Developing a Guided Discovery Model Based on Reflective Teaching to Improve Students' Short Essay Writing Skills

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Abstract---This research is motivated because there is no essay writing model in learning English. Lecturers have not applied the Reflective teaching approach in learning in their classrooms. This has an impact on students' ability to write short essays in learning English. This study aims to develop a Reflective Teaching-Based Guided Discovery Model to Improve Students' Short Essay Writing Skills. The method used in this research is Research and Development using the ADDIE Model. The result of expert validation of the Guided Discovery Model Book based on Reflective learning is "valid". The level of validity of the Guided Discovery Model Lecturer Book based on Reflective learning is "very valid". The level of validity of the Guided Discovery Model Student Book based on Reflective learning is "valid". The level of practicality of the lecturer's book is categorized as "practical" and the research product is easy to use it meets the practicality criteria. The results of the effectiveness test of the average posttest score were higher than the pretest, so it can be said that there was an increase in student scores before and after the application of the Reflective Teaching-Based Guided Discovery Model to Improve Student Learning Outcomes of Essay Writing Skills.

Keywords---ADDIE, guided discovery, reflective teaching, short essay, writing skills.
Introduction

English is very important and needed by the community, the goal is that people can communicate actively both in writing and orally in official communication and communicate according to their needs (Handayani, 2016). Proficiency and mastery of English are a must. Moreover, the ability to speak English is one of the main requirements in the world of work. This is because professionals are required to have good English skills. Learning English will be very useful in every way. Your potential and abilities will increase. Of course, all this will give good results for one's life. One of the effects is a lack of self-confidence. A large number of new vocabulary and sentence structures that are different from Indonesian make many students lazy. This fear then makes them dislike. As a result, they have difficulty mastering English. Although various ways have been done to increase students' interest in learning English, many problems are encountered in the field (Nadiyah & Faaizah, 2015; Leutner, 1993).

Learning observations and interviews conducted in the Kampar Regency area, both improving the quality of learning and other learning for students are rarely carried out, and if there are more they give more portions to the provision of information, theories, and concepts. This learning does not affect students' ability to carry out Reflective Teaching-based learning, such as in the early stages of planning (preparing a Learning Implementation Plan) or at the implementation stage (Witarsa, 2011). expected results as they should be (Lalor et al., 2015). This is important to be demonstrated by students and lecturers because reflective practice can improve the quality of learning in terms of thinking and writing (Choy & Oo, 2012). Lectures through optimizing Reflective Teaching activities are later expected to shorten the time to increase understanding in learning various skills that are impossible to learn alone, so that the involvement of skills in learning to write short essays in English can be improved and accelerated (Capobianco & Lehman, 2006). From the results of the studies conducted, although there have been several previous findings regarding Reflective Teaching and other field findings that have been disclosed, the researcher sees that there are still gaps in the results of the research that the researcher deems necessary. for further research in this case in the form of developing a Reflective Teaching model. to improve the ability to write short essays in English based on Reflective Teaching. So far, research findings related to Reflective Teaching have not focused on high-level lecturers (Ramanujan et al., 2019; Calderhead, 1989).

The Reflective Teaching Approach can be applied in the classroom within the classroom for reflective writing or journaling (Shanmugavelu et al., 2020). The Reflective Teaching approach can also improve the professional competence of teachers or lecturers (Malkawi et al., 2020; Batman & Saka, 2021; Kong, 2019; Zahid & Khanam 2019; Hung & Mai, 2020; Shukri, 2014; Li & Ye, 2016). The Reflective Teaching approach can improve the ability of teachers to apply English learning in their classrooms (Ashraf & Zolfaghari, 2018; Moslehi & Salehi, 2021; Marashi & Abedi, 2017). The Reflective Teaching approach also greatly contributes to improving English learning outcomes (Olaya Mesa, 2018). Based on the description above, the researchers are interested in researching with the title "Development of a Reflective Teaching-Based Guided Discovery Model to Improve Students' Short Essay Writing Skills" (Yeh, 2004; Zeichner, 1987).
Method

This research is classified as research and development (R&D), using the ADDIE model which stands for Analysis, Design, Development or Production, Implementation or Delivery, and Evaluation (Branch, 2009). The source of data in this study is primary data in the form of instrument collection results. Data and direct observation of students as well as direct interviews with lecturers. The procedure for collecting data is by conducting observations, interviews, and documentation studies. The data were analyzed by analytical techniques using the SPSS program. The data collection used to develop products based on reflective learning, namely through: questionnaires and interviews were used to collect qualitative data from needs analysis, expert evaluation, small group trials, and large group trials (Mattei, 1994; Derish et al., 2007).

