Optimizing the Quiz Moodle Module for the B1 Level German Language Exam Simulation Application

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ABSTRACT
Language competency tests, including German, are indispensable for measuring a learner's ability and language skills. The mastery of the language is then proven by acquiring of a language certificate. Since 2019 students majoring in German at several universities in Indonesia are required to take an international examination, known as the *Goethe-Zertifikat* B1 exam. This is a challenge for German study programs, bearing in mind that this exam has a fairly high degree of difficulty compared to the previous German language exam. One way to answer these challenges is to create a Moodle-based exam simulation application as a step to prepare students to take the exam well. This study aims to develop a German B1 level exam simulation application by optimizing the Quiz Moodle module. This exam simulation application is intended for students majoring in German as a means of preparation for taking the B1 level German language exam. By using R&D techniques, a virtual examination environment is developed to help students not only to improve their German language skills but also to train and familiarize themself with the form of exam questions.

Keywords: German class, language competency test, Moodle quiz

1. INTRODUCTION

Language competency tests, also in German learning, are indispensable to measure the language skills and abilities of a learner. Mastery of these languages is then proven by the possession of a language certificate. Since 2003, German language students at several universities in Indonesia have been required to take a national-level German competency exam, namely the ZIDS exam (*Zertifikat für indonesische Deutschstudierende*). However, since 2018, due to various considerations from the Goethe Institut, the ZIDS exam has been officially canceled. Instead, German language students are required to take the *Goethe-Zertifikat* B1 exam.

The implementation of the *Goethe-Zertifikat* B1 exam, on the one hand, brings its own challenges for German language teachers and students. This is based on the fact that this exam has a higher level of difficulty compared to the ZIDS test, while the ZIDS test results from previous years have shown relative insufficient results. Each year the average ZIDS test score is in the range of 60-70% of the maximum expected score. In addition, the student failure rate on the ZIDS exam is in the range of 10-20%. In addition, the high cost of taking this exam can also be a burden for students.

To anticipate these problems, this research was conducted as an innovative and interactive way to improve the quality of the implementation of German competency test preparation, namely by developing an online test simulation tool for the Moodle-based *Goethe-Zertifikat* B1 exam. Thus, the specific objectives of this study are (1) to produce an innovative and effective Moodle-based online exam simulation tool in improving German student achievement in the *Goethe-Zertifikat* B1 exam, and (2) to obtain factual and empirical information about the results of developing simulation tools. online exams with the optimization of the Moodle Quiz module and its achievements and obstacles

Previous research has produced a simulation program for the ZIDS exam which is available on the http://simujerman.com page. The results of this study indicate that the Moodle-based simulation program has a positive contribution to student achievement in the ZIDS exam. However, considering that the ZIDS exam has been eliminated, the importance (urgency) of this research is to revitalize and further develop the web/program so that it is not built in vain and can still be used by students in preparing for the *Goethe-Zertifikat* B1 exam. In addition, the urgency of this research is also to act as a solution and anticipatory steps to possible

problems that will arise regarding the implementation of the *Goethe-Zertifikat* B1 exam at a later date.

In contrast to the previous study, this research specification focuses more on optimizing the use of the Moodle Quiz module in developing an online exam simulation program. As a follow-up and implication of previous research, this study departs from the support of initial data and findings generated in previous studies. With this online exam simulation program, students are expected to be able to prepare themselves well independently. Because it is online, students can access the program anywhere and anytime without limited space and time. Thus, the minimal number of meetings in class can be overcome by the existence of this online exam simulation program.

2. LITERATURE REVIEW

Moodle (Modular Object-Oriented Dynamic Learning) is one of the popular LMS platforms. Moodle is an open-source product designed by a wide online community and continues to develop from time to time. The interaction of learners with their environment is the most important thing carried out by Moodle-based online learning. Thus, it is hoped that students can learn independently in order to build their own knowledge, share and discuss this knowledge with other learners, and so they can respect differences of opinion. As Álvarez and Gonzales (2007) emphasize, Moodle is very focused on the contribution role of users who are involved in all learning processes. Thus, Moodle is a combination of dynamic perspective and stimulation of creativity. Sahin-Kizil (2014) states that the use of Moodle in learning gets a positive response from learners, especially for those who are involved in language learning.

