

STUDENT NEEDS ANALYSIS FOR DEVELOPING A DIGITAL PLATFORM-ASSISTED GENRE-BASED GERMAN WRITING MODEL**Santiah^{1*}, Rina Agustin², Ary Fadjar Isdiati³, Anim Purwanto⁴**Universitas Negeri Jakarta¹²³⁴Email: santiah_hernawan@yahoo.de¹, rinaagustin.unj@gmail.com²,
aryisdiati16@gmail.com³, animpurwanto1107@gmail.com⁴**ABSTRACT**

This study aims to analyze the learning needs of senior high school students in German writing and to determine the urgency of developing a text-based German writing learning model supported by a digital platform. A descriptive quantitative approach with a needs analysis design was employed. Thirty-five students (33 in Grade XI, 2 in Grade XII) participated as respondents. A structured questionnaire comprising 10 open-ended diagnostic questions and 10 Likert-scale items (1–4) was used for data collection. Quantitative data were analyzed with descriptive statistics, and qualitative data were analyzed thematically. Five major writing barriers were identified: mastery of nominal articles (der/die/das) (51.4%), German noun capitalization rules (40.0%), verb conjugation (34.3%), umlauts (20.0%), and spelling–pronunciation discrepancy (17.1%). The overall need-analysis mean was 3.51 (SD = 0.57) on a four-point scale, signifying a high level of need. The highest need was recorded for a digital text-based writing model (M = 3.69, SD = 0.47; 68.6% maximum score), followed by online-accessible learning media (M = 3.63) and a motivation-enhancing instructional model (M = 3.60). All respondents (100%) expressed positive perceptions toward technology-integrated language learning. These findings provide empirical grounding for the subsequent development of a digital, text-based German writing instructional model.

Keywords: *needs analysis; German writing; genre-based approach; digital platform***INTRODUCTION**

Writing is one of the most complex productive skills in foreign language learning (Abdel-Malek, 2019). In the context of learning German as a foreign language (Deutsch als Fremdsprache/DaF), writing requires mastery of a unique grammatical system, a diverse vocabulary, and an understanding of text conventions that differ from those of the learner's native language (Purwanto et al., 2024). Globally, low levels of foreign language writing competence have become a serious concern in education. Various international studies have shown that learning foreign language writing cannot simply rely on traditional, teacher-centered approaches but needs to be supported by innovative, technology-based pedagogical strategies (Hyland, 2019; Rose & Martin, 2012).

This problem also exists in the context of German language learning in Indonesian senior high schools (SMA). German, as a foreign language learned in addition to English, is often perceived as difficult by students, particularly in writing skills (Purwanto et al.,

2026). The complexity of German morphosyntax including a four-tiered case system (Kasus), three grammatical genera (Genus), the distinction between masculine/feminine/neuter articles (der/die/das), the mandatory capitalization of all nouns, subject-dependent verb conjugation, and the use of umlauts (ü, ö, ä) forms a series of cognitive barriers that are fundamentally different from the Indonesian language system (Pallotti, 2015). Furthermore, the limited availability of relevant media and learning resources, as well as minimal exposure to authentic text examples during the learning process, also weaken students' writing competence.

Various approaches have been developed to address this issue. One of the most effective is the text-based/genre-based approach. This approach provides students with exposure to authentic text models relevant to real-life contexts, enabling them to understand the social purpose, schematic structure, and linguistic features of a text before producing their own (Rose & Martin, 2012). Yasuda (2017), through his study of foreign language learners in Japan, demonstrated that a genre-based approach significantly improved students' text cohesion, lexicon selection, and rhetorical quality. In Indonesia, research by Pham & Bui (2022) in the context of English learning also demonstrated improvements in the quality of high school students' writing through the integration of authentic text models.

On the other hand, the era of digital transformation has opened up new opportunities in foreign language learning. The integration of digital technologies known as Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) has been shown to increase student motivation, participation, and achievement in foreign languages (Zain & Bowles, 2021). Modern digital platforms such as Learning Management Systems (LMS), content-sharing applications, and interactive tools enable: (1) ubiquitous access to materials anytime and anywhere; (2) personalized learning according to students' ability levels; (3) faster feedback; and (4) a more interactive and enjoyable learning experience (Cope & Kalantzis, 2026). Specifically for German language learning, Purwanto et al. (2025) and Rösler et al. (2010) shows that digital media enriches the quality of linguistic input through access to authentic German texts and sources.

