

Analysis of Organizational Capacity of Public Schools in Adopting Educational Technology Innovation (Study at SDN 2 Hikun as a Google Reference School)

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ARTICLE INFO

Keywords: Educator Capability, Google Reference School, Pedagogical Competence, Professional Competence, Digital Literacy

Received : 21 June

Revised : 23 July

Accepted: 23 August

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ABSTRACT

This study analyzes the capability of educators in implementing the Google Reference School Program at SDN 2 Hikun, Tabalong Regency, appointed through Letter Number B-233/DIKBUD/000.1.2.3/IV/2024. Using a qualitative descriptive method, data were collected through observation, interviews, and documentation involving the principal, teachers, and parents as informants. The findings reveal two key dimensions: Pedagogical Competence falls in the Poor category, as most teachers still rely on conventional teaching methods with minimal use of Google Workspace for Education; while Professional Competence falls in the Fair category, as administrative requirements have been met and teachers understand the Google for Education ecosystem. Three main obstacles identified are inadequate infrastructure, limited digital literacy, and suboptimal platform utilization. Solutions include structured Google Certified Educator certification, infrastructure improvement, and stakeholder socialization.

INTRODUCTION

Bagian The challenges facing the world of education in the 21st century are increasingly complex. Traditional teacher-centered learning models are gradually being replaced by more collaborative, student-centered approaches. In addition to academic abilities, education today also emphasizes the development of intellectual (IQ), emotional (EQ), and spiritual (SQ) intelligence. In the context of the Society 5.0 era introduced by Japan in 2019, where technology coexists harmoniously with humans, the world of education is required to prepare an adaptive and character-driven generation. National education, as mandated by Law Number 20 of 2003, aims to develop students' potential to become faithful, noble, capable, creative, independent, and responsible citizens in a democratic society.

To achieve these goals, teachers are required to possess strong competencies. According to Law Number 14 of 2005 concerning Teachers and Lecturers, teacher competencies encompass four dimensions: pedagogical, personality, social, and professional. Furthermore, educators also need to master 21st-century skills known as the 4Cs- creativity, critical thinking, communication, and collaboration (Siti Zubaidah, 2021) in order to deliver relevant and meaningful learning for the digital generation.

In this context, SDN 2 Hikun, Tabalong Regency, was appointed by the Tabalong Regency Education and Culture Office through Letter Number: B-233/DIKBUD/000.1.2.3/IV/2024 to participate in the benchmarking study for the Google Reference School Candidate (KSRG) program on June 10–12, 2024, at the Google Indonesia Pacific Office. This program is an exclusive Google for Education initiative that encourages schools to integrate technology such as Google Workspace for Education, Google Classroom, Chromebooks, and Google Educator Certifications into the learning process in a transformative and innovative manner.

The requirements that must be met as a Google Reference School include: (a) use of a minimum of 60 Chromebooks for two pilot study groups; (b) 100% of teachers receiving official training from a Google Certified Trainer; (c) 100% activation of Learning Accounts (belajar.id); (d) a minimum of 30% of teachers certified as Google Certified Educator Level 1; (e) creation of evidence of work utilizing Google Workspace; (f) sharing the benefits of Google for Education with one other school; and (g) commitment to becoming a Google Reference School.

However, based on initial observation results, several gaps were identified in the field: no teachers hold Google Certified Educator Level 1 certification; teachers' understanding of Google Workspace for Education is still very minimal; most teachers still use conventional book-based learning patterns; the utilization of Google Workspace for learning is still very limited; and supporting infrastructure such as internet speed and Chromebook-based learning spaces is still inadequate. These conditions necessitate in-depth research on the ability of educators in implementing the Google Reference School program at the school.

Research Questions

1. How is the ability of educators in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency?
2. What are the obstacles hindering the ability of educators in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency?
3. What are the solutions to overcome the obstacles to educators' ability in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency?

Research Objectives

1. To analyze the ability of educators in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency.
2. To identify the obstacles hindering the ability of educators in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency.
3. To identify solutions to overcome the obstacles to educators' ability in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency.