The use of Moodle in learning does not mean forcing to apply certain behavioral styles in learning. The concept of pedagogy which is used as the basis for the development of Moodle can be used as a consideration in determining what experiences the learner deserves in online learning, not just displaying information or learning material that according to the teacher the learner needs to know. Teacher assignments in Moodle are dynamic. They no longer act as mere knowledge providers, but also as role models that provide facilities for learners to recognize their learning needs and lead them to achieve learning goals.

Moodle couldn't actually create such learning situations on its own. But Moodle can support the creation of expected learning situations effectively. Moodle helps realize that teachers and learners have an equal position in online learning, where the role of a teacher is no longer a mere 'source of knowledge' but also as a role model and motivator that facilitates learners to carry out activities to meet their learning needs in order to achieve the expected learning goals. As Nozawa

(2011) emphasizes that Moodle itself does not prioritize independent learning, thus the effectiveness of learning is absolutely in the way of active and interactive teacher participation.

Moodle offers various types of online learning modules that are easily adapted to the type and purpose of learning. There are at least 20 features that make it easy for teachers to create online learning activities that can be configured manually and can be easily adjusted as needed. The ease or ability of Moodle to provide these configurable activities is an advantage for the teachers.

The various modules provided by Moodle are listed on the official website (https://docs.moodle.org/35/en/Activities), including Assignment, Chat, Choice, Database, External Tool, Feedback, Forum, Glossary, Lesson, Quiz, SCORM, Survey, Wiki, and Workshop.

Apart from the modules above, there are also hundreds of modules and plugins from third parties that can be installed according to your learning needs. Moodle also supports various languages as the language of instruction, including Indonesian.

Of the many features that Moodle has, the Quiz module is one that is considered very important and is often used (Deepak, 2017). This quiz module represents an alternative to traditional assessment tools, such paper-based tests (Berrais, 2014). With this Quiz module, teachers can design and organize a quiz or test that contains various types of questions, such as multiple-choice, true/false, fields, descriptions to drag & drop questions. The questions are stored in the Moodle question bank and can be reused in other quizzes or tests. Every answer given by the user/learner in this quiz can be automatically known to be right or wrong and can be given immediate feedback.

The Quiz module makes it easy for teachers to set a flexible test design that can be tailored to the wishes of the teacher or according to the learning process or goal to be achieved, such as the arrangement of questions that can be displayed randomly and the amount allowed for learners to be able to try the test. Related to this, Cohen and Sasson (2017) reveals that the test design that combines the randomization of questions and a large number of trials offers the opportunity for learners to have a sense of responsibility for their own learning. The existence of direct feedback can encourage learners to reflect on their understanding, to be able to apply the appropriate methods to gain more understanding and to conduct other experiments to ensure whether their knowledge is increasing or not.

Regarding the attitude of learners in activities using the Quiz module, Cohen and Sasson (2017) further states that this quiz module contributes to shaping students to be able to focus on solving problems and could improve students' engagement with the subject topics (Berrais,

2014). If students frequently take quizzes, they learn more, self-efficacy increases, and test anxiety is reduced (Rugelj & Rugelj, 2018).

Berrais (2014) also states that there are at least four virtues of this Quiz module, namely:

1) Learners do not need to wait long for their test results. They get immediate feedback on whether their answer is right or wrong.

2) Learners will not feel embarrassed if they answer wrongly, it is different if this happens in a face-to-face class.

3) Learners can read the instructions given by the teacher to correct the wrong answers.

4) teachers can quickly analyze areas where learners have succeeded and which areas are still gaps. With the graph analysis feature available in the Quiz module, teachers can perform this analysis.

Gamage et al. (2019) furthermore added that the features available in Moodle quizzes can streamline the workload of academics. These key features are:

1) Having a database of resources to teach and assess course content which can be modified with minimal academic effort

2) Customized and automated feedback which provide adequate and prompt responses to students

3) Automated marking which reduces academics' workload

4) Randomizing and shuffling quiz questions, together with monitoring Moodle logs, which enable academics to address issues of plagiarism more effectively and efficiently.

These features collectively benefit time-poor academics and improve the quality of teaching.

3. METHOD

This study uses a research and development (R & D) approach, which is a method suitable for developing a new product or perfecting an existing product that can be justified, or in other words a process for developing and validating educational products (Borg & Gall, 1979). Through the steps of define, design, develop, and disseminate a product is developed based on research findings. The findings obtained in the initial research are used as the basis for product development which is then tested in a situation and revised on the trial. The products that will be produced in this research are not in the form of objects or hardware such as books, modules, learning aids, but in the form of software, which is an online

simulation test model for the Moodle-based *Goethe-Zertifikat* B1 exam with optimization quiz module.