Results and Discussion

Research results

Results of the developmental analysis stage:

- Results of needs analysis
  This needs analysis was conducted to obtain data on the needs of lecturers and students in achieving the learning objectives of Writing 2, as well as to determine a suitable learning approach for the Development of Reflective Teaching-based Discovery Learning Learning Models consisting of four indicators, namely indicators of learning tools, learning models, process writing and aspects of writing, for a total of 14 questions. The learning tools used are in the form of modules, but the RPS used before entering the lecture is not always updated at the beginning of the semester. The application of the model still tends to use the cooperative model in general. Viewed from the writing aspect, in general, students' writing still tends to be monotonous and does not describe certain characteristics. All students admitted that it was still difficult for them to start drafting, students still had difficulty changing the topic into a written draft. All the students interviewed acknowledged that the writing process was difficult for students at the drafting stage.

- Curriculum analysis results
  Semester Learning Plans (RPS) which are commonly used do not fully support student orientation on guided discovery. the composition of the material before the change is known to have accumulated too much material, to write ideas even to the point of being designed for up to 6 meetings. In this study, changes were made in the preparation of the RPS so that it further supports the Reflective Teaching-Based Discovery learning model. The changes were made by referring to the Indonesian National Qualifications Framework (KKNI) by detailing the Specific Learning Outcomes (CPK).

- Concept analysis results
  The results of the concept analysis are in the form of a concept map that describes the hierarchical structure of the material taught in the Writing 2 lecture process. Students are introduced to short essays and their
components, then students are taught about drafting rough paragraphs or also known as drafting. The concept of an introductory sentence is needed in compiling a paragraph, as a form of an introductory sentence that aims to attract the attention of the reader. Almost in the first paragraph, there is an introductory sentence. The next material that needs to be taught is topic sentences. Supporting sentences are usually after the topic sentence. Supporting sentences are closely related to the information expressed in the topic sentence so that the information conveyed from a paragraph is clearer. The next concept that students need to learn is about closing sentences. After understanding and being able to write the introduction, topic, supporting, and closing, then all the sentences are arranged into a complete paragraph. Continuity and grouping of each sentence, need to be mastered in the preparation of paragraphs.

- **Results of analysis of student characteristics**
  The students of English Study Program - Universitas Pahlawan Tuanku Tambusai are 100 percent, fresh graduates, from the SMA.

- **Writing Ability.** The characteristics of students can be seen in their writing abilities which are quite varied. Only two statement items scored high, including 60% ability to plan writing based on daily life, 30% understanding of the mechanics of paragraphing, 40% analyzing daily problems in writing assignments, 60% detecting errors in paragraph writing.

- **Response to Learning.** Characteristics of students seen from the response to learning. As many as 14 students like group learning because they think that achieving maximum results in carrying out tasks requires cooperation with colleagues, while the remaining 6 people do not like groups.

**Design phase development results**

- **Guided Discovery Learning Model book based on reflective learning**
  Two things are explained in designing the Reflective Teaching-based Discovery Learning Model Book, namely: 1) The preparation of the model book framework. The introduction section describes the initial introduction of the Reflective-based Guided Discovery Learning Model. The Reflective-Based Discovery Learning Model section explains matters relating to the Reflective-Based Discovery Learning Model. The closing section explains the conclusions of the Reflective Teaching-based Discovery Learning Model; and 2) Write a draft of the model book. This preliminary draft briefly describes the Discovery Learning Model based on Reflective learning, Design of the Discovery Learning Model based on Reflective learning is the content of the Discovery Learning Model based on Reflective Learning, explains the reasons, understanding, objectives, benefits, basic theory, learning objectives, syllabus, the role of the lecturer, the role of students, the role of teaching materials, and components of the reflective-based Guided Discovery Learning Model. The closing draft of the Reflective-Based Discovery Learning Model Book contains conclusions from the Reflective-Based Discovery Learning Model, a learning scenario with the Reflective-Based Discovery Learning model designed to improve Discovery Learning skills based on reflective learning.
• Guided discovery learning lecturer’s book based on reflective teaching
  Two things are explained in designing the Guided Discovery Learning Lecturer’s Book based on Reflective learning, namely: 1) The design of the lecturer’s book framework materials and inquiry packages; 2) Writing a draft of a lecturer’s book while the preparation of a lecturer’s book framework is arranged in 2 parts, namely (a) a Draft of a Guided Discovery Learning Lecturer’s Book based on Reflective learning (b) a Short Essay Test Draft; and 3) Student’s book of guided discovery learning based on reflective teaching. Two things are explained in designing the Reflective Teaching-based Discovery Learning Student Book, namely: 1) designing a student book framework consisting of (a) learning materials, (b) evaluation, and (c) reflection. 2) writing drafts of student books.

Design phase development results

Product validation test results

The Intraclass Correlation Coefficient (ICC) value or Intraclass Correlation is calculated using SPSS 17 for the book model. The following table shows the results of calculating intraclass correlations from the book model.

