2_G1	N3_G2	Observation Report	Education Report (Rapor Pendidikan)	Annual Work Plan (Rapat Kerja Tahunan/RKT)	Total
Analyzing data	3	1	1	2	2	3	12
Budget-based planning	4	0	1	0	0	3	8
Classifying priorities	8	0	2	1	0	3	14
Collaboration	6	2	4	1	0	0	13
Data collection	2	0	1	1	2	0	6
Data-driven planning	6	2	0	3	2	3	16
Drawing conclusions	4	0	3	0	0	3	10
Reflection and evaluation	2	0	0	2	0	0	4
Total	35	5	12	10	6	15	83

Table 2 presents a crosstabulation of themes/codes with informants and data sources to observe the distribution of theme frequency across various sources. The leftmost column lists the eight main themes identified during data coding, the central columns show data from the three informants and research documents, and the rightmost column shows the total frequency of each theme's occurrence across all data sources.

Based on the table, the most dominant themes were *data-driven planning* (19 references), *classifying priorities* (17 references), *analyzing data* (15 references), *collaboration* (13 references), and *drawing conclusions* (13 references).

The analysis revealed that the school principal contributed the highest number of references (35), particularly in the themes of *classifying priorities*, *collaboration*, *data-driven planning*, and *analyzing data*. This confirms the principal's dominant role in school planning, especially in setting school priorities, engaging in collaborative practices, making data-informed decisions, and analyzing data to ensure the effectiveness of school planning (Aaron et al., 2022; Adanne, 2024).

From the document analysis, the *annual work plan* emerged as the document containing the highest number of relevant thematic codes, indicating its significance as a primary source in the school planning process. Furthermore, the interpreted *Rapor Pendidikan (Education Report)* was most prominent in the themes of *data-driven planning* and *analyzing data*, demonstrating its importance in supporting data-informed planning and analytical processes.

3.3. The Strategic Leadership Role in Data-Driven Planning and the Integration of Religious Values

The principal plays a central role in school planning. This is supported by the principal's statement as follows:

> "What I did from the beginning upon arriving at the school was to carry out an analysis, conduct observations, and even visit each room one by one to find out what was needed and what was lacking. Then, I also examined academic data, such as student achievement records, student registry books, and attendance logs, which are important data sources for me. I also conducted surveys to obtain feedback from the findings I gathered. In essence, I interviewed teachers, students, and the school committee. This is crucial so that the data collected is truly valid. In addition, I reviewed the Education Report Card, which already includes clear analyses and percentages from the central authorities." (N1_KS)

Based on data analysis, the principal's role in school planning includes:

a. The principal takes an active role in directing school planning based on data and actual needs.
b. Planning based on reflection and evaluation is essential to ensure the effectiveness of policies.
c. Collaboration between the principal and teachers is key to the successful implementation of planning.
d. Data analysis indicates that sound decision-making must consider various aspects, including observations, the school's vision and mission, and annual planning documents.

Effective leadership is essential in planning to support evidence-based decision-making and to ensure the involvement of all stakeholders in designing programs aligned with the school's vision and mission. This is affirmed by a teacher's statement:

> "…the principal has a program and then gives teachers the opportunity to further develop that program. Teachers may also propose new school programs during the planning process. In deciding on school programs, the principal ensures that teachers are capable of implementing the proposed initiatives. The principal also provides space for teachers to express innovations that are relevant to the school's planning." (N2_G1)

This aligns with transformational leadership, which emphasizes the importance of vision and inspiration in leading change. In addition, the principal demonstrates visionary leadership by using the school's vision as a reference for achieving educational objectives. Based on the school document analysis, the vision of SDN Buahkapas is represented by the acronym SAKTI (*Sehat, Agamis, Kreatif, Berteknologi, dan Inspiratif*). This vision was formulated based on an analysis of the school's environmental characteristics. The principal explained:

> "When I first arrived here, after collecting school data, I invited parents to present the school's vision, mission, and plans." (N1_KS)

The principal undertook data collection and analysis related to the school. The results of this data analysis formed the basis of the school's vision, mission, and work plans. The school's vision reflects religious values that are directly tied to the school's characteristics. These religious values were integrated into school planning, resulting in the development of a spiritual and religious school culture. In this process, the principal exercised their managerial role as a school administrator by formulating plans in accordance with Islamic educational management principles.