Research Benefits

Theoretical Benefits

This research is expected to contribute to scientific knowledge in the field of Educational Administration, particularly regarding the implementation of the Google Reference School program as a technology-based learning model at the elementary school level.

Practical Benefits

1. For Educators: as material for reflection and reference in improving technological competency to support the optimal implementation of the Google Reference School.
2. For Schools: as strategic input for the institution in formulating teacher capacity-building programs and fulfilling the digital infrastructure required to become a Google Reference School.

LITERATURE REVIEW

Teacher Ability

Ability is a fundamental factor that educators must possess in carrying out their professional duties. Etymologically, the word "able" in the Indonesian Dictionary (Kamus Besar Bahasa Indonesia) means having the power or capacity to do something, which in English corresponds to the term *competence* (John M. Echols and Hassan Shadily, 2009). According to Anshari, as cited by Binti Maunah (2009), every educator has different abilities in methods and teaching styles, and these differences help determine the outcomes achieved in the educational process.

Johnson, as cited by Sardiman (2005), defines ability as rational behavior aimed at achieving required goals under expected conditions, demonstrated through accountable performance. Sardiman (2005) divides teacher abilities into ten areas, namely: mastering subject matter; managing the teaching-learning program; managing the classroom; mastering educational foundations; managing teaching-learning interactions; using media or resources; assessing

student achievement; understanding the function of guidance and counseling; organizing school administration; and understanding and interpreting educational research findings.

Meanwhile, James M. Cooper, as cited by Nana Sudjana (2008), proposes four teacher competencies: (1) having knowledge about learning and human behavior; (2) mastering the subject area being taught; (3) having appropriate attitudes toward oneself, students, and the profession; and (4) possessing technical teaching skills and being able to translate theory into actual teaching practice.

Competence

Competence literally means authority or proficiency in carrying out a task (W.J.S. Purwadarminta). Nana Sudjana (2008) understands competence as the ability required to hold a profession, while Sardiman (2005) interprets it as the basic ability that a person must possess in carrying out their professional duties. Law Number 14 of 2005 concerning Teachers and Lecturers defines competence as a set of knowledge, skills, and behaviors that teachers must possess, internalize, and master in carrying out their professional duties.

E. Mulyasa (2004) explains competence as a combination of knowledge, skills, values, and attitudes reflected in habits of thinking and acting. More broadly, Finch & Crunkilton (1992) state that competence includes tasks, skills, attitudes, values, and appreciation provided for success in life. Thus, competence is the result of combining various types of abilities that teachers must master to carry out their duties professionally and effectively.

Types of Teacher Competence

Based on Law Number 14 of 2005 concerning Teachers and Lecturers, a professional teacher is required to possess the following four competencies:

Pedagogical Competence

Pedagogical competence is the teacher's ability to understand students, design and implement learning, evaluate learning outcomes, and develop students' potential. This competence includes mastery of knowledge and teaching skills that are student-centered (Agus Wibowo and Hamrin, 2012).

Personality Competence

Personality competence is personal ability that reflects a stable, mature, wise, authoritative, and noble personality, thereby serving as a role model for students in daily life.

Social Competence

Social competence is the teacher's ability to communicate and interact effectively with students, fellow teachers, parents, and the surrounding community (Buchari Alma, 2008). This competence includes cooperation skills, conflict management, effective communication, and adaptation to environmental changes.

Professional Competence

Professional competence is the ability to master learning materials broadly and deeply, used to establish learning objectives and organize student-centered knowledge content, including the ability to plan, implement, and evaluate learning professionally.

Factors Influencing Competence

According to Mulyana (2004), factors that influence teacher competence include: motivation to work, responsibility for duties, opportunities for development, leadership, compensation, and working conditions supported by adequate facilities and infrastructure. Michael Zwell (2012) adds that a person's competence is also influenced by beliefs and values, skills, experience, personality characteristics, motivation, emotional issues, intellectual ability, and organizational culture. Hutapea and Thoha (2011) formulate three indicators of competence, namely knowledge, skills, and attitude, which mutually support optimal task performance.

