

SENTIMENT ANALYSIS OF SERVANT LEADERSHIP IN SMP IT INSAN MANDIRI

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Abstract

This study aims to analyze sentiments toward servant leadership practices at SMP IT Insan Mandiri Sukabumi. Servant leadership emphasizes the values of devotion, empathy, and empowerment toward organizational members, in this case teachers, staff, students, and parents. This study uses a qualitative approach with methods. The method used is sentiment analysis based on text mining with Orange software on qualitative data in the form of open responses, comments, and testimonies, and testimonies, collected through interviews. The results of the analysis indicate that the majority of teachers have positive sentiments toward the implementation of servant leadership by the principal who is considered supportive, open, and builds a collaborative work atmosphere. However, there are also a small number of neutral and negative sentiments related to the lack of consistency in the implementation of servant leadership values at the operational level. This study recommends strengthening internal communication, continuous leadership training, and participatory evaluation as strategies to improve leadership quality. These findings are expected to be an important contribution in developing a more humanistic educational leadership model that is responsive to the needs of the school community.

Keywords: *Servant Leadership, Sentiment Analysis, Integrated Schools, Education, Serban Leadership*

INTRODUCTION

In the world of education, the principal's leadership plays a central role in determining the direction and culture of the school organization. One leadership approach that is increasingly relevant in the context of modern education is servant leadership. This concept was first developed by Robert K. Greenleaf (1970), who emphasized that a true leader is one who first seeks to serve, not to be served. Servant leadership emphasizes values such as empathy, self-awareness, commitment to the growth of others, and community building. In an integrated Islamic school environment like SMP IT Insan Mandiri Sukabumi, which upholds Islamic values, this leadership approach is highly appropriate because it aligns with the principles of morality, service, and social justice taught in Islam. However, implementationServant leadership values do not always align with the ideals espoused. Therefore, it is important to understand how school stakeholders perceive and respond to the principal's leadership practices. One approach used in this study is sentiment analysis, a process for identifying and classifying opinions or emotions within a text into positive, negative, or neutral categories. This analysis provides an objective portrait of stakeholders' perceptions of the principal's leadership style, such as teachers, students, staff, and parents. This research is important because it can provide an overview of the effectiveness of the principal's leadership from the perspective of those directly impacted. Furthermore, the results are expected to provide input for developing educational leadership that is more humanistic and adaptive to the needs of the school community, especially in the digital era when opinions can spread rapidly through various communication platforms. Previous studies, such as those conducted by Eva et al. (2019) in *The Development and Validation of a Multidimensional Measure of Servant Leadership*, emphasize the importance of evaluating servant leadership in various organizational contexts, including schools.

Based on the background of the problem, formulationthe problem is described as follows:

1. What are the results of teacher sentiment regarding servant leadership at SMPIT Mandiri?
2. What topics or words are most talked about regarding servant leadership at SMPIT Insan Mandiri?

METHODS

The method used is text mining-based sentiment analysis with Orange software on qualitative data in the form of open responses, comments, and testimonials, which were collected through interviews.

Text Mining

Text mining is a specialized branch of data mining that primarily focuses on extracting information from text-based data, typically sourced from various documents. This process aims to identify key words that represent the overall content of a document, thus enabling analysis of the relationships between information within the document (Mooney, 2006).

Text Preprocessing

Text preprocessing is the initial stage in the text mining process. The main goal of this stage is to clean the data of irrelevant or distracting elements (noise), so that the data becomes more concise, structured, and ready for further analysis (Rani & Arora, 2016).

Sentiment Analysis

Sentiment analysis is a field of study that focuses on analyzing a person's opinions, assessments, attitudes, and emotions toward an object such as a product, individual, organization, social issue, or event (Liu, 2012). In practice, sentiment analysis also known as opinion mining uses automated techniques to understand, extract, and interpret text-based data to determine the direction of sentiment contained in a statement. This process is useful for determining whether opinion trends are positive, negative, or neutral (Liu, 2010). One of the approaches used is lexicon-based, namely by determining the sentiment of a word based on a list of words. Classified words. In this method, each word is assigned a score indicating its level of positivity or negativity. For example, in the VADER (Valence Aware Dictionary and Sentiment Reasoner) lexicon, words like "great" receive a high positive score, while "tragedy" or "disaster" receive a negative score (Sagala & Toba, 2021).

Topic Modeling

Topic modeling is a generative modeling method that uses a probabilistic approach to identify groups of words that form themes or topics in a collection of documents. The result of this process is a collection of words categorized into topics based on the probability distribution of words in a particular document (Y et al., 2016).

