

## The Effectiveness of Google Forms as a Diagnostic Assessment Tool in Online EFL Classrooms: Perspectives of Vocational High School Teachers in Makassar

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### Abstract

This study examines the effectiveness of diagnostic assessments in virtual classrooms, which require robust empirical elaboration, particularly in the vocational education sector amidst the dynamics of post-pandemic digital transformation. This study aims to comprehensively investigate the effectiveness of using Google Forms as a diagnostic assessment instrument in English as a Foreign Language (EFL) learning at SMK Nasional Makassar. Using a mixed-methods approach with an exploratory sequential design, this study integrates quantitative descriptive statistical analysis of instrument data recapitulation and qualitative thematic analysis obtained from in-depth interviews, document studies, and participant observation involving two English teachers at the school (initialized as WA and WR). Quantitative findings indicate that Google Forms provides a high level of real-time recapitulation, administrative time efficiency, and high device accessibility (achieving more than 85% of student responses). Qualitative findings confirm the teachers' perspectives that this platform essentially facilitates education in mapping early cognitive abilities and non-cognitive barriers through the implementation of accurate digital assessments.

**Keywords:** *diagnostic assessment, teachers' perspectives, digital assessment,*

### INTRODUCTION

The dynamics of digital transformation in the global education ecosystem require English as a Foreign Language (EFL) educators to master adaptive, responsive, and student-centered online classroom management strategies. The success of learning interactions in virtual spaces depends heavily on the quality of initial learning preparation, starting with a comprehensive identification of student needs. In the context of Vocational High Schools (SMK), heterogeneity in vocabulary mastery levels, variations in cognitive backgrounds, and gaps in supporting facilities present significant challenges frequently faced by teachers. Based on empirical specifications at SMK Nasional Makassar, the transition process from conventional face-to-face learning to a digital ecosystem presents unique complexities in formulating effective learning objectives. The rapid global spread of English has resulted in the emergence of numerous variations of the language, commonly referred to as World English. This concept highlights that English is no longer a single, standardized system but a pluralistic and dynamic language shaped by diverse socio-cultural contexts. This result demonstrates that English is widely used as a lingua franca among non-native speakers, making communicative effectiveness more important than adherence to native norms. This shift has significant implications for English language education, particularly in redefining teaching objectives, materials, and assessment practices.

Several previous studies have shown that the implementation of online classes in vocational settings is often limited by device availability, internet network stability, and students' intrinsic motivation. Consequently, the implementation of diagnostic assessments is essential before delivering core material. These assessments encompass two main dimensions: cognitive diagnostics to measure understanding of prerequisite material and non-cognitive diagnostics to map psychosocial conditions, learning environment comfort, and device accessibility. Without a valid initial mapping, the transfer of English language knowledge in virtual spaces risks pedagogical disorientation.

However, conventional diagnostic assessment tools are considered inefficient amidst the constraints of physical distancing. Integrating digital assessment tools through practical platforms like Google Forms has emerged as a strategic solution. From a teacher perspective, utilizing this technology not only reduces administrative bureaucracy but also provides valuable empirical data.

Based on this background, the research questions are formulated as follows:

1. What is the quantitative effectiveness of using Google Forms as a digital assessment instrument in mapping students' initial abilities at SMK Nasional Makassar?
2. What are teachers' views on the use of Google Forms in conducting diagnostic assessments in EFL classes?
3. How are pedagogical follow-up strategies implemented based on diagnostic assessment data at SMK Nasional Makassar?

The objectives of this study are to investigate quantitative response patterns regarding the use of Google Forms, analyze in-depth views of English teachers, and explore the effectiveness of digital assessment integration on the quality of lesson planning.

## **LITERATURE**

### **1. The Urgency of Diagnostic Assessment in Vocational EFL Learning**

Diagnostic assessment serves as a pedagogical navigation tool for teachers to holistically understand students' learning profiles before the knowledge transfer process begins. In the EFL domain, cognitive diagnostic mapping ensures the appropriateness of the difficulty level of teaching materials (such as functional or narrative text structures) with students' actual capacities, while non-cognitive diagnostics identify external barriers such as internet quotas and smartphone ownership. This approach is firmly rooted in cognitive and constructivist learning theories, where teachers act as facilitators who rely on accurate data to optimize the achievement of learning objectives. Furthermore, mastery of digital assessment literacy (Language Assessment Literacy) is a fundamental competency that educators must master in processing alternative assessment instruments validly and reliably.

Diagnostic assessment is a process conducted before learning activities begin to identify students' prior knowledge, strengths, weaknesses, and learning needs. According to Black and Wiliam (2018), diagnostic assessment serves as a basis for teachers to design learning that is tailored to student characteristics, thereby making the learning process more effective. This assessment is not only oriented towards measuring learning outcomes but also provides information that can be used to improve learning strategies.

According to Tomlinson (2017), diagnostic assessment data is crucial to supporting the implementation of differentiated instruction. Teachers can group students based on their learning readiness, interests, and learning profiles, thus making learning more adaptive. In the context of vocational education, this approach becomes increasingly important due to the heterogeneity of student characteristics, both in terms of academic ability and readiness to use technology.