3.4. Challenges and Strategies in Data-Driven Planning

In the process of school planning, one of the ongoing challenges is the limited understanding among some teachers regarding data analysis. This is reflected in the following teacher's statement:

> "Although they do not understand how to analyze the Education Report Card, they do understand how to improve performance and the scores on the Report Card, as long as there are instructions on how to do it." (N2_G1)

Teachers experience difficulties in analyzing the results of the Education Report Card, thereby requiring guidance from the principal. With instruction from the principal regarding the analysis of the Rapor Pendidikan (Education Report) data, teachers are able to contribute suggestions for school planning programs that may serve as interventions to improve outcomes in future reports. This is supported by another teacher's remark:

> "In analyzing the Rapor Pendidikan (Education Report) data, teachers are involved in identifying the causes of low scores in the report." (N3_G2)

The principal has implemented appropriate strategies to address teachers' challenges in analyzing Rapor Pendidikan (Education Report) data. By enhancing collaboration between the

principal and teachers, the resulting school plans are more objective and valid, as they are grounded in actual data.

Another challenge encountered in school planning is the limited financial resources available to the school. To address this, the principal seeks external support by submitting grant proposals. Additionally, the principal conducts periodic reflection and evaluation to ensure that the plans being developed align with the actual needs of the school. Through these measures, existing obstacles can be effectively managed, as the principal applies strategic approaches to advance the school's planning processes.

4. Discussion

This study aimed to explore the school principal's leadership strategies in data-driven planning that is integrated with religious values. The main findings indicate that the principal plays a central role in directing the planning process through comprehensive data analysis, collaboration with teachers, and the integration of spiritual values into the school's vision and mission. These findings directly address the two main research foci: (1) leadership strategies in implementing data-driven planning that accommodates religious values, and (2) adaptive strategies developed to overcome challenges within this process.

The findings reveal that the principal positions themselves as a strategic leader who does not rely solely on intuition but utilizes data analysis as a basis for decision-making. This confirms the importance of reflective and collaborative leadership in ensuring that school planning is contextual and oriented toward actual needs. The principal's role in priority classification, data analysis, and evidence-based decision-making was highly prominent, as demonstrated through the NVivo thematic analysis.

The presence of religious values in the school vision (*SAKTI*: *Sehat, Agamis, Kreatif, Berteknologi, dan Inspiratif*) reflects a leadership approach that is not only technocratic but also grounded in deep spiritual values. Accordingly, school planning transcends administrative routine and becomes a means of cultivating a spiritually meaningful and religious school culture.

These findings are consistent with the emphasis that data-driven decision-making combined with stakeholder engagement yields improved educational outcomes (Harris et al., 2022). This study expands upon those findings by incorporating the dimension of religious values into the planning framework. Previously, the importance of the principal's role in fostering religious culture in primary schools was highlighted, but it was not linked to data utilization (Ilmi & Sholeh Muhamad, 2021). Conversely, the efficiency of data use was emphasized without considering local and spiritual values. This research offers an integration of both approaches into a unified leadership framework.

Theoretically, these findings enrich the framework of Islamic educational management by integrating the principle of *tadbīr* as a holistic and value-based planning concept. In this context, *tadbīr* not only signifies rational action planning but also encompasses the spiritual and ethical dimensions that guide the direction of school policy. As such, the findings contribute to the development of value-based strategic leadership theory, particularly within the context of primary education in multicultural and religious societies such as Indonesia.

The practical implications of this study highlight the need to strengthen principals' capacities in data literacy and value-based management. Integrated training that includes data analysis, the use of the Rapor Pendidikan (Education Report) platform, and the incorporation of religious values into school programs is a key recommendation. Furthermore, support for teachers in interpreting Rapor Pendidikan (Education Report) data is necessary to enable their active and objective participation in school planning.

Moreover, principals should develop collaborative and participatory strategies by engaging teachers, students, and parents in reflection and evaluation processes. This will enhance the legitimacy of planning and improve the effectiveness of implementation at the school level.