However, research specifically integrating text-based approaches with digital platforms for German writing instruction at the high school level in Indonesia is still very limited. Most existing research: (1) focuses on speaking and reading skills, not writing; (2) examines English, not German; or (3) does not proceed from a systematic needs analysis before developing a learning model. This gap underlies the novelty of this research, which is the first study to empirically analyze the needs of Indonesian high school students for a German writing instructional model that integrates a text-based approach with a digital platform.

The contributions of this research are: (1) to provide empirical data on the real obstacles and needs of high school students in writing German; (2) to provide an analytical basis for the development of innovative and contextual learning models; and (3) to enrich the research on learning German as a foreign language in Southeast Asia. Based on this description, this research aims to: (1) describe the actual conditions of learning German writing in high school; (2) identify the obstacles faced by students; (3) analyze the profile of students' needs regarding the components of the learning model; and (4) determine the level of urgency of developing a text-based German writing learning model assisted by a digital platform.



METHOD

Research Design

This study uses a quantitative descriptive approach with a needs analysis design. Needs analysis is a systematic procedure for gathering information about the current conditions (what is) and the desired conditions (what should be) in a learning context, thus obtaining a picture of the gaps that form the basis for designing interventions or developing educational products (Brown, 2009; Stufflebeam et al., 2002). In learning model development research, needs analysis is a crucial first phase before entering the design, development, and evaluation phases (Dick et al., 2015).

Research Subjects

The research subjects were 35 high school students currently studying German, consisting of 33 students in Grade XI (94.3%) and 2 students in Grade XII (5.7%). Subject selection was carried out using a purposive sampling technique based on the following criteria: (1) currently or having studied German at school in the current academic year, and (2) willing to participate voluntarily in the research. The class characteristics were dominated by Grade XI because at that level students have received German language learning for at least one year, thus having sufficient experience to reflect on their needs and obstacles meaningfully.

Research Instruments

The research instrument was a structured questionnaire consisting of two parts. The first part was 10 open-ended diagnostic questions that explored: (1) the learning strategies and methods used by teachers, (2) learning resources and media, (3) teacher responses to student difficulties, (4) implementation of group work, (5) obstacles in writing German, (6) use of sample texts, (7) media used, (8–9) perceptions of technology-assisted learning and digital platforms, and (10) general level of need. The second part was 10 statements with a four-point Likert scale (1 = Very Not Need, 2 = Not Need, 3 = Need, 4 = Very Need) that measured the need aspect for the components of the learning model. The validity of the instrument was ensured through consultation with German language learning experts and a readability test before distribution.

Data Collection and Analysis Techniques

Data were collected through a Google Form distributed online during the period of April–May 2025. Quantitative data from the Likert scale were analyzed using descriptive statistics including the mean (M), standard deviation (SD), and frequency-percentage distribution. Qualitative data from open-ended questions were analyzed thematically through the following stages: thorough reading, initial coding, grouping of themes, and preparation of interpretive narratives (Braun & Clarke, 2006). The interpretation criteria for the average Likert score refer to the range: 1.00–1.75 (very low/no need), 1.76–2.50 (low/less need), 2.51–3.25 (moderate/fair need), and 3.26–4.00 (high/very need).

RESULTS AND DISCUSSION

Current Conditions of German Writing Learning

Based on a thematic analysis of open-ended questionnaire responses, it was found that German writing instruction in schools has been conducted using a variety of methods. The most commonly used methods are active discussions, Q&A sessions, direct dialogue

practice, group work, and digital interactive games. Learning resources used by teachers include textbooks (Beste Freunde, Deutsch Einfach), PowerPoint presentations, YouTube videos, interactive websites, and the Padlet platform. Table 1 summarizes the types of learning resources and media mentioned by respondents.

Table 1. Learning Resources and Media Used in Learning German

Learning Resources / Media	Frequency Called
PowerPoint (PPT) / projector	29
Learning videos (YouTube, etc.)	22
Textbook (Beste Freunde, Deutsch Einfach)	18
Interactive website / online platform	15
Digital games (games, online quizzes)	12
Whiteboard / print media	9
Canva / Padlet	4

PowerPoint and projectors were the most commonly used media (mentioned by 83% of respondents), followed by instructional videos (63%) and textbooks (51%). Most students (>80%) reported that teachers always or often provided text examples during lessons. Regarding handling difficulties, teachers reported providing individual re-explanations, guiding students slowly, providing additional practice, and helping identify individual word or letter errors. Group work activities were also reported by most students, although the intensity varied from sometimes to always.