### **2. The Role of Digital Assessment and Google Forms in Learning Technology Architecture**

The implementation of digital assessment has transformed the way educators evaluate students' learning readiness in virtual classrooms. In the modern taxonomy of

educational technology, Google Forms is categorized as an effective learning management and professional development tool. Its interface flexibility allows for rapid deployment of assessment instruments, automatic data recapitulation into digital spreadsheets, and descriptive analytical presentation that serves as an empirical basis for developing differentiated learning modules.

Advances in educational technology have driven the transformation of assessment practices from conventional systems to digital assessment. According to Redecker (2015), digital assessment is the process of collecting, analyzing, and interpreting learning information using digital technology, making the evaluation process more efficient, accurate, and accessible.

One platform that is widely used in digital assessment is Google Forms. According to Iqbal (2018), Google Forms is a web-based application that allows teachers to create evaluation instruments quickly, collect data automatically, and produce a summary of results in the form of graphs or spreadsheets. This convenience makes Google Forms an effective assessment medium for online learning.

Furthermore, Brown (2007) emphasized that the use of technology in language assessment should not only simplify the administrative process but also improve the quality of information teachers obtain for instructional decision-making. Thus, the use of Google Forms serves not only as a data collection tool but also as an instrument to support pedagogical decision-making based on empirical evidence.

In the context of EFL learning in Indonesia, research conducted by Rinaldi et al. (2022) shows that the use of online assessments can increase the efficiency of diagnostic assessment implementation while providing faster feedback to teachers and students. These results are reinforced by research by Sari et al. (2020), which found that most students have a positive perception of the use of Google Forms because it is easy to use, flexible, and accessible via smartphone. These findings support your research, which shows that Google Forms provides administrative efficiency, high accessibility, and helps teachers map students' initial abilities more effectively.

## METHOD

This research used a mixed methods approach with an exploratory sequential design. A mixed methods approach integrates quantitative and qualitative data to gain a more comprehensive understanding of a phenomenon. According to Creswell and Plano Clark (2018), mixed methods allows researchers to combine the strengths of a quantitative approach, which produces objective data, with a qualitative approach, which provides in-depth understanding of participants' experiences and perceptions.

Furthermore, Creswell (2018) explains that an exploratory sequential design is a research design that combines the exploratory results of one approach with another to obtain a more comprehensive interpretation. In this study, quantitative data regarding diagnostic assessment results using Google Forms were analyzed to illustrate the effectiveness of the platform's implementation, then further deepened through qualitative data in the form of interviews and observations with English teachers. This approach was chosen because it can yield a more comprehensive understanding of the effectiveness of Google Forms as a diagnostic assessment instrument in online EFL learning.

The research was conducted at Makassar National Vocational School, involving two English teachers, codenamed WA and WR. Participants were selected using purposive sampling, a technique for determining samples based on specific considerations in line with the research objectives.

According to Patton (2015), purposive sampling is used to select informants with relevant experience, knowledge, and information related to the phenomenon being studied. The two teachers were selected because they had experience implementing online EFL learning and consistently used Google Forms as a diagnostic assessment tool.

Furthermore, Sugiyono (2022) stated that purposive informant selection aims to obtain information-rich cases to explain the research phenomenon in depth. Therefore, both teachers were deemed capable of providing comprehensive information regarding the implementation of Google Forms-based diagnostic assessments in online EFL classes.

Data collection was conducted through three techniques: documentation of Google Forms results, semi-structured interviews, and observation. According to Creswell (2018), the use of various data collection techniques in a single study aims to obtain more comprehensive data and increase the validity of research results through triangulation. The first stage is the collection of quantitative data in the form of diagnostic assessment results obtained from Google Forms. This data includes students' initial ability scores, participation levels, device access, and internet network conditions. The second stage is semi-structured interviews with English teachers to explore their perceptions regarding the use of Google Forms in implementing diagnostic assessments. According to Kvale (2009), semi-structured interviews allow researchers to obtain more in-depth data because they give informants the freedom to explain their experiences in detail. The third stage is observation of the implementation of diagnostic assessments and analysis of learning documents as a form of data triangulation, thus increasing the credibility of the research results. According to Denzin (1978), triangulation is a strategy to increase the validity of research through the use of various data sources and data collection methods.

Quantitative data were analyzed using descriptive statistics, including percentages, frequency distributions, averages, and graphical presentations to illustrate the effectiveness of using Google Forms as a diagnostic assessment tool. According to Sugiyono (2022), descriptive statistics are used to describe data characteristics without generalizing to a wider population. This analysis aims to provide an overview of student participation levels, diagnostic assessment results, and the effectiveness of Google Forms use. Meanwhile, qualitative data were analyzed using an interactive model developed by Miles, Huberman, and Saldaña (2014), which consists of three stages: data reduction, data display, and conclusion drawing/verification. This model enabled researchers to identify key themes regarding teachers' perceptions of using Google Forms as a diagnostic assessment tool in online EFL learning. Next, the results of the quantitative and qualitative analyses were integrated in the interpretation stage to obtain comprehensive conclusions regarding the effectiveness of Google Forms as a diagnostic assessment tool. The integration of both types of data is a key characteristic of mixed methods research because it allows researchers to understand phenomena more deeply than using a single approach alone.

