

Instructional Supervision through *GTK Room*: Validity Analysis and Its Contribution to Improving Learning Quality at a State Vocational School in Tenggara District

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ABSTRACT

This study aims to examine the validity and contribution of instructional supervision through the *Merdeka Mengajar Platform* (PMM), currently known as the *GTK room*, in improving the quality of teaching at SMK Negeri 2 Tenggara. A descriptive quantitative approach was used, involving 67 teachers from three subject clusters: vocational (produktif), adaptive, and normative. Data were collected using a questionnaire based on indicators of supervision validity and teaching quality, employing a 4-point Likert scale. The results show that most teachers perceived supervision through the *GTK room* as reasonably valid and relevant, particularly in aspects such as rubric clarity, indicator coherence, and teacher involvement in reflective teaching practices. However, challenges remain, especially regarding limited digital literacy among some teachers, which hinders optimal use of the platform's features. Findings indicate that supervision followed by concrete and targeted feedback has a more significant impact on classroom practices. Therefore, effective use of *GTK room* requires technical training, strong instructional leadership, and adequate digital infrastructure to support its role as a tool for meaningful and sustainable teacher development.

INTRODUCTION

The implementation of technology-based instructional supervision, particularly through the *Merdeka Mengajar Platform* (PMM), now known as *Ruang GTK*, has emerged as a response to the demands for greater efficiency, transparency, and equitable improvement in education quality across Indonesia. Supervision is no longer seen merely as an administrative task but as a strategic mechanism for teachers' professional development. In the digital era, a supervision system integrated with technology is considered capable of providing a more systematic and objective oversight process. Digital supervision via *Ruang GTK* is designed to document teaching practices, deliver data-driven feedback, and regularly assess teacher performance.

However, the ideal implementation of this system still faces challenges in practice, particularly regarding its validity. Validity here does not refer solely to technical or instrumental aspects, but includes the alignment between the instrument and the context of implementation, user competence, and the system's effectiveness in driving real improvements in learning quality.

This situation is relevant to the case of SMK Negeri 2 Tenggarong, a vocational high school (VHS/SMK) under the East Kalimantan Provincial Education Office. The school has gradually implemented instructional supervision via the *GTK room* since the 2022/2023 academic year. However, the process still encounters several issues related to the validity of supervision practices. As a vocational institution focused on hands-on learning and industry-relevant competencies, the supervision format offered by *GTK* often does not fully align with the nature of SMK education. Productive subject teachers, for instance, report that many of the indicators used in the *GTK room* supervision instruments lean heavily toward academic teaching models and thus fail to capture the nuances of project-based learning or collaboration with business and industry sectors, which are integral to SMK.

A major challenge also felt by teachers and school management at SMK Negeri 2 Tenggarong is the uneven level of digital literacy. While some teachers, especially younger ones, are already comfortable using digital platforms for instruction and reporting, there remains a group of senior teachers who find it difficult to navigate *GTK's* interface. This has hindered the smooth execution of supervision, both in terms of data input and in understanding the results of observation and reflection. Similar challenges were found in a study by Martínez-Serrano et al. (2023), which noted that low digital literacy directly affects the accuracy and depth of supervision. At SMK Negeri 2 Tenggarong, this has resulted in supervision sometimes becoming a formality, rather than a meaningful guidance process.

Infrastructure issues at the school also play a significant role in the validity of supervision implementation via *GTK*. Although SMK Negeri 2 Tenggarong is located in an urban area of the regency, stable internet access is not consistently available in all classrooms, especially during online observations or when uploading learning evidence documents. This mirrors findings from contextual studies on supervision in nonmetropolitan areas,

where technical obstacles often lead to incomplete or misaligned supervision processes that fall short of their intended goals (Farihin, 2022).

From a policy and school management perspective, *GTK* has been introduced and supported by the school leadership as part of efforts to align instructional practices with the Free to Learn policy direction. The school principal has initiated internal workshops and technical guidance sessions on the use of *GTK* for supervision. However, many teachers still lack a deep understanding of formative supervision. Teachers tend to see supervision as a top-down evaluation activity, rather than a collaborative process for improvement. This shows that although the system is available, the shift in the supervision paradigm has yet to fully take place. In a study by Asghar et al., (2023). It was emphasized that the success of platform-based supervision largely depends on the collective understanding within the school that supervision is a reflective and developmental process, not merely an assessment.