Latent Dirichlet Allocation (LDA)

LDA, or Latent Dirichlet Allocation, is a generative-probabilistic topic modeling algorithm. This approach assumes that each document consists of a mixture of various latent topics, and each topic is represented by a number of words with a certain probability distribution (Zulhanif, 2016).

Web Scraping

Web scraping is a method of automatically extracting data from web pages, typically written in HTML or XHTML. This technique is used to systematically extract information from internet sites without the need for manual data copying (Turland, 2010; Ayani et al., 2019). In the context of sentiment analysis research, web scraping is often used to efficiently collect public opinion data from digital platforms.

RESULTS AND DISCUSSION

This image is a widget design to get research results starting from input.

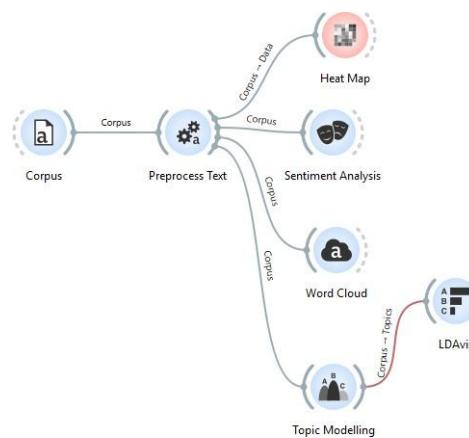


Figure 1. Design of Sentiment Analysis and Topic Modeling Widget

This study aims to determine teacher sentiment toward servant leadership at SMPIT Insan Mandiri and identify the most frequently discussed topics or words in this context. The analysis was conducted based on the results of interview and observation data visualized through a word cloud. Based on this analysis, it was obtained two main findings as follows:

1. Sentiment Teacher To Servant Leadership

The word cloud results show that most of the words that emerged represent positive sentiments from teachers toward the principal's leadership. These sentiments can be summarized in the following points:

a) Head School Listen and Serve

Words like "listen," "serve," and "immediate response" illustrate that teachers feel the principal exercises leadership with an empathetic and humanistic approach. The principal is perceived as being willing to accept input, suggestions, and even criticism from teachers.

b) Open and Encouraging Participation

The use of the words "open," "discussion," "aspiration," and "participation" emphasizes that the decision-making process in schools is participatory. Teachers feel involved in various planning and implementation processes for school activities.

c) Providing Role Models and Moral Support

The presence of the words "exemplary," "supportive," "guiding," and "consistent" shows that teachers view the principal as a role model in attitude, behavior, and firmness in leadership.

d) Focus on Need And Community Welfare

The words "needs," "students," "teachers," and "staff" The dominant findings indicate that school leaders are considered capable of understanding and accommodating the real needs of the school community, both in academics, activities, and welfare. Overall, teacher sentiment indicates that the principal of SMPIT Insan Mandiri has implemented the principles of servant leadership quite well, particularly in the aspects of communication, empathy, and participation.

2. Most Talked About Topics or Words

From the word cloud visualization, several of the most prominent keywords can be identified, which represent identify the dominant topics in teachers' perceptions of servant leadership, as follows:

a) Students and Teachers as the Main Focus

The words "student" and "teacher" appear the most, This shows that these two elements are the focus of the principal's attention. Servant leadership is aimed at meeting the needs and supporting the development of both.

b) Schools as Collaborative Spaces

The words “school,” “activities,” “space,” and “atmosphere” indicate that the school is seen as a collaborative environment created by supportive, open, and harmonious leadership.

c) Active and Responsive Leadership

The words “active,” “direct,” “helpful,” and “responsive” describe leadership that is not passive, but actively involved and responsive to the daily dynamics of the school.

d) Accommodate And Providing Facilities

The emergence of the words “accommodate,” “facility,” and “service” indicates that the headSchools are considered to pay attention to the technical and administrative aspects needed to support the educational process.