Concept of Google Reference School Candidate (KSRG)

The Google Reference School Candidate (KSRG) is an exclusive invitation program from Google for Education intended for public schools that wish to adopt technology-based learning in a transformative and innovative manner. Selected schools are expected to use Google Workspace for Education and Chromebooks, integrate technology into the teaching-learning process, train teachers in utilizing digital platforms such as Google Classroom and Google Meet, and encourage students to actively participate in digital learning.

The benefits of becoming a Google Reference School Candidate include: obtaining official branding and a KSRG plaque, opportunities to participate in special Google events, the chance to promote the school's success stories in various forums, and having the school's profile officially displayed in the KSRG list.

The requirements that must be met to become a Google Reference School include: (a) use of a minimum of 60 Chromebooks for two study groups in pilot classes; (b) 100% of teachers receiving official training from a Google Certified Trainer; (c) 100% activation of Learning Accounts (belajar.id) for teachers and students; (d) a minimum of 30% of teachers certified as Google Certified Educator Level 1; (e) creation of at least one piece of evidence of work utilizing Google Workspace as a learning tool; (f) sharing the benefits of Google for Education with one other school within 12 months; and (g) commitment to becoming a Google Reference School.

21st Century Skills (4C)

21st-century skills, known as the 4Cs, are skills that students and educators must master to thrive in the era of the Industrial Revolution 4.0 and Society 5.0. The P21 framework (2011) divides these skills into three groups: basic literacy, competencies, and character education. The four 4C skills are as follows:

Creativity and Innovation

Creativity is the ability to develop and convey new ideas, remain open to diverse perspectives, and generate innovations that benefit the surrounding environment (Siti Zubaidah, 2021).

Critical Thinking and Problem Solving

Critical thinking includes the ability to analyze and synthesize information, connect various ideas to generate new perspectives, and find solutions to complex problems (Redecker et al., 2011).

Communication

Communication skills include the ability to convey thoughts clearly and persuasively, both orally and in writing, deliver opinions and instructions effectively, and motivate others through speaking skills.

Collaboration

Collaboration is the ability to work together synergistically in completing project-based tasks, both inside and outside the school environment. This skill is becoming increasingly important given the demands of the workplace, which require teamwork across locations and disciplines (P21, 2007a).

Table 1. Previous Research

No	Researcher & Year	Research Title	Findings / Results	Relevance to This Study
1	Ilham Sahputra (2024)	Application of Google Classroom Technology to Improve Student Learning at Dayah Nurul Iman	Google Classroom proved to be a highly valuable resource in education, particularly in supporting more effective and efficient distance learning.	Supports the urgency of using Google Classroom as a digital learning tool at SDN 2 Hikun.
2	Fheny Rawati Napitu, et al. (2023)	Utilization of Google Sites as a Learning Medium for Science at Grade III Elementary School	The Google-based application was deemed suitable for use, with ease of use receiving a positive response from students at 85.7%.	Strengthens the argument that Google-based platforms can be readily adopted in elementary school learning.
3	Indzaldi Gianjas Saputra, et al. (2022)	Effectiveness of Google Workspace for Online Learning Using the Delone-McLean Model and PLS-SEM	Google Workspace had a success rate of 37.67% (Delone-McLean) and showed a significant effect with a 95% success rate (PLS-SEM).	Provides empirical evidence of Google Workspace effectiveness relevant to the KSRG program at SDN 2 Hikun.
4	Dasaristna Listiyani (2021)	Analysis of Google Classroom Use in Online School Learning	Google Classroom was utilized through five features assignment, grading, mobile application, privacy, and time-cost covering account creation, class organization, topic management, material upload, question development, and assessment.	Demonstrates the optimal potential of Google Classroom not yet fully applied by educators at SDN 2 Hikun.