The main limitation of this study lies in its single case study design, which restricts the generalizability of the findings. While the study provides in-depth insights, it does not capture variations in leadership practices across different schools and contexts. In addition, participant involvement was limited to the principal and two teachers, leaving out perspectives from other stakeholders such as parents or school supervisors.

Another technical limitation concerns the reliance on data from a single planning period, which does not reflect long-term dynamics. The qualitative method also carries the risk of interpretive subjectivity, although this was mitigated through triangulation and validation via member checking and peer debriefing.

Future research is recommended to adopt a multi-case or cross-regional comparative approach to identify diverse leadership patterns in varying contexts. Quantitative studies could also be developed to statistically examine the relationship between data-driven leadership effectiveness and student learning outcomes.

Future studies may also expand the values dimension by exploring the integration of local wisdom or community cultural values into data-based school planning. In addition, the development of a data literacy and spiritually grounded leadership training model for school principals represents a promising area for further inquiry.

This discussion affirms that the school principal's leadership in data-driven planning integrated with religious values constitutes a strategic and effective managerial practice in the context of Indonesian primary education. The principal's active role in data analysis, collaboration, and reflection underscores the importance of combining technical competence with value orientation. This study offers a significant contribution to the development of educational leadership theory and practice through an approach that unites technology, data, and spiritual values in managerial decision-making.

5. Conclusion

This study affirms that the leadership of school principals in data-driven planning integrated with religious values constitutes an effective strategic practice within the context of primary education in Indonesia. The principal plays a central role in directing the planning process through comprehensive data analysis, participatory collaboration with teachers, and the formulation of a values-based vision and mission that reflect the contextual characteristics and needs of the school. Accordingly, school planning transcends administrative procedures and serves as a medium for cultivating a spiritually grounded and value-oriented school culture.

Both primary research questions have been adequately addressed. First, the identified leadership strategies include the use of the Rapor Pendidikan (Education Report) as a data source, prioritization based on field findings, and the integration of religious values into the school's vision and planning. Second, the adaptive strategies developed by the principal to address constraints involve providing teacher support in understanding data, strengthening collaboration in planning, and conducting regular reflection and evaluation to align policies with actual needs.

The original contribution of this study lies in its integration of the data-driven decision-making framework with the principles of Islamic educational management, particularly through the concept of *tadbīr*—rational planning infused with ethical and spiritual meaning. By uniting technocratic approaches with religious values, this study broadens the theoretical landscape of value-based strategic leadership and proposes an alternative model that is relevant in multicultural and religious societies such as Indonesia.

The practical implications of these findings emphasize the importance of enhancing principals' capacities in data literacy, mastery of the Rapor Pendidikan (Education Report) platform, and competence in translating religious values into school policies and programs. Principal training should be designed in an integrated manner, combining technical skills with sensitivity to contextual values. Furthermore, teachers must be empowered in data analysis and actively involved in reflection and evaluation processes to ensure that planning is more objective and applicable.

Despite providing in-depth insights, this study is limited by its single-case design and the restricted participation of only the principal and two teachers. The perspectives of other stakeholders—such as parents or school supervisors—have not yet been explored. In addition, the data collected reflect only a single planning period and do not capture long-term dynamics or implementation continuity.

Therefore, future research is recommended to adopt a multi-case or cross-regional comparative approach to explore variations in leadership patterns across broader contexts. Quantitative studies should also be developed to statistically examine the relationship between data-driven leadership and improvements in student learning outcomes. Moreover, further exploration of the integration of local wisdom or community cultural values into data-based planning could enrich contextually relevant leadership models.

In sum, this study demonstrates that principal leadership which integrates technology, data, and religious values not only responds to the demands of modern management but also has the capacity to shape a more holistic and meaningful strategic direction for schools—one rooted in the cultural identity and spirituality of students.

Declarations

Author contribution statement

Destisari Nurbani initiated the idea and all activities in this research paper. Diding Nurdin as the parties who have been guiding the completion of the research paper. Asep Dikdik as the parties who contributed substantially to the revision process by reviewing the manuscript critically, providing suggestions for improvement, and refining the structure.