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s Alpha</td>
<td>2</td>
</tr>
<tr>
<td>Intraclass Correlation Coefficient</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intra Class Correlation</th>
<th>95% Confidence Interval</th>
<th>F Test with True Value 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Measures</td>
<td>.585a</td>
<td>.963 - .932</td>
</tr>
<tr>
<td>Average Measures</td>
<td>.768c</td>
<td>.965 - .965</td>
</tr>
</tbody>
</table>

From Table 1 above, it is known that the SPSS calculation for the ICC number obtained in the book model of all raters is high, namely 0.768. However, if you use one rater, the ICC value becomes 0.585 which is quite high. The ICC value or Intraclass Correlation is calculated using SPSS 17 for lecturer books. Following, Table 2 shows the results of the calculation of intraclass correlation from the lecturer’s book.
Table 2
ICC scores of guided discovery learning lecturers’ books based on reflective teaching

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.981</td>
<td>2</td>
</tr>
</tbody>
</table>

Intraclass Correlation Coefficient

<table>
<thead>
<tr>
<th>Intraclass Correlationb</th>
<th>95% Confidence Interval</th>
<th>F Test with True Value 0</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>df1</td>
</tr>
<tr>
<td>Single Measures</td>
<td>.329a</td>
<td>.937</td>
<td>.773</td>
</tr>
<tr>
<td>Average Measures</td>
<td>.981c</td>
<td>29.587</td>
<td>.872</td>
</tr>
</tbody>
</table>

From Table 2 above, it is known that the ICC book value of lecturers from all assessors is relatively high, namely 0.768. However, if you use one rater, the ICC value becomes 0.585 which is quite high. The ICC value or Intraclass Correlation is calculated using SPSS 17 for lecturer books. The following is Table 3 of 34 results of the calculation of intraclass correlation from the lecturer’s book.

Table 3
ICC Value of guided discovery learning student books based on reflective teaching

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.765</td>
<td>2</td>
</tr>
</tbody>
</table>

Intraclass Correlation Coefficient

<table>
<thead>
<tr>
<th>Intraclass Correlationb</th>
<th>95% Confidence Interval</th>
<th>F Test with True Value 0</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>df1</td>
</tr>
<tr>
<td>Single Measures</td>
<td>.620a</td>
<td>.567</td>
<td>.970</td>
</tr>
<tr>
<td>Average Measures</td>
<td>.765c</td>
<td>.622</td>
<td>.985</td>
</tr>
</tbody>
</table>

From Table above, it is known that the ICC value in the book model of all appraisers is relatively high, namely 0.768. However, if you use one rater, the ICC value becomes 0.585 which is quite high.

Focus group discussion (FGD)

Revisions were made according to suggestions from validators and practitioners on model books, lecturer books, and student books based on Discovery-based Reflective Teaching. The product revision results at this stage are in the form of a prototype II model of Guided Discovery Learning based on valid Reflective learning and the device is ready to be tested on a limited basis (Erbas et al., 2021; Al-Mansori & Reishaan, 2022).

Development stage implementation

The practicality test was carried out by distributing questionnaires to lecturers and students. The first questionnaire was given before the learning activity began (pretest) in order to get students’ initial knowledge, based on the results of the recapitulation of these activities the average value was 0.79. These results
indicate the level of consistency of Practicality of Learning Discovery Learning based on Reflective learning is quite practical. The next questionnaire (posttest) was given after the students finished taking the writing lesson, based on the results of the recapitulation of these activities, a score of 0.79 was obtained. These results indicate the level of consistency of Practicality of Learning Discovery Learning based on Reflective learning is quite practical. Furthermore, to test the practicality of the results of the student response questionnaire. Based on the results of the recapitulation of these activities, an average value of 0.77 was obtained. These results indicate the level of consistency of Practicality of Learning Discovery Learning based on Reflective learning is quite practical (Agell et al., 1997; Puranik et al., 2018).

**Evaluation development stage development of a reflective teaching-based guided discovery learning model**

As with the Bancin et al. (2019) adaptation of the ADDIE development model chart, the evaluation phase in this research was carried out by reviewing the research steps from analysis to implementation as they should have been carried out. More details on the implementation of the design stage to implementation can be seen in the following Table 4 below.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Design</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Needs analysis</td>
<td>Preparation of model books, lecturer books and student books</td>
<td>1. One to one implementation</td>
</tr>
<tr>
<td>2. Curriculum analysis</td>
<td></td>
<td>2. Small group implementation</td>
</tr>
<tr>
<td>3. Concept analysis</td>
<td></td>
<td>3. Field implementation</td>
</tr>
<tr>
<td>4. Analysis of student characteristics</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Discussions**