No	Researcher & Year	Research Title	Findings / Results	Relevance to This Study
5	Juhaidah Abd Hakim & Dalbir Singh (2020)	Competency Theory: A Review from the Perspective of Digital Skills	Competency elements were classified into three dimensions: Personal Competence, Skills Competence, and Knowledge Competence, as a foundation for digital skills research instruments.	Serves as the basis for classifying digital competence of educators in the context of the Google Reference School program.

Source: Processed Data

The similarity between previous studies and this research lies in the focus on the utilization of Google-based technology in the educational context. The difference is that this research specifically focuses on the analysis of educators' ability in implementing the Google Reference School program at the elementary school level, by analyzing pedagogical and professional competencies as the two main dimensions most relevant to the program's demands.

METHODOLOGY

The research method used in this study is a qualitative method. According to Sugiyono (2021:7), qualitative research emphasizes meaning that is, the data behind what is observed. Qualitative research places greater emphasis on understanding the meaning in depth from a particular phenomenon. Meaning is the actual data behind the visible data, namely the interpretation resulting from observable data.

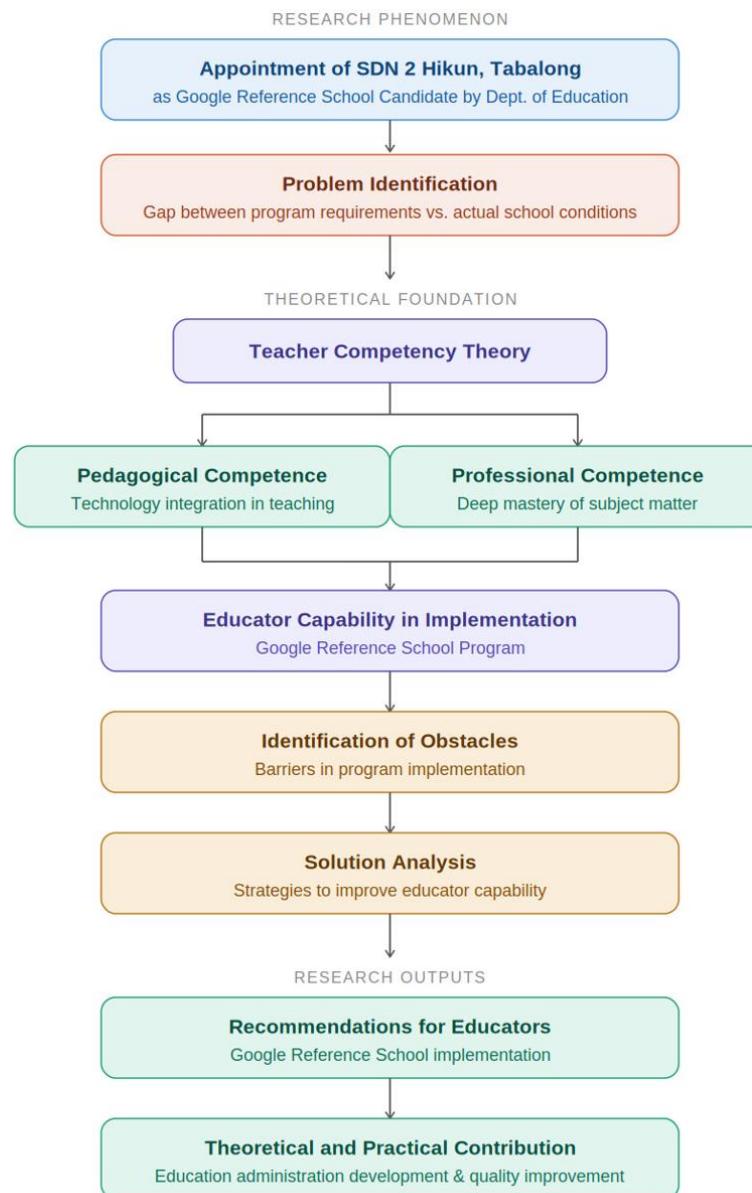
The researcher chose to use a descriptive qualitative research type because this study aims to explain and describe phenomena that occur, thus placing greater emphasis on analysis through interpretive ability and reasoning power in approaching an object. For this reason, a description or depiction of the research findings is required, including data derived from interviews, observations, and documents. The researcher went directly to the research location to ensure alignment with the research title, namely "Analysis of Educators' Ability in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency."