In general, the stages of research that will be carried out include: 1) preliminary research and information collection, 2) planning, 3) development of the preliminary form of product, 4) preliminary field testing, 5) Revision of the main product, 6) main field testing, 7) operational product revision, 8) operational field testing, 9) final product revision, and 10) dissemination and distribution.

4. FINDING AND DISCUSSION

4.1. Overview of Goethe-Zertifikat B1 exam

The *Zertifikat* B1 exam was developed in a tri-national collaboration between the Goethe-Institut (Germany), the ÖSD (Austria), and the University of Freiburg (Switzerland). The test is carried out and evaluated worldwide according to standardized criteria. The *Zertifikat* B1 exam is aimed at young people and adults. The *Zertifikat* B1 for young people is recommended for those from 12 years of age, while ZTD is for those aged 16 years or older.

The German test documents the third level - B1 - of the six-level competence scale described in the Common European Framework of Reference for Languages. Level B describes the ability to use language independently. The level was assessed and confirmed by experts from all over Europe. By successfully passing the exam, participants have demonstrated that they can cope with all-important everyday situations if the interviewees use clear standard language.

In this exam, participants are tested to be able to:

1) Understand the main information when using clear standard language and when it comes to familiar things from work, school, leisure, etc.

2) handle most situations one encounters while traveling in German-speaking countries.

3) express yourself simply and coherently on familiar topics and personal areas of interest.

4) report on experiences and events and describe dreams, hopes and goals as well as give brief reasons or explanations.

The four skills reading, listening, writing and speaking are tested. These skills test can be taken individually, i.e. modular, or as usual as a whole. A maximum of 100 points per module can be achieved in the exam. The pass limit is 60 points, i.e. 60%. An overview of the types of task and objectives for each skill can be observed in Table 1 to Table 4.

Table 1. Task overview of zertifikat-b1 exam (Reading)

Modul	Task	Objective	Task type	Item	Time
Reading	1	Read correspondence	True/False	6	65 Minutes
	2	Understand information and reasoning	Multiple choice (3 options)	6	
	3	Read for guidance	Matching	7	
	4	Understand information and reasoning	Yes/No	7	
	5	Understand written instruction	Multiple choice (3 options)	4	

Table 2. Task overview of zertifikat-b1 exam (Listening)

Modul	Task	Objective	Task type	Item	Time
Listening	1	Understand advertisements, announcements and instructions	True/False & Multiple choice (3 options)	10	40 Minutes
	2	Understand as a spectator/listener in the audience	Multiple choice (3 options)	5	
	3	Understand conversations between native speakers	True/False	7	
	4	Understand radio broadcasts and sound recordings	Matching	8	

Table 3. Task overview of zertifikat-b1 exam (Writing)

Modul	Task	Objective	Task type	Time
Writing	1	Interaction Personal communication for maintaining contacts	free writing (describe, explain, make a suggestion)	60 Minutes
	2	Production Express personal opinion on a topic	Free writing (describe, justify, explain, compare, express your opinion, etc.)	
	3	Interaction Personal communication to regulate action	free writing (apologize, ask for something, etc.)	

Table 4. Task overview of zertifikat-b1 exam (Speaking)

Modul	Task	Objective	Task type	Time
Speaking	1	Interaction Plan and negotiate something together	Participants plan something, adhering to 4 guiding points	15 minutes per two participants
	2	Production Present a topic in a monologue	Participants give a presentation on 5 given slides	
	3	Interaction React appropriately to the situation	Participants give each other feedback on the presentation or react to it and ask each other a question or react to it	

4.2. Setting the Quiz for the Simulation

The initial step in the development of a Moodle-based simulation program for the test of the *Goethe-Zertifikat* B1 is the preparation of the different types of questions that correspond to the format of the tested tasks and have a level of difficulty corresponding to the level of GER B1. This phase can take a lot of time and effort as it is not an easy task to ask dozens of ideal or original questions for the B1 exam simulation program. It takes additional hard work to create the ideal simulation questions, both in difficulty and differentiation and in the level of validity and reliability. To achieve this, some activities are required, which include collecting, setting questions, and testing questions, and also revising test results.