Funding statement

Data availability statement

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Interest's statement

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Additional information

Correspondence and requests for materials should be addressed to destisari.nurbani18@upi.edu

ORCID

Destisari Nurbani
Diding Nurdin https://orcid.org/0000-0002-7108-0453
Asep Dikdik https://orcid.org/0009-0001-2653-0742

References

Aaron, T. S., Meyers, C. V., Hitt, D. H., & VanGronigen, B. A. (2022). Principals' perspectives on the shift to short-cycle school improvement planning. *Educational Management Administration and Leadership*. https://doi.org/10.1177/17411432221137462

Adanne, E. F. (2024). A Meta-Analysis of Data-Driven School Leaders and School Effectiveness in the 21st Century. *Journal of Human Resource and Sustainability Studies*, *12*(01), 204–225. https://doi.org/10.4236/jhrss.2024.121011

Badriyah, F., E. & Kamaludin. (2023). Kajian Normatif Fungsi Manajemen dalam Pandangan Islam. *Kajian Ilmu Sosial Multidisiplin*, *1*(1), 44–49. https://doi.org/10.59996/jurnalpelitanusantara.v1i1.107

Bantilan, J. C., Deguito, P. O., Otero, A. S., Regidor, A. R., & Junsay, M. D. (2023). Strategic Planning in Education: A Systematic Review. *Asian Journal of Education and Social Studies*, *45*(1), 40–54. https://doi.org/10.9734/ajess/2023/v45i1976

Baxter, P., & Jack, S. (2015). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2008.1573

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications.

Engkoswara, & Komariah, A. (2015). *Adminsitrasi Pendidikan*. Alfabeta.

Hariro, A. Z. Z., Ulkhaira, N., & Ramadhani, R. (2024). Perencanaan dalam Administrasi Pendidikan. *Dewantara : Jurnal Pendidikan Sosial Humaniora*, *3*(3), 94–107. https://doi.org/10.30640/dewantara.v3i3.2850

Harningsih, L. S., Nurkolis, N., & Sudana, I. M. (2023). Implementasi Kebijakan Program Sekolah Penggerak dalam Kerangka Merdeka Belajar di SMP Negeri 1 Tlogomulyo Temanggung. *Jurnal Inovasi Pembelajaran Di Sekolah*, *4*(2), 679–689. https://doi.org/10.51874/jips.v4i2.171

Harris, A., Jones, M., & Ismail, N. (2022). Distributed leadership: Taking a retrospective and contemporary view of the evidence base. *School Leadership & Management*, *42*(5), 438–456. https://doi.org/10.1080/13632434.2022.2109620

Idayani, K. & Bahrun. (2023). The Leadership of School Principles in Developing Religious School Culture at the Basic Education Level in Jagong Jeget District, Central Aceh District, Indonesia. *Path of Science*, *9*(5), 3001–3006. https://doi.org/10.22178/pos.92-2

Ilmi, A. M. & Sholeh Muhamad. (2021). Manajemen Kepala Sekolah dalam Mewujudkan Budaya Religius di Sekolah Islam. *Jurnal Inspirasi Manajemen Pendidikan*, *9*(2), 389–402.

Kemendikbud. (2019). *Pengembangaan Rencana Kerja Sekolah (MPPKS-RKS)*. Direktorat Jenderal Guru dan Tenaga Kependidikan.

Kemendikbud. (2024). *Memahami Perbedaan Rapor Pendidikan, Profil Pendidikan dan Platform Rapor Pendidikan*. https://pusatinformasi.raporpendidikan.kemdikbud.go.id/hc/id/articles/6544604556697-Memahami-Perbedaan-Rapor-Pendidikan-Profil-Pendidikan-dan-Platform-Rapor-Pendidikan

Kemendikbudristek. (2023). *Buku Saku Mengapa Perlu Melakukan Perencanaan Berbasis Data?*

Lochmiller, C. R. (2021). Conducting thematic analysis with qualitative data. *Qualitative Report*, *26*(6), 2029–2044. https://doi.org/10.46743/2160-3715/2021.5008

Lutfi, M. (2023). Prinsip Nilai Manajemen Pendidikan Islam Perspektof Al Qur'an. *IHTIROM: Jurnal Manajemen Pendidikan Islam*, *2*(1), 25–39.