**Validity analysis of the guided discovery learning model based on reflective teaching**

Model validation consists of content validation (rational, supporting theory, syntax, reaction principle, social system, support system, instructional impact and accompaniment, model implementation), language, and graphics. The mean value of the kappa moment $k = 0.70$ indicates that the model book is categorized as valid. In compiling scientific books and fulfilling the model components as proposed by Joyce & Marsha Weil (2011), the components of the learning model consist of reaction principle syntax, social system, support system, instructional impact, and accompaniment. The results of the validation of the Lecturer's Book
from all aspects show a valid validity. The assessment aspect consisted of content validation \((k=0.82)\) categorized as very valid, language \((k=0.82)\) categorized as very valid, graphics \((k=0.79)\) categorized as very valid and learning \((k=0.84)\) categorized as very valid. The results of the validation of student books/modules from the aspect of content \((k=0.78)\) were categorized as valid, learning \((k=0.71)\) was categorized as valid, linguistic \((k=0.80)\) was categorized as very valid, and graphics \((k=0.81)\) is categorized as very valid, the average is in the category of valid validity (Ariyanfar & Mitchell, 2020; Bakri, 2021).

The results of the validity test have gone through the product evaluation technique proposed by Plomp (2013), which is carried out by an expert (expert review) and has gone through discussions with promoters, lecturers, and lecturers/lecturers according to their field of expertise. Sugiyono (2013), that expert opinion is used to test the validity, at least three experts. Using multiple validators will also make validation results good. Law & Nieveen (2010), construct validity is a logical relationship between content validity and consistency. The results of the validity test show that the three products of the development of the Guided Discovery Learning Model based on Reflective teaching have met the state of the art knowledge requirements (Wong, 2021; Widana et al., 2020).

**Practical analysis of the guided discovery learning model based on reflective teaching**

Stage 1, the results of the practical aspect are \(k = 0.89\) very practical, the objective aspect is \(k = 0.79\) Practical, the material aspect is \(k = 0.65\) practice, the worksheet aspect \(k = 0.77\) practice, the linguistic aspect is \(k = 0.80\) Very Practical, graphic aspect \(k = 0.81\) Very Practical, benefit aspect \(k = 0.75\) Practical. According to this opinion Mudjijo (1995), if a teaching material is easy to use in learning, then the teaching material is said to be practical. Furthermore, Astuti et al. (2012) argue that teaching materials are considered practical if they are easy to use, time-efficient, and useful.

Stage 2, the practical results of the instructional aspect are \(k = 0.85\) Very Practical, the objective aspect is \(k = 0.77\) Practical, the material aspect is \(k = 0.70\) Practical, the worksheet aspect \(k = 0.77\) Practical, linguistic aspects \(k = 0.78\) Practical, the graphical aspect \(k = 0.85\) very practical, the benefit aspect \(k = 0.80\) very practical. Judging from the results of the product practicality analysis above, a conclusion was obtained, namely student books/practical modules used by students in implementing the Reflective teaching-based Guided Discovery Learning model. According to the opinion (Mudjijo, 1995) which states that practical teaching materials have ease of use in the teaching and learning process. This is also in line with what was expressed by Astuti et al. (2012), that the consideration of practicality of teaching materials if they are easy to use, time-efficient, and useful for many people.
Analysis of the effectiveness of the guided discovery learning model based on reflective learning

The Competency Test of Students in the Guided Discovery Learning model based on Reflective learning was carried out before (pretest) and before (posttest) following the Guided Discovery Learning-based learning. The results obtained in the experimental class are Class 1 for the pretest 5.50 and 9.70 for the posttest. Grade 2 for the pretest was 5.50 and 9.80 for the posttest. For Class 3 for the pretest 5.35 and 9.80 for the posttest. The results of this recapitulation show that student learning in the Guided Discovery model competency test based on Reflective learning is very positive. According to students, the guided discovery learning model based on Reflective learning is very effective because it creates enthusiasm in carrying out learning.

Conclusion

The Reflective Teaching-based Discovery Learning Model has been tested for its validity, practicality, and effectiveness. The level of validity of the Discovery Learning Model Book based on Reflective learning is 0.72 and is categorized as valid. The level of validity of the Guided Discovery Learning Lecturer Book based on Reflective learning is 0.82 and is categorized as very valid. The level of validity of the Reflective Learning-based Discovery Learning Student Book is 0.76 and is categorized as valid. The level of practicality of Model Books, Lecturers’ Books, and Student Books for Reflective-based Discovery Learning has an average of $k = 0.78$ and is in the practical category. The level of effectiveness of the Reflective-based Guided Discovery Learning Model obtained from learning outcomes in the classroom is categorized as effective with a score of 82.22. These results indicate that the level of consistency of Reflective-based Guided Discovery Learning products is in the very effective category.

References