To adjust the level of difficulty to the original question set, it is necessary to carry out other activities can also be carried as alternatives, namely by using or adapting the questions available from various online or printed sources as questions used in the simulation program. The questions used in this simulation program are taken from the following sources:

1) *So geht's zu B1 - Lesen: Lehrerhandbuch mit Kopiervorlagen und Lösungen aller Aufgaben der Modelltests*;

2) *So geht's zu B1 - Lesen: Prüfungsvorbereitung Goethe-/ÖSD-Zertifikat B1. Übungsbuch*;

3) *Lesen & Schreiben B1: Buch (deutsch üben)*

4) *Hören & Sprechen B1: Buch mit MP3-CD (Deutsch üben - Hören & Sprechen)*

The next step after collecting the required questions is to create a course (virtual classroom) on the installed Moodle platform. This method is accomplished by logging in as an administrator, accessing the administration site menu, and adding new courses. The

format of the course for this simulation program can use the subject format with only one subject. In this topic, four main activities are occupied according to the test units to be simulated, namely, the modules reading, listening, writing, and speaking. Since these four activities are used as exam simulation, the quiz module is the most appropriate Moodle feature to use in the activity. With this quiz module, we can create a series of tests for users with customizable settings.

When setting the quiz, there are at least a few things that we have to pay attention to so that this activity can optimally simulate the *Goethe-Zertifikat* B1. Essential settings for this simulation program include time settings, evaluation, layout, question behavior, reviews, and feedback settings.

The time setting for each module must be arranged according to the actual examination time, namely 65 minutes for the reading module, 40 minutes for the listening module, 60 minutes for the writing module, and 15 minutes for the speaking module. In the evaluation setting, the ideal number of points for each module and the exceedance limit can be determined, namely 60% of the maximum points 100 for each module. The number of possible attempts at the simulation can also be set. Since this program is a simulation, the number of simulation attempts is ideally not limited. This means that the participants can use this simulation multiple times according to their wishes.

In the layout settings, it can be determined how many questions or tasks are displayed on one page. The ideal layout setting for this simulation program is to display part of the test on one page. For example, the Reading module consists of five parts of the exam, so the page for this module also consists of five test pages plus a start page and a final page (results page). Figure 1 shows the flow of navigation between pages in the Reading-module.
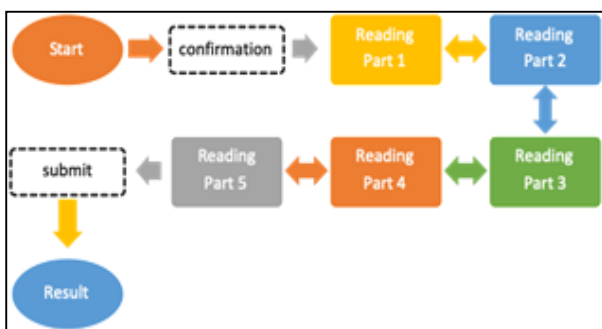

Figure 1 Navigation flow of pages in reading-module.

The above visualization shows that the simulation for Reading-module has seven main pages, namely the start page with introductions, instructions for working with the tasks and the button for starting the simulation; the five main pages of the simulation with simulated questions; and a final page showing the final simulation results and

feedback received by the user. By clicking on the "attempt quiz now" button and then confirming, the user immediately goes to the test page and the time for the test starts immediately. At the bottom of each page, there is a "next" button that, when clicked, temporarily saves the student's work on that page and forwards the page to the next page.

As long as the simulation time is still available, users can navigate from one page to another. This is to help users check their answers on every page. When the time has expired, the system automatically closes this simulation program and all open attempts are saved directly on the server. The system then immediately displays the last page with a recap of the result.

On the last page, users can find a summary of their work. Here you can check which parts of the exam have been answered and which have not. If time is still available, users can click the button "return to the attempt" to return to working on questions that were not answered. They can also complete this test simulation by clicking on the "Submit" button. As soon as this button is clicked, all responses from the users are saved on the server and the system displays the simulation results of the related user.

Regarding the setting of the question behavior, Moodle allows its users to interact with the questions in the test in different ways. There are at least six interaction modes provided by Moodle in this test, but usually, only two interaction modes are used, namely "deferred feedback" and "interactive with multiple tries". For example, we might want users to input an answer to each question and then submit the entire test before grading anything or giving them feedback. That would be the "deferred feedback" mode. Alternatively, we may wish users to submit each question on the go for instant feedback and if they don't get it right away, try again with fewer points. That would be the mode "interactive with multiple tries". The appropriate mode for this simulation program would be the "deferred feedback" mode.