An informant is someone who is asked for information related to the object under study. They possess substantial information relevant to the research data being collected. Therefore, the term "informant" is more closely associated with sources commonly found in research where the subject consists of a "case" as a single unit, which may include institutions, organizations, or social organizations.

The informants in this study consisted of:

1. The Principal of SDN 2 Hikun, Tabalong Regency (Key Informant)
2. The 6th-grade homeroom teacher at SDN 2 Hikun, Tabalong Regency (Informant 1)
3. Community/stakeholder representatives, specifically the parent/guardian of a 6th-grade student at SDN 2 Hikun, Tabalong Regency (Informant 2)

Figure 1: Research Conceptual Framework



Source: Processed Data

The key informant in this study was a senior teacher at SDN 2 Hikun, Tabalong Regency, accompanied by two additional informants: Informant 1 (6th-grade homeroom teacher at SDN 2 Hikun, Tabalong Regency) and Informant 2 (parent/guardian of a 6th-grade student at SDN 2 Hikun, Tabalong Regency).

To collect data from the research object, the author employed the following methods: Observation, Interviews, and Documentation

The data analysis method used in this study is qualitative data analysis. Data analysis is the process of systematically searching for and organizing data obtained from interviews, field notes, and other materials, so that it can be easily understood and its findings can be communicated to others. Data analysis was conducted by organizing data, breaking it down into units, performing synthesis, arranging it into patterns, selecting what is important and what will be learned, and drawing conclusions that can be shared with others.

Data analysis in this study was conducted according to Miles and Huberman (as cited in Sugiyono, 2021:134), which includes four (4) components of data analysis, namely: Data Collection, Data Reduction, Data Display, and Conclusion Drawing/Verification.

RESEARCH FINDINGS

Educators' Ability in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency

SDN 2 Hikun, Tabalong Regency, was appointed as the implementer of the Google Reference School Candidate Program (KSRG) through the Decree of the Tabalong Regency Education and Culture Office Number: B-233/DIKBUD/000.1.2.3/IV/2024. This program is a Google for Education initiative aimed at delivering interactive, technology-based learning by utilizing Google Workspace for Education, Google Classroom, Chromebooks, and Google Educator certification as implementation benchmarks.

Law Number 14 of 2005 concerning Teachers and Lecturers defines competence as a set of knowledge, skills, and behaviors that teachers must possess and master in carrying out their professional duties. Referring to Government Regulation No. 19 of 2005 concerning National Education Standards, teacher competence covers four dimensions: pedagogical, personality, social, and professional. In this study, the two competencies most relevant to the implementation of the Google Reference School program at SDN 2 Hikun are Pedagogical Competence and Professional Competence. Johnson, as cited by Sardiman (2005), states that ability is rational behavior aimed at achieving required goals, demonstrated through accountable performance – thus, educators' ability is not sufficiently measured by conceptual understanding alone, but rather by its actual application in daily learning processes.

Pedagogical Competence

Pedagogical Competence is the educator's ability to manage the student learning process. The research results indicate that the Pedagogical Competence of educators at SDN 2 Hikun in implementing the Google Reference School program is still in the Poor category. Most teachers still use conventional learning patterns, and the utilization of Google Workspace for Education in teaching and learning activities remains very minimal. Although the platform's features are technically adequate, in practice, teachers have not utilized them optimally, resulting in students and parents assessing that the platform has not been effective enough in supporting a comprehensive learning process. Ongoing evaluation and continuous mentoring are needed so that the quality of technology utilization among educators can improve evenly.

Professional Competence

Professional Competence is the ability to master learning materials broadly and deeply, including the ability to plan, implement, and evaluate learning. The research results show that the Professional Competence of educators at SDN 2 Hikun is in line with the research objectives and is categorized as Fairly Good. Administratively, the school has met the minimum requirements as a Google Reference School; educators have understood the Google for Education ecosystem and have undergone basic training in preparation for the Google Certified Educator Level 1 examination; and parents and the school administration have responded positively to this program. Nevertheless, in daily teaching practice, its implementation has not been evenly distributed and has not been fully effective, so further coaching and regular evaluations that are not solely focused on achieving certification are needed.