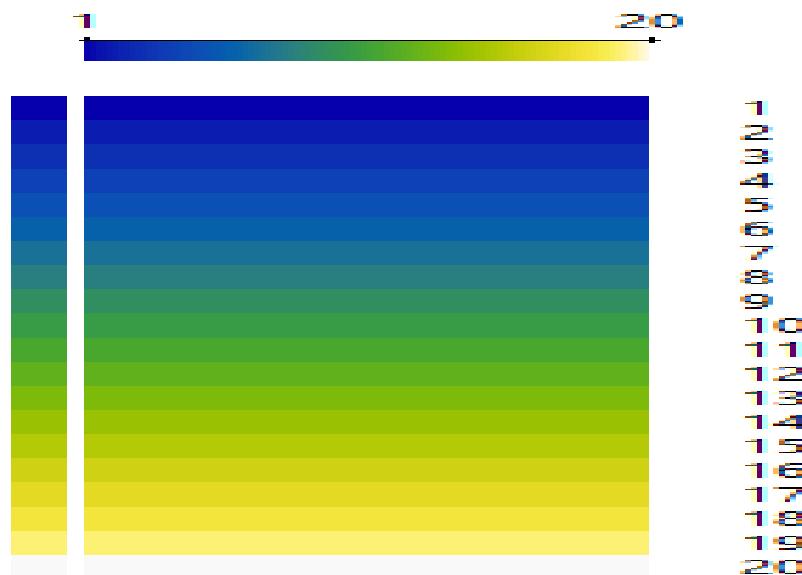
e) Formation of Values and Work Ethic

Several words such as “professionalism,” “exemplary,” “ukhuwah,” “Islamic,” and “brotherhood” indicate that leadership also plays a role in instilling positive moral, spiritual, and work culture values in the school environment.



Figure 2

Dominant Topics in Servant Leadership SMPIT Insan Mandiri The findings of the word cloud results are in line with the concept of servant leadership according to Robert K. Greenleaf's theory, which emphasizes that true leaders are servants first, who focus on the needs of others, listen actively, and empower. First, Servant Leadership Is Not Merely Administrative. The principal does not only act as an administrative manager, but also as an active listener, mentor, and facilitator of teacher and student growth. This is reflected in the dominance of words such as "listening" and "serving." Second, the Presence of Leaders as Moral and Professional Role Models. The words "exemplary," "professionalism," and "Islamic" reinforce that the principal does not only carry out structural duties, but also serves as a role model who brings value influence in daily practice. Third, the importance of building a positive and open atmosphere. Discussions about "openness," "discussion," "aspiration," and "collaborative" indicate that teachers highly value a democratic and inclusive work environment, one that makes them feel valued and involved. Thus, the principal's leadership at SMPIT Insan Mandiri can be said to have adopted a servant leadership approach, characterized by empathy, empowerment, and commitment.



Picture 3. Heatmap Visualization

Strong Sentiment Cluster (bottom, light yellow). Words like “student,” “teacher,” “role model,” “support,” and “facility” tend to fall into this cluster. Medium Sentiment Cluster (green) Associated with the words “discussion,” “participation,” “aspiration,” “space,” and “activity.” Lower Sentiment Cluster (top, dark blue). May be associated with less frequently occurring words, such as “direct,” “listening,” “responsive.” Based on the heatmap visualization, it can be concluded that servant leadershipThe principal's leadership is more directly perceived in concrete aspects (serving teacher-student needs, improving facilities, and exemplary professionalism). Meanwhile, more conceptual aspects such as Islamic integrity, emotional closeness, and mentoring are still appreciated but do not appear dominant. Thus, these results indicate that teachers place a higher value on leadership that is practical and has a direct impact, compared to more normative or symbolic ones. This means that the implementation of servant leadership at SMP IT Insan Mandiri Sukabumi has been going well, especially in the tangible service dimension, but still has room for strengthening in terms of spiritual development and personal relationships.

CONCLUSION

Based on the results of data analysis visualized through word clouds, it can be concluded that:

1. Teacher sentiment towards leadershipserving at SMPIT Insan Mandiri is very positive. Teachers assessed that the principal had effectively implemented the principles of servant leadership, characterized by an open attitude, listening to aspirations, being responsive to the needs of the community, and setting a moral and professional example. This attitude fostered a harmonious, participatory school atmosphere that supported the growth of teachers and students.
2. The most frequently discussed topics related to servant leadership included: students, teachers, school activities, transparency, service, and accommodating needs. This demonstrates that the leadership focus at SMPIT Insan Mandiri is not solely focused on managerial aspects, but also on interpersonal relationships, empowerment, and creating a positive learning environment.
3. The principal's leadership was successfulCreating a collaborative and conducive space for the growth of all elements of the school. Leaders are not only tasked with carrying out structural functions but also serve as stewards and promoters of values, shaping a school culture based on Islamic values, professionalism, and brotherhood.

Thus, it can be concluded thatThe implementation of servant leadership at SMPIT Insan Mandiri has been running well and has had a positive impact on the perceptions and experiences of teachers in carrying out their duties and responsibilities in the school environment.

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