In report setting, we can control what information is shown to users when they review the simulation attempts they have carried out. The information displayed includes: 1) the attempt, namely the answers you entered for each question; 2) whether correct, namely the correct or incorrect answer you entered; 3) marks, namely the score obtained from each answer and the final score of the simulation; 4) specific feedback, this is the feedback response that is received for each question; 5) general feedback, namely the general feedback on the given test; 6) right answer, which is the correct answer to each question, and 7) overall feedback, which is all of the feedback received from the user.

All feedback will be shown when the users have finished the simulation. The feedback displayed can be adjusted according to the final grade received from the

user. For example, if the user gets a value between 85% and 100%, the text will appear "very good"; if they get a score of less than 60% you will see the message "not satisfied, please try again", etc.

4.3. Setting the Questions

After the quiz is set for simulation, the next step is to enter a collection of questions that were previously provided in the questions bank. This questions bank is one of the essential features of Moodle. With this feature, we can create, view, and edit questions online. To make it easier to manage questions, we first create several categories of questions with sub-categories as needed. For this simulation program, we need at least four categories of questions, namely reading, listening, writing, and speaking. Sub-categories can also be added to each of these categories, for example, sub-categories can be added for the Reading category: Reading Part 1, Reading Part 2, Reading Part 3, and so on. In addition to making it easier to manage questions, categorizing these questions is also useful when we need to simulate a lot of questions and want to randomize the questions. With this categorization, the existing questions are randomized according to their respective categories and not mixed with questions from other categories.

The types of questions that can be asked using Moodle's features include the calculated question, single calculated question, calculated multiple-choice, description, essay, assignment, embedded answers (cloze/fill in the blank), multiple-choice, short answer, numeric answer, and true/false. The suitable question types for this simulation program are multiple-choice, true/false, essay, and fill in the blank.

The questions can be just created questions according to the available type of questions. But in this way, the questions should be created individually for each item, and it could lead to have a little trouble later to adapt the display of the simulation test page. For this reason, the cloze test would be the appropriate question type in this simulation program, so that it is easier to set the layout and the design of the question page so that they can be adapted to the actual appearance of the *Goethe-Zertifikat* B1 examination.

A Cloze test provides a text in a special Moodle format in which the user has to answer various questions. The questions are built into the text as gaps and can be in form of multiple-choice, short answer, or numeric question. This simulation program generally only requires multiple-choice. This type of question is more complicated to create than other question types, so we'll have to go to extra efforts to create a cloze test manually. Unfortunately, there is currently no graphical user interface to easily create cloze test. Instead, we have to enter the questions in a special format or syntax: either

directly in the text field of the question or imported from a previously created external text file.

To create questions in type of cloze test, we must first know the syntax structure of the cloze test writing format. A gap must first be marked in the text. The gap consists of three parts: 1) grading; 2) marking the type of gap, and 3) defining the answer options and marking whether they are correct or incorrect.

The structure of each cloze question is explained as follow, as cited from https://docs.moodle.org/:

1) All question items within a cloze-type question are coded inside curled braces { }.

2) The number which appears between the opening brace and the colon {1: is the weighting of that item; if it is set at 1 for all the items, it needs not be specified, so you can have {:.

3) After the colon we have the item question type: MULTICHOICE, SHORTANSWER, NUMERICAL.

4) A correct answer is preceded with the equal sign = or a percentage (usually %100%) - Note: The equal sign (=) doesn't seem to work with SHORTANSWER.

5) A wrong answer is preceded with nothing or a percentage (usually %0%) but you can even use negative points by preceding with ~%-25% [not before Moodle 2.0]). Note that negative points are considered in all question behaviors except "Interactive with multiple tries".

6) You can allocate some points between 0 and 100 to some answers, if you put the appropriate percentage.

7) All answers except the first one is separated from one another by the tilde ~ sign.

8) Answers can be followed by an optional feedback message, preceded with the # sign; if there is no feedback message, the # sign can be present or absent, it does not matter.

9) Note that the feedback message and the correct answer are displayed in a small popup window upon mouse hovering.

For example, the following text is a simple syntax for cloze question:

10. In diesem Text geht es darum, dass ...

{1:MULTICHOICE_V:%0% die Geschichte von Murten neu erzählt wird.#~%100% es ein neues Tourismus-Angebot gibt.#~%0% man in Murten neue Velo-Wege bauen will.#}

The result is as shown in Figure 2.

10. In diesem Text geht es darum, dass …

◯ die Geschichte von Murten neu erzählt wird.