Conditions at SMK Negeri 2 Tenggara also suggest that the validity of supervision is closely linked to the improvement of instructional quality. Among teachers who received well-planned, systematic supervision with follow-up actions, improvements were observed in teaching methods and assessment strategies. These teachers showed a greater tendency to use differentiated instruction and to develop projects based on local industries. This supports the findings of Ali et al. (2023), who state that valid supervision, characterized by clear indicators, consistent processes, and concrete follow-up, has a tangible impact on teacher professionalism.

Internationally, the need for contextual and reflective supervision is also recognized as a best practice. Senanayake et al. (2023) introduced the "adaptive validity" framework, which encourages flexibility in supervision according to the school's background and student profiles. For schools with particular demands in vocational education, such as SMK Negeri 2 Tenggara, this strategy is quite pertinent. Biased assessments and lost chances for efficient teacher growth might result from a strict supervision system that ignores the traits of productive topics.

The availability of training and structural assistance also has an impact on how well supervision is implemented at this institution. Although the local education authorities have offered technical training on *GTK*, it has not been offered frequently. Teachers who did not receive follow-up mentorship frequently stopped using *GTK* regularly. Hassan (2024) emphasize that continuous training and mentoring mechanisms are necessary for digital supervision to be successful. Establishing internal professional learning communities has been shown to help schools preserve the continuity and validity of their supervision procedures.

These different circumstances lead to the conclusion that both internal and external variables affect the validity of instructional supervision at SMK Negeri 2 Tenggara through *GTK*. Success is mostly determined internally by a collaborative culture, formative supervisory knowledge, and human resource preparedness. To provide efficient monitoring, external resources like as digital

infrastructure, more contextualised *GTK* instruments, and technical assistance from local authorities are essential. In order to determine how supervision using *GTK* may be modified for the SMK context and how its validity supports the continuous enhancement of vocational learning quality, more research is thus required.

LITERATURE REVIEW

The education system is adapting to technology advancements and the need for more efficient policy execution by switching from a traditional to a digital approach to instructional monitoring. Today, supervision is viewed as a constructive, reflective process of professional growth rather than just an instrument for control. Within this framework, *GTK* functions as a digital platform that provides a range of supervisory instruments to help enhance the quality of education and teachers. (Rasdiana et al., 2024).

The focus of contemporary instructional supervision is on teamwork, helpful criticism, and data-driven reflection. Effective supervision should assist the continuous improvement of teaching methods, identify opportunities for professional development, and evaluate teachers' adherence to lesson plans. (Wiyono et al., 2021). Digital supervision must, however, be legitimate on several levels: meaningful follow-up, consistency in execution, alignment with local circumstances, and unambiguous signs. Thus, validity is not only a technical issue; it also entails educational relevance and practitioner acceptability.

Local studies in Indonesia show that implementing supervision via *GTK* still faces various challenges, particularly in schools with limited resources and infrastructure. Isnandar et al. (2023) noted that in areas with low digital literacy, supervision through *GTK* tends to become a purely administrative task, lacking reflective value. In many cases, features such as Lesson Observation or Self Reflection are used simply to meet reporting requirements, rather than to support learning improvement. This indicates a disconnect between the system's design and the on-the-ground capacity of actors, especially teachers and supervisors.

This is also the case at vocational high schools (VHS/SMK), which differ from normal schools in the way they teach. In the framework of SMK, supervisory indicators must consider industrial job experience, teaching factory methods, and practice-based learning. Regrettably, *GTK*'s supervision functions are still not entirely appropriate for this setting, which calls into doubt the usefulness of supervision in vocational high schools. This supports the claim made by Maryono et al. (2025), who put out the adaptive validity framework, according to which supervision should modify its strategy in light of regional requirements and student profiles rather than depending exclusively on standardised instruments.

Another important component of the legitimacy of supervision through *GTK* is the principal's function as an instructional leader. Schools with administrators who are dedicated to teacher development had more success utilising digital platforms for supervision, according to research by Maryono et al. (2025). Changes in teaching behaviour are mostly the consequence of

principals who actively offer coaching, foster debate, and make sure that observation findings are followed up on. This supports the notion that the effectiveness of supervision is dependent on the calibre of contact and assistance offered in addition to the system.