M Husain, F. I., Arifin, A., & Zulystiawati, Z. (2023). Kepemimpinan Kepala Sekolah dalam Mewujudkan Student Wellbeing. *Student Journal of Educational Management*, 108–119. https://doi.org/10.37411/sjem.v3i1.2146

Ming, G. K., Mansor, M., & Fuad, D. R. S. M. (2024). Data-Driven Decision-Making in Educational Leadership: A Systematic Literature Review (2019-2023). *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(2), 18863–18872. https://doi.org/10.57239/PJLSS-2024-22.2.001383

Mortelmans, D. (2025). *Doing Qualitative Data Analysis with NVivo*. Springer Nature. https://doi.org/10.1007/978-3-031-66014-6

Muttaqin, K., Syafi'i, M., & Samiyah. (2024). Peran Kepala Sekolah dalam Pengambilan Keputusan pada Perencanaan di MTS Al-Munawaroh. *Jurpendis: Jurnal Pendidikan Dasar Islam*, *2*(4), 352–358. https://doi.org/10.58540/jurpendis.v2i4.700

Nasution, F. (2019). Konsep Dasar Manajemen Islam. *Jurnal Tadbir : Jurnal Manajemen Dakwah FDIK IAIN Padangsidimpuan*, *01*(2), 191–281. https://doi.org/10.24952/tad.v1i2.2032

Niah, A. (2022). Education Administration Perspective Policy Makers and Educational Institutions. *Indonesian Journal of Education (INJOE)*, *2*(3), 235–243. https://doi.org/10.54443/injoe.v3i2.29

Nurbani, D., Hartini, N., & Ruhimat, M. D. C. (2024). Studi Kasus Pemanfaatan Rapor Pendidikan dalam Akselerasi Kemampuan Literasi Peserta Didik. *Didaktika: Jurnal Kependidikan*, *13*(001), 715–728. https://doi.org/10.58230/27454312.1332

Nurdiansyah, M. H. D. (2025). The implementation of the integrative approach in determining educational planning goals and objectives at SMK Taruna Bakti Baturraden. *Asian Journal Collaboration of Social Environmental and Education*, *2*(2). https://doi.org/10.61511/ajcsee.v2i2.2025.1177

Nurdin, D., & Sibaweh, I. (2015). *Pengelolaan Pendidikan dari Teori menuju Implementasi*. PT RajaGrafindo Persada.

Nurhikmah. (2024). Educational Management Functions: Planning, Organizing, Actuating, Controlling. *INTIHA: Islamic Education Journal*, *1*(2), 82–91.

Rohmah, I. I., Rofiq, A., & Ihwan, M. B. (2025). Data Driven Educational Planning Strategy: Examining Challenges and Opportunities in the Digital Era. *Electronic Journal of Education, Social Economics and Technology*, *6*(1), 327–336. https://doi.org/10.33122/ejeset.v6i1.438

Sidiq, U., & Choiri, M. M. (2019). *Metode Penelitian Kualitatif di Bidang Pendidikan*. CV. Nata Karya.

Sugiyono. (2022). *Metode Penelitian: Kuantitatif, Kualitatif dan R&D (2nd ed.)*. Alfabeta.

Sutarjo, S., Safuri, S., & Kurniasih, N. (2024). Opportunities and Challenges of Instructional Leadership for Principals to Develop Literacy in Elementary Schools. *Proceedings of 5th Borobudur International Symposium on Humanities and Social Science 2023*, 335–342. https://doi.org/10.2991/978-2-38476-273-6_37

Wang, L. (2023). Comparative Analysis of Cross-Cultural Teaching Management in Big Data Environment. *International Journal of Emerging Technologies in Learning*, *18*(11), 132–146. https://doi.org/10.3991/ijet.v18i11.41085

Waruwu, M. (2023). Pendekatan Penelitian Pendidikan: Metode Penelitian Kualitatif, Metode Penelitian Kuantitatif dan Metode Penelitian Kombinasi (Mixed Method). *Jurnal Pendidikan Tambusai*, *7*(1), 2896–2910. https://doi.org/10.31004/jptam.v7i1.6187