◉ es ein neues Tourismus-Angebot gibt.

◯ man in Murten neue Velo-Wege bauen will.

Figure 2 The display of cloze question.

To create a cloze question, we login as a teacher in the Moodle course. We click the block Settings > Course Administration > Questions bank > Questions. Click on the button "create a new question" and chose the question type "Embedded Question (Cloze)". Then a question setting configuration page will appear.

While there is currently no official Moodle GUI to facilitate the creation of cloze questions, there are third-party programs that help create a fill-in-the-blank question: like Hot Potatoes that we can install on our computer; Cloze Editor, which we can use as a plugin on our Moodle web; or with the online Cloze generator. CLOZE editor of the University of Tübingen (http://projects.ael.uni-tuebingen.de/quiz/htmlarea/index.php) enables the graphical creation of the questions and subsequent copying to Moodle.

The cloze questions are very flexible and suitable for objective questions. It's because the question enables users to get instant feedback on the answers. The questions contained in the reading module and the listening module are all set in the form of cloze test, but the questions for the modules writing and speaking are given in the form of essay questions. Since the answers in these two modules are in the form of descriptions, the evaluation of the answers to these modules cannot be checked directly by the Moodle system but is evaluated manually by the teacher based on certain defined criteria.

The online implementation of the exam simulation for the speaking module is very difficult. The oral exam in the *Goethe-Zertifikat* B1 takes place in pairs, but the online exam simulation is technically intended for individuals. To make it easier for students to prepare for the Goethe Zertifikat B1, however, an attempt is made to simulate this language test by making certain adjustments, whereby the questions asked are only designed for individuals.

In practice, when users access the questions in this module, they will be asked to record their voices and speak according to the instructions. These voice recording files are used as a response and need to be uploaded to the available response column. The teacher will then play and evaluate the recording separately. Since this is only a simulation, information about tips on language testing could be given in the module.

After the question setting is completed, each of the existing questions is entered into each appropriate module. This online exam simulation program is designed to give users a random set of questions. Each simulated module consists of several different question packages with relatively the same level of difficulty. Each package contains a variety of question package variants. The chance that the students will receive the same set of questions can be minimized. The same applies if the students carry out the simulation experiments for the second time or as often, they will receive questions that are different from the previous questions. Thus, a large number of question packages per module is required, so that the question randomization process can be more diverse. This means that different questions can arise for each user and in each attempt.

The important phase in the development of this exam simulation program is the trial testing or experiment phase. This testing is certainly not enough just once but has to be carried out several times to obtain an ideal simulation program. By doing this trial testing, it can be determined the weakness and the strength of the developed exam simulation program. These findings can be analyzed and considered to improve the simulation program. With a series of testing carried out, we can determine not only information about the degree of difficulty and the differentiation of the questions set in the simulation program but also the validity and reliability of the questions. This information is very useful for measuring the quality of the questions available in the simulation program. Although it is only a simulation, the quality of the questions asked must be prioritized. Thus, the main goal of the development of this test simulation program can be realized, namely to help the students prepare for the *Goethe-Zertifikat* B1 exam.

The present model set corresponds to the original tasks of the Zertifikat B1 exam in terms of task types, the number of items, and time limits. You can use it to simulate an exam situation if you work on the tasks as you would under real exam conditions.

5. CONCLUSION

The simulation program for the *Goethe-Zertifikat* B1 exam is important because it allows students to see their readiness before the exams. Those who get unsatisfactory simulation results can learn more actively or more committed in preparation for the real exam. Those who get satisfactory results in the simulation gain self-confidence at least before the exam.

Developing an exam simulation for the *Goethe-Zertifikat* B1 is not easy. It certainly takes a lot of time and energy, and many procedures have to be done. It is envisaged that this program could help students practice exam questions. It could also help them to recognize the

format of the *Goethe-Zertifikat* B1 and to become familiar with the format. The assessment system was also developed to at least correspond to the real results of the *Goethe-Zertifikat* B1 so that the students can realistically measure their knowledge in the exam.

This online B1 certificate exam simulation program is a product that will continue to undergo development. The development of this program continues and always continues through a series of ongoing trials so that the utility of this program can ultimately be effectively and reliably tested. These efforts are intended so that this exam simulation program can be used by all German language students in Indonesia.

This online exam simulation program is an evolving product. The development of this program continues and this program always seeks to evolve through a series of experiments so that the usefulness of this program can ultimately be validly and reliably tested. This program could then be used by all German students in Indonesia.

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