The main obstacles identified in this study mastery of noun articles, capitalization, conjugation, and umlauts reflect the inherent complexity of German morphosyntax, which is structurally very different from Indonesian. Pallotti (2015) in his study of linguistic complexity asserted that foreign language learners experience a greater cognitive load when faced with grammatical features that have no equivalent in their first language. For Indonesian learners, Indonesian is an agglutinating language that does not recognize a case system, grammatical genus, or the distinction of three types of articles; therefore, internalizing the German der/die/das article system requires intensive, dedicated effort (Purwanto et al., 2026).

The Substantivgroßschreibung rule capitalizing all German nouns which posed a barrier for 40.0% of respondents is also a unique feature of German orthography that is not found in almost any other language, including Indonesian and English (Fuhrhop & Peters, 2023; Purwanto et al., 2025). This finding aligns with Pytlík (2022) research, which identified orthography as one of the biggest challenges for DaF learners in Asia. These difficulties underscore the importance of lesson designs that not only expose students to grammatical rules deductively but also provide numerous contextual examples through authentic texts a core principle of text-based approaches .

Students' Obstacles in Writing German

A thematic analysis of the responses to the questions about barriers yielded five main categories of barriers. Table 2 and Figure 3 summarize these findings.

**Table 2.** Students' Main Obstacles in Writing German (N = 35)

Barriers to German Writing	n	Percentage	Ranking
Mastery of vocabulary and noun articles (der/die/das)	18	51.4%	1
Rules for capitalizing nouns	14	40.0%	2
Grammar and verb conjugation	12	34.3%	3
Use of umlauts (ü, ö, ä)	7	20.0%	4
Mismatch between spelling and pronunciation	6	17.1%	5

The biggest obstacle was mastery of vocabulary and noun articles (der/die/das), stated by 51.4% of respondents. As one student put it: "My obstacle is the use of grammar—for example, verb endings change depending on the subject, and memorizing the noun article der die das." The second obstacle was the rule of capitalizing all nouns (40.0%), followed by grammar and verb conjugation (34.3%), the use of umlauts (20.0%), and the discrepancy between spelling and pronunciation (17.1%).

The high demand for relevant German text examples ($M = 3.51$) and digitally assisted text-based learning models ($M = 3.69$) consistently support the effectiveness of genre-based approaches in foreign language writing instruction. Hyland (2007) asserts that exposure to text models enables students to develop an understanding of the social purpose, schematic structure, and linguistic features of various text types, thereby facilitating a more purposeful and genre-conscious writing process. Rose & Martin (2012) describe a genre-based pedagogical cycle which includes the stages of deconstruction (analysis of model texts), joint construction (teacher-student co-construction), and independent construction as a framework that has proven effective in developing foreign language writing competence. Yasuda (2017) found in his empirical study that a genre-based approach significantly improved students' writing skills in Japanese as a foreign language, particularly in terms of text cohesion, genre completeness, and lexical accuracy. These findings provide a strong empirical basis for the students' needs in this study for text examples and text-based models.

Perceptions of Digital Technology-Based Learning

All respondents (100%) expressed positive perceptions of technology-assisted writing learning. Dominant responses included: "very helpful" (mentioned by >70% of respondents), "more interesting and less boring," "easier to understand," and "flexible can be studied anytime and anywhere." Similarly, all students expressed a high need for learning models that included examples of texts aided by digital platforms. One respondent elaborated: "Learning to write using examples of German texts aided by digital platforms is very effective. With examples of texts, students more easily understand sentence structure, vocabulary, and grammar. Digital platforms also make the learning process more interesting because they provide easy, interactive access to materials that can be studied at any time."

The highest scores for online accessible media (M = 3.63; 68.6%) and digital-based models (M = 3.69; 68.6%) reflect students' readiness and enthusiasm for digital learning, which aligns with the characteristics of the digital native generation (Prensky, 2001). Godwin-Jones (2019) argues that modern digital platforms have shifted the paradigm of foreign language learning from an instructor-dependent model to a learner-centered and resource-rich one, where students can access, interact, and produce texts in the target language more autonomously. Klímová (2018) empirically demonstrates that e-learning increases intrinsic motivation and foreign language learning achievement through interactivity mechanisms, immediate feedback, and the availability of diverse materials.

In the context of DaF learning, Purwanto et al. (2025) demonstrated that digital media enriches the quality of language input through access to authentic German texts and sources a crucial factor given the limited German language environment in Indonesia. Stockwell (2012) emphasized that MALL specifically supports ubiquitous learning, allowing language practice to take place outside of school hours, extending exposure to the target language. This is relevant to the needs of students in this study, who explicitly stated the importance of a platform that “can be studied at any time, not necessarily at school.