Relevance to Previous Research

The findings of this study are in line with several previous studies. Ilham Sahputra (2024) proved that Google Classroom is a highly useful resource in student learning. Dasaristna Listiyani (2021) showed that Google Classroom can be optimally utilized through its five main features if teachers have adequate understanding. Fheny Rawati Napitu et al. (2023) reported positive student responses regarding the ease of use of Google-based platforms, reaching 85.7%. Meanwhile, Indzaldi Gianjas Saputra et al. (2022) concluded that Google Workspace has a significant effect on online learning, with a 95% success rate based on PLS-SEM analysis. The novelty of this research lies in the identification of a gap between the technical readiness of the platform and the pedagogical capacity of educators in the field: Pedagogical Competence still needs significant improvement, while Professional Competence has already become a positive foundation for program implementation.

Inhibiting Factors in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency.

Based on the research results, three main inhibiting factors were identified that hinder educators' ability to implement the Google Reference School program at SDN 2 Hikun, Tabalong Regency.

Inadequate Facilities and Infrastructure

The most significant inhibiting factor is the inadequacy of school infrastructure, particularly unstable internet connections and the unavailability of dedicated Chromebook-based learning spaces. This condition directly contradicts the program requirements, which mandate the availability of a minimum of 60 Chromebook units and reliable digital infrastructure. Without adequate facilities, Google-based learning processes cannot run optimally and consistently.

Limited Technological Literacy

The benefits of this program have not been evenly felt due to the low digital literacy of some educators and parents. Although training has been provided, the absence of continuous post-training mentoring makes it difficult for digital skills to develop. Without consistent habituation and support from an active learning community, mastery of tools such as Google Classroom, Google Forms, and Google Drive is difficult to internalize effectively.

Suboptimal Utilization of the Platform

In practice, most teachers only use one or two features of Google Workspace generally limited to assigning tasks without interactive material explanations or meaningful feedback. As a result, students perceive that digital learning is no better than face-to-face classroom instruction. An appropriate pedagogical approach to integrating technology into learning has become an urgent need that has not yet been fulfilled.

Solution Factors to Overcome Obstacles Hindering Educators' Ability in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency

Based on the research findings, three strategic solutions are recommended to address the identified obstacles.

Optimization of the Google Certified Educator Certification Program

All educators need to be encouraged to participate in structured Google for Education basic training, followed by taking the Google Certified Educator Level 1 and Level 2 examinations. Training materials are available for free through the official Google platform and the Google Educator Groups (GEG) community. Most importantly, certification must be accompanied by post-training mentoring to ensure that mastery of technology is genuinely implemented in daily teaching practice, rather than being merely an administrative achievement.

Strengthening Infrastructure and Fulfilling Program Requirements

SDN 2 Hikun already has a foundational asset in the form of official recognition from the Tabalong Regency Education Office. The next step is to follow up on this recognition by addressing the remaining infrastructure gaps, particularly by increasing internet connection capacity and providing Chromebook-based learning spaces. In addition, the number of certified educators needs to be increased beyond the minimum threshold of 30%, and evidence of works utilizing Google Workspace should be compiled and disseminated to other schools as part of the reference school's active role.

Enhancing Technological Literacy and Socialization to All Stakeholders

The Google Reference School program needs to be socialized more intensively to all stakeholders, including parents. The school needs to establish open communication regarding the goals, benefits, and usage methods of Google Workspace for Education in supporting children's learning. Periodic evaluations involving students, parents, and educators are essential to ensure that this program develops according to actual field needs not only prioritizing administrative aspects but also the comfort and learning effectiveness of students

DISCUSSION

Educators' Ability in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency

SDN 2 Hikun, Tabalong Regency, was appointed as the implementer of the Google Reference School Candidate Program (KSRG) through the Decree of the Tabalong Regency Education and Culture Office Number: B-233/DIKBUD/000.1.2.3/IV/2024. This program is a Google for Education initiative aimed at delivering interactive, technology-based learning. The selected school is expected to utilize Google Workspace for Education, Google Classroom, Chromebooks, and Google Educator certification as implementation benchmarks.