About instructional quality, valid supervision has been shown to improve teachers' pedagogical and professional competencies. Ika Sari et al., (2024) Reported that teachers involved in *GTK-based* supervision and who received technical training showed better understanding in planning, delivering, and evaluating instruction. Even in a relatively short period, interventions based on supervision results can lead to significant improvement, especially when accompanied by mentoring programs. This suggests that supervision validity is directly correlated with better teaching practices and student learning outcomes.

Challenges such as infrastructure limitations, digital literacy, and school culture need to be addressed systematically. Prasetya et al. (2025) Emphasized that in nonmetropolitan schools, the validity of supervision is often disrupted by technical obstacles and a lack of training. Therefore, a holistic approach is needed, where supervision is not only based on digital platforms, but also supported by ongoing training, mentoring systems, and policies that adapt to the realities of each school.

From this literature review, it can be concluded that the validity of instructional supervision through *GTK* is shaped by three key components. First, the clarity and contextual relevance of supervision instruments. Second, the capacity of users to understand and implement formative supervision. Third, the existence of concrete follow-up actions based on supervision outcomes. These three components are interrelated and determine how far digital supervision can contribute to improving the quality of education.

In the context of SMK Negeri 2 Tenggarong, this literature serves as a crucial foundation for critically analyzing the implementation of supervision through *GTK*. Vocational high schools, with their unique curriculum structure and industry-based learning models, require an adaptive supervision approach. Therefore, a *GTK-based* supervision model must be designed to be not only administratively valid but also contextual, reflective, and responsive to the distinct challenges of vocational education.

METHODOLOGY

This study uses a descriptive quantitative approach, as its main goal is to provide a clear and measurable picture of the extent to which instructional supervision through *GTK* is perceived as valid and how it contributes to improving teaching quality. This approach is considered appropriate for observing general trends and patterns of perception among a relatively large number of respondents – in this case, the teachers at SMK Negeri 2 Tenggarong (Sugiyono, 2013).

SMK Negeri 2 Tenggarong was selected as the research site because it is a public vocational school that actively implements *GTK*. The school has 67 teachers, all of whom were included as respondents. They are grouped into

three categories: 32 vocational subject teachers, 21 adaptive subject teachers, and 14 normative subject teachers. Since the number of teachers is manageable and all have experience using *GTK*, the study used a total sampling technique. This means every teacher was surveyed to ensure that the findings truly reflect the actual situation at the school.

A closed-ended questionnaire served as the main instrument in this investigation. The three main supervisory elements offered by *GTK*-lesson observation, self-reflection, and work outcome plan (also known as RHK) were the foundation for the development of the items. Likert scales with four points, from "strongly disagree" to "strongly agree," were used to score each item. Three experts validated the instrument to make sure the statements applied to real-world supervision practices. The instrument was created using the data-driven and reflective supervision validity principles. (Maryono et al., 2025; Rasdiana et al., 2024).

Following the collection, the data underwent descriptive analysis. The study's goal was to find broad trends in the questionnaire replies rather than investigate causal linkages. Mean scores, percentage distributions, and the classification of replies into low, medium, and high categories were all part of this procedure. The findings were then analysed to determine the validity of the *GTK* supervision method and its contribution to instructional practice. In order to ascertain if views and experiences vary among these groups, data were also examined by teacher category (vocational, adaptive, and normative). This stage is in line with the methodology. Ika Sari et al. (2024) Employed to assess the efficacy of technology-based supervision in various subject areas.

Supporting documentation, including supervision reports, teachers' reflection diaries on the platform, and meeting minutes from scholarly debates, was also given to supplement the survey results. Despite the fact that this is quantitative research, the comprehension of numerical data is strengthened by these contextual texts. This supports Wang (2020) Recommendation that field practice notes and digital recordings be used to assess educational technology.

With this approach and design, the study aims to offer a comprehensive picture of how valid instructional supervision through *GTK* is and to what extent the system genuinely supports teaching quality improvement in schools. The findings are also expected to offer practical insights for other schools that are developing platform-based supervision practices.