Needs Analysis: Likert Scale Data

Table 3 present the results of the descriptive statistical analysis of the 10 Likert scale items of needs.

Table 3. Results of Student Needs Analysis of Learning Model Components (N = 35)

Items of Need	Mean	Elementary School	% Score	Category
1. Opportunity to practice writing German in class	3.54	0.56	57.1%	Needed
2. Group German writing assignments	3.20	0.77	40.0%	Needed
3. Teacher feedback on writing assignments	3.37	0.54	45.7%	Needed
4. Teacher support and guidance in writing	3.60	0.63	65.7%	Very Needed
5. Examples of German language texts that are relevant to everyday life	3.51	0.66	57.1%	Very Needed
6. Class discussion on how to write German	3.46	0.61	51.4%	Needed
7. Learning media can be accessed online	3.63	0.60	68.6%	Very Needed
8. Writing guides are tailored to students' abilities.	3.54	0.56	54.3%	Needed
9. Model to increase motivation (group/independent)	3.60	0.55	65.7%	Very Needed



Items of Need	Mean	Elementary School	% Score	Category
10. Digital-based model + text-based education	3.69	0.47	68.6%	Very Needed

Table 3 show that all 10 need items obtained a mean score above 3.00, falling into the high category (very much needed). The overall mean of 3.51 (SD = 0.57) indicates a consistently high level of need across all aspects. The highest-scoring item was the Digital-Based German Writing Learning Model with a Text-Based Approach (M = 3.69; SD = 0.47), to which 68.6% of respondents gave a score of 4. The second-highest scores were Online Learning Media (M = 3.63; SD = 0.60; 68.6%) and Motivation-Enhancing Learning Model (M = 3.60; SD = 0.55; 65.7%). The lowest-scoring item was Group Writing Assignments (M = 3.20; SD = 0.77; 40.0%), although it remained in the high category. The distribution of scores was highly concentrated at values 3 and 4, emphasizing the high level of need across the board. A relatively balanced radar profile with a minimum value of 3.20 and a maximum of 3.69, indicating that all dimensions of need are important to be accommodated in the learning model to be developed.

This finding aligns with Blake (2013), who asserted that technology is most effective in foreign language learning when pedagogically integrated under the guidance of a skilled teacher. Ferris (2014) demonstrated that timely and specific teacher feedback significantly improved the accuracy and cohesion of students' writing in a foreign language. One student's response, stating that the use of digital platforms still requires teacher guidance so that students don't just copy examples, reflects a mature metacognitive awareness and is also an important note for the design of future learning models: models must explicitly integrate teacher scaffolding even when using digital platforms.

CONCLUSION

This study comprehensively analyzed high school students' needs in learning German writing and identified the urgency of developing a text-based writing learning model supported by a digital platform. Four main conclusions can be formulated as follows. First, German writing instruction in schools has been conducted using a variety of methods and utilizing various digital media. However, there has been no learning model that systematically integrates text-based approaches with digital platforms into a cohesive system. Second, the five main obstacles faced by students in writing German in sequence are: (1) mastery of the noun articles der/die/das (51.4%); (2) rules for capitalizing nouns (40.0%); (3) verb conjugation (34.3%); (4) use of umlauts (20.0%); and (5) spelling-pronunciation discrepancies (17.1%). These obstacles reflect the morphosyntactic characteristics of German which are structurally fundamentally different from Indonesian. Third, all aspects of needs measured were in the very need category (M = 3.20–3.69), with an overall mean of 3.51 (SD = 0.57). The highest need was for a digital-based writing learning model with a text-based approach (M = 3.69), followed by online media (M = 3.63), and a motivation-enhancing model (M = 3.60). Fourth, all

respondents (100%) expressed positive perceptions of digital technology-assisted learning, with an emphasis on flexibility of access, ease of understanding through text examples, accelerated feedback, and increased motivation to learn. Students viewed technology as a pedagogical complement that still requires teacher guidance, not as a substitute.

The limitations of this study include: (1) the relatively small number of respondents (35 students) from one school which limits generalization; (2) data triangulation has not been carried out through classroom observations and in-depth interviews with teachers; (3) the study is still in the needs analysis phase so it has not yet produced a learning model product. Further research is recommended to: (1) expand the sample to more schools and regions; (2) triangulate with qualitative teacher data; and (3) continue to the design, development, and validation stages of a text-based German writing learning model assisted by a digital platform.

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