Law Number 14 of 2005 concerning Teachers and Lecturers defines competence as a set of knowledge, skills, and behaviors that teachers must possess and master in carrying out their professional duties. Referring to Government Regulation No. 19 of 2005 concerning National Education Standards, teacher competence covers four dimensions: pedagogical, personality, social, and professional. In this study, the competencies that are relevant and identified in the implementation of the Google Reference School program at SDN 2 Hikun are Pedagogical Competence and Professional Competence.

Johnson, as cited by Sardiman (2005), states that ability is rational behavior aimed at achieving required goals under expected conditions, demonstrated through accountable performance. Based on this view, educators' ability to implement the Google Reference School is not only measured by conceptual understanding but also by its actual application in daily teaching and learning processes.

Pedagogical Competence

Pedagogical Competence is the educator's ability to manage the student learning process. The research results indicate that the Pedagogical Competence of educators at SDN 2 Hikun in implementing the Google Reference School is still categorized as **Poor**. Most teachers still use conventional learning patterns, and the utilization of Google Workspace for Education in teaching and learning activities remains very minimal.

Although the features of Google Workspace for Education are technically adequate, in practice, educators have not utilized them optimally. This has resulted in students and parents feeling that the platform is not yet effective enough in supporting a comprehensive learning process. Furthermore, this program has not been evenly experienced by all parties, so ongoing evaluation and mentoring are needed to standardize the quality of technology utilization among educators.

Professional Competence

Professional Competence is the ability to master learning materials broadly and deeply, including the ability to plan, implement, and evaluate learning. The research results show that the Professional Competence of educators at SDN 2 Hikun is in line with the research objectives and is categorized as Fairly Good.

Administratively, the school has met the minimum requirements as a Google Reference School. Educators have understood the Google for Education ecosystem and have undergone basic training, including preparation for the Google Certified Educator Level 1 examination. Parents and the school administration have responded positively to this program as a step toward modernizing education. However, in daily teaching practice, its implementation has not been evenly distributed and has not been fully effective. Therefore, further coaching, technical assistance, and regular evaluations that are not solely focused on certification alone are needed.

Relevance to Previous Research

The findings of this study are in line with several previous studies. Ilham Sahputra (2024) proved that Google Classroom is a highly useful resource in education and student learning. Dasaristna Listiyani (2021) showed that Google Classroom can be optimally utilized through its five main features if teachers have sufficient understanding and skills. Fheny Rawati Napitu et al. (2023) reported that the ease of use of Google-based platforms received positive responses from students, reaching 85.7%. Meanwhile, Indzaldi Gianjas Saputra et al. (2022) concluded that the use of Google Workspace for online learning has a significant effect, with a 95% success rate based on PLS-SEM analysis.

The novelty of this research lies in the identification of a gap between the technical readiness of the platform and the pedagogical capacity of educators in the field. Pedagogical Competence still needs significant improvement, while Professional Competence has shown positive development as a foundation for implementing the Google Reference School program.

Inhibiting Factors in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency

Based on the research results regarding the two competencies examined, three main inhibiting factors were identified that hinder educators' ability to implement the Google Reference School program at SDN 2 Hikun, Tabalong Regency.

Inadequate Facilities and Infrastructure

The most significant inhibiting factor is the inadequacy of school infrastructure. Unstable internet connections and the unavailability of dedicated Chromebook-based learning spaces pose real obstacles to program implementation. This condition directly contradicts the requirements of the Google Reference School, which mandate a minimum availability of 60 Chromebook units and reliable digital infrastructure support. Without adequate facilities, Google-based learning processes cannot run optimally and consistently.