RESULTS AND DISCUSSION

This study aims to examine the extent to which instructional supervision through *GTK* at SMK Negeri 2 Tenggaraong can be considered valid and how it contributes to the quality of teaching. In this context, validity refers not only to the accuracy of the instruments used but also to the alignment of supervision practices with pedagogical principles, the teacher's ability to engage with them, and the extent to which follow-up actions based on supervision results lead to meaningful improvements in teaching and learning.

Data analysis was based on questionnaire results developed using five key validity indicators of supervision, as proposed by Maryono et al. (2025).

These indicators include the alignment of *GTK* indicators with actual teaching practices, consistency in the implementation of digital supervision, teacher involvement in reflective processes, the availability of follow-up after supervision activities, and the actual impact on teaching strategies.

Each indicator was measured using a four-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree).

Table 1. Supervision Validity Indicators in *GTK* and Distribution of Responses

Assessment Indicator	Sub Indicator	Likert 1 (%)	Likert 2 (%)	Likert 3 (%)	Likert 4 (%)
Instrument Alignment	Instruments align with formative supervision principles	2.9%	8.9%	37.3%	50.7%
	Indicators in <i>GTK</i> reflect teacher competency standards	1.5%	13.4%	40.3%	44.8%
	Observation rubrics in <i>GTK</i> are clear and can be used objectively	4.4%	17.9%	38.8%	38.8%
Integration with Teaching Practice	Observation results are used to revise lesson plans or teaching modules	5.9%	13.4%	43.2%	37.3%
	Teacher reflection after supervision impacts teaching strategies	4.4%	11.9%	38.8%	44.8%
	Teachers understand the link between supervision and student learning outcomes	2.9%	10.4%	41.8%	44.8%
Accessibility and Use of Ruang <i>GTK</i>	Teachers can access the platform without major technical issues	7.5%	20.9%	38.8%	32.8%

	The platform's features are easy to learn independently	5.9%	17.9%	40.3%	35.8%
	Supervisors or principals actively support the use of <i>Ruang GTK</i>	8.9%	23.9%	38.8%	28.4%
Follow Up Actions	Feedback is given (written or oral) after observation	4.4%	14.9%	40.3%	40.3%
	Follow-up plans are developed based on supervision results	5.9%	16.4%	37.3%	40.3%
	Teachers implement changes to teaching practice based on supervision and reflection	4.4%	14.9%	40.3%	40.3%

Note:

Scale 1: Strongly Disagree

Scale 2: Disagree

Scale 3: Agree

Scale 4: Strongly agree

The table shows that the highest percentage of responses in the “strongly agree” category (scale 4) was related to the alignment of *GTK* indicators with teaching principles (32.8%). On the other hand, the area with the most dissatisfaction was follow-up actions after supervision, as seen in the relatively higher percentage of responses in scale 1 (around 6%).

These results suggest that teachers are generally satisfied with the design and intent of *GTK* as a digital supervision platform. However, implementation, particularly in terms of practical support and actionable follow-up, still needs strengthening. This indicates a gap between the platform's potential and its real-world application, especially in how it influences teaching behavior and classroom strategies.

1. Alignment of Supervision Instruments

Most teachers (88%) agreed or strongly agreed that the supervision instruments in *Ruang GTK* align with formative supervision principles. This suggests that *Ruang GTK* is reasonably effective in providing an observation framework that supports reflective, feedback-based instruction. Instruments like the Learning Observation Rubric and the Work Outcome Plan (RHK) are

considered relevant to pedagogical competency standards. These findings are consistent with Rasdiana et al. (2024), who argued that the success of *GTK* depends on the alignment between its instruments and teacher competency standards, as well as active learning principles. Wang (2020) also emphasized that the validity of supervision lies in the connection between observation instruments and changes in teaching practices. However, about 11.8% of teachers, especially those teaching normative subjects, expressed doubts about the rubric's relevance. These teachers may be less accustomed to using digital instruments for supervision, indicating the need for differentiated training approaches.

2. Integration Between Supervision and Teaching Practice

Indicators such as using observation results to revise lesson plans and teacher reflection after supervision show that over 80% of teachers acknowledge a link between supervision and their instructional practices. This means most teachers at SMK Negeri 2 Tenggara do not see supervision as a formality, but as a way to improve their teaching.