## FINDINGS AND DISCUSSION

### Findings

#### 1. Effectiveness of Google Forms as a Diagnostic Assessment Tool

The research results show that using Google Forms as a diagnostic assessment tool can improve the efficiency of initial assessments in online EFL learning. Based on the data obtained, more than 85% of students successfully accessed and completed the assessment instrument in less than 24 hours. Furthermore, the automatic recapitulation feature allows teachers to quickly obtain information about students' initial abilities, which can then be used as a basis for developing learning strategies.

These findings support Redecker's (2015) argument, which states that digital assessment increases the efficiency of the evaluation process by automating data collection and processing, allowing teachers to focus more on the learning process than on administrative tasks. Thus, the use of Google Forms not only speeds up the assessment process but also improves the quality of data-driven pedagogical decision-making.

| Analysis dimension                    | Quantitative Evidence (Google forms)                                                                   | Teachers' Perspectives (Interviews & Observation at SMK Nasional Makassar)                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Diagnostic Assessment (Cognitive)     | identification of score variations in vocabulary mastery and initial text comprehension among students | Teachers (WA and WR) confirmed that these data assist in grouping students to design differentiated instruction.    |
| Diagnostic Assessment (Non-Cognitive) | Mapping of device ownership and internet quota limitations among vocational students.                  | Teachers view digital assessment as crucial in tailoring material design to be mobile-friendly and quota-efficient. |

#### 2. Teachers' Perspectives toward Google Forms

Interviews with two English teachers (WA and WR) revealed that both had positive perceptions of using Google Forms as a diagnostic assessment tool. The teachers stated that this platform simplifies the process of distributing instruments, speeds up data collection, and reduces administrative burdens compared to using paper-based instruments.

The teachers also stated that the information obtained through Google Forms helps them identify students' learning readiness, understand technical challenges they face, and determine learning strategies appropriate to each student's characteristics.

These differences indicate that linguistic performance is not solely determined by cognitive ability but is significantly shaped by educational exposure and social environment.

### 3. Pedagogical Follow-up Based on Diagnostic Assessment

The results of the study indicate that teachers used data obtained from Google Forms as a basis for designing follow-up learning activities. Teachers grouped students based on their initial ability level, adjusted the difficulty level of the material, and designed learning activities that were more appropriate to the students' needs. Furthermore, information regarding device and internet network limitations was used to select learning media that were more user-friendly, enabling a more effective learning process.

#### Discussion

The research results show that the use of Google Forms as a diagnostic assessment tool positively contributes to the effectiveness of online EFL learning. Efficiency in data collection and processing allows teachers to obtain information about students' initial abilities more quickly, allowing them to make learning decisions based on accurate data.

This finding supports Redecker's (2015) argument, which states that digital assessments increase the efficiency of the evaluation process by automating data collection and analysis. This allows teachers to reduce administrative work and focus more on lesson planning.

The findings of this study also reinforce Anderson's (2008) theory, which asserts that the success of online learning is influenced by teachers' ability to understand student characteristics before the lesson begins. Through Google Forms-based diagnostic assessments, teachers obtain the information necessary to design learning that is more adaptive to student needs.

The findings of this study are also consistent with those of Rinaldi et al. (2022), who reported that digital-based diagnostic assessments can improve the efficiency of identifying student learning needs and expedite the provision of feedback to teachers. Furthermore, research by Sari et al. (2020) showed that Google Forms was positively received by students due to its ease of use, flexibility, and accessibility across multiple devices. The alignment between the results of this study and previous research strengthens empirical evidence that Google Forms is an effective medium for supporting the implementation of diagnostic assessments in online EFL learning. Overall, this study demonstrates that the effectiveness of Google Forms as a diagnostic assessment tool is demonstrated not only by its ease of use and administrative efficiency, but also by its ability to provide data that supports pedagogical decision-making. Therefore, integrating Google Forms into EFL learning can be an effective strategy for improving the quality of lesson planning, implementing differentiated learning, and optimizing data-driven learning processes in vocational education settings.

#### CONCLUSION

This study demonstrates that Google Forms is an effective diagnostic assessment tool in online EFL learning at SMK Nasional Makassar. This platform can improve assessment efficiency through automated data collection and processing, while providing accurate information on students' initial cognitive and non-cognitive abilities. The results also indicate that teachers have a positive perception of Google Forms' use because it supports pedagogical decision-making, including designing more adaptive learning that meets students' needs.

Theoretically, this study reinforces the importance of digital assessment and Language Assessment Literacy in EFL learning. Practically, Google Forms can be used as an effective and easily implemented alternative diagnostic assessment instrument in schools. However, because this study only involved two teachers at one school, further research is recommended to involve a wider range of participants and various educational contexts to better generalize the results.

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