Limited Technological Literacy

The benefits of this program have not been evenly felt due to the low digital literacy of some educators and parents. Although training has been provided, the results have not been uniform because there is no continuous post-training mentoring. Educators are required to master various digital tools such as Google Classroom, Google Forms, and Google Drive; however, without consistent habituation and support from an active learning community, digital skills are difficult to develop significantly.

Suboptimal Utilization of the Platform

Although Google Workspace for Education is technically adequate, in practice, most teachers only use one or two features—generally limited to assigning tasks without interactive material explanations or meaningful feedback. This causes students to feel that digital learning is no better than direct classroom instruction. An appropriate pedagogical approach to integrating technology into learning has become an urgent need that has not yet been fulfilled.

Solution Factors to Overcome Obstacles Hindering Educators' Ability in Implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency

Based on the research findings, three strategic solutions are recommended to address the identified obstacles.

Optimization of the Google Certified Educator Certification Program

All educators need to be encouraged to participate in structured Google for Education basic training, followed by taking the Google Certified Educator Level 1 and Level 2 examinations. Many training materials are available for free through the official Google platform and the Google Educator Groups (GEG) community. Most importantly, certification must be accompanied by post-training mentoring to ensure that mastery of technology is genuinely implemented in daily teaching practice, rather than being merely an administrative achievement.

Strengthening Infrastructure and Fulfilling Program Requirements

SDN 2 Hikun already has a strong foundational asset in the form of official recognition from the Tabalong Regency Education Office. The next step is to follow up on this recognition by addressing the remaining infrastructure gaps, particularly by increasing internet connection capacity and providing dedicated Chromebook-based learning spaces. In addition, the number of certified educators needs to be increased beyond the minimum threshold of 30%, and evidence of works utilizing Google Workspace should be produced and disseminated to other schools as part of the reference school's role.

Enhancing Technological Literacy and Socialization to All Stakeholders

The Google Reference School program needs to be socialized more intensively to all stakeholders, including parents. The school needs to establish open communication regarding the goals, usage methods, and real benefits of the various Google Workspace for Education features. Periodic evaluations involving students, parents, and educators are essential to ensure that this program continues to develop according to needs and actual field conditions, and does not merely prioritize administrative aspects but also the comfort and learning effectiveness of students

CONCLUSIONS AND RECOMMENDATIONS.

Based on the research results and discussion regarding the ability of educators in implementing the Google Reference School at SDN 2 Hikun, Tabalong Regency, three main conclusions can be drawn. First, the Pedagogical Competence of educators is still categorized as Poor; most teachers have not optimally utilized Google Workspace for Education and still rely on conventional learning patterns. Second, the Professional Competence of educators is categorized as Fairly Good; administratively, the minimum program requirements have been met and educators have understood the Google for Education ecosystem, although its implementation in daily learning has not been entirely equitable. Third, the three main factors hindering program implementation are inadequate facilities and infrastructure, low technological literacy among educators, and the use of platforms still limited to basic functions. Based on the above conclusions, three recommendations are presented as follows:

1. The school needs to encourage all educators to undergo structured Google Certified Educator Level 1 certification, accompanied by post-training mentoring, to ensure that technological mastery is genuinely applied in learning practices.
2. The Education Office and the school need to prioritize the improvement of digital infrastructure, particularly internet connection stability and the provision of Chromebook-based learning spaces, to fully meet the program's operational requirements.
3. The school needs to intensify the dissemination of the program to all stakeholders' educators, students, and parents as well as conduct periodic evaluations oriented towards student learning effectiveness, not merely fulfilling administrative aspects.

FURTHER RESEARCH.

This research is still limited to analyzing educators' abilities through two competencies, pedagogical and professional, using a descriptive qualitative approach in a single school. Therefore, it is recommended that future researchers expand the scope of the study by involving more Google reference schools in Tabalong Regency as well as in other regions, utilizing a quantitative or mixed-methods approach to produce more measurable and representative data, and including the personality and social competency variables that have not been examined in this study. This would provide a more comprehensive overview of educators' readiness in implementing the Google for Education-based educational digitalization program.

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