Ika Sari et al. (2024) Found that supervision involving reflection and feedback contributes significantly to improved assessment quality and instructional differentiation. Teachers who actively reflect are more likely to try new teaching approaches.

That said, about 19% of teachers do not yet feel a clear connection between supervision and what happens in the classroom. This aligns with Maryono et al. (2025), who emphasized the need for an adaptive validity framework where supervision instruments should fit local contexts and teacher characteristics. This is particularly important for vocational teachers, who face different technical and industrial demands compared to normative teachers focused on values and character education.

3. Accessibility and Implementation of Ruang GTK

Around 70 to 76% of teachers found *Ruang GTK* relatively easy to access and use independently, although only 30 to 36% strongly agreed. This indicates that while the platform is fairly intuitive, technical issues like internet connectivity and lack of support remain obstacles, especially in workshop areas where vocational teachers work. Isnandar et al. (2023) Pointed out that successful digital supervision depends heavily on infrastructure and digital literacy, especially in non-urban schools. Many vocational teachers felt that *GTK*'s features were more suited to traditional classrooms than to project-based or industrial learning environments. Maryono et al. (2025) Highlighted the importance of a simplified interface and ongoing technical support to prevent platforms like *GTK* from becoming an added administrative burden.

4. Follow-up to Supervision

This indicator is crucial for evaluating functional validity. About 80% of teachers agreed that they received feedback after supervision and that follow-up plans (RTL) were implemented. However, roughly 15% expressed uncertainty or disagreement about whether the process continued beyond observation. Wiyono et al. (2021) stated that follow-up is the most critical element in digital supervision. Without actual classroom implementation of

RTLs, supervision risks becoming a purely administrative exercise. The challenge remains in ensuring that RTLs are not just documents, but are acted on, especially by adaptive teachers who teach cross-disciplinary or general subjects.

CONCLUSIONS AND RECOMMENDATIONS

The implementation of instructional supervision through *GTK* at SMK Negeri 2 Tenggara shows a relatively high level of validity. The majority of teachers across productive, adaptive, and normative categories agreed that *GTK*'s instruments align with formative supervision principles and support efforts to improve instructional quality. Indicators such as rubric alignment, links between supervision and practice, ease of use, and feedback and follow-up all received positive responses from most participants.

However, the findings also highlight variation in how teachers interpret and use *GTK*, especially among those less familiar with digital systems or working in hands-on environments. Some still see supervision as an administrative task rather than a meaningful reflective process. This shows that supervision validity depends not just on the platform, but on teacher readiness and consistent follow-up after observations.

These results reinforce findings from previous research, nationally and internationally, that effective supervision must be adaptive, reflective, and followed by concrete actions. *GTK* has strong potential as an instrument for teacher professional development, but its success depends on thoughtful implementation, targeted training, and active leadership support.

Based on the findings, several recommendations can be made. First, there needs to be stronger technical training focused on how to use the supervision features in *GTK* in a way that fits the specific context of each subject. Training approaches should not be uniform, but instead tailored to the needs of productive, adaptive, and normative subject teachers.

Second, school principals and supervisors should play an active role in ensuring that supervision does not stop at the observation stage but is followed by reflective dialogue and concrete follow-up in the classroom. Ongoing, data-driven supervision becomes far more meaningful when integrated with systematic professional development programs for teachers.

Third, local governments and education offices need to strengthen digital infrastructure in schools, including ensuring the availability of devices and stable internet access, so that *GTK* can be used effectively by all teachers.

Finally, future development of *GTK* features should consider the flexibility to adapt supervision indicators to local contexts, as proposed in the adaptive validity framework. With a more participatory, contextual, and sustained approach, supervision through *GTK* has strong potential to drive improvements in teaching quality, especially in vocational high schools that face unique challenges and dynamics.

FURTHER STUDY

This study was limited to a single school and employed a descriptive quantitative approach, which means it does not yet provide a broader or more

in-depth picture of the overall situation. Therefore, future research could expand the scope to include multiple schools across different levels and regions, allowing for more meaningful comparisons.

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