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Inquiry Learning Model to Improve Student's Quick Reading Ability

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Abstract

This research is based on problems related to the application of the inquiry learning model to improve students' speed reading skills, which so far have not been activated. The aim of the research is to find a valid, effective, and practical learning model to improve students' speed reading skills. The research method used is Gall, Gall and Borg development research. The research was conducted in a private elementary school in Medan. The learning model developed is equipped with learning tools, namely model books, lesson plans, teacher books, and student books. The product developed was carried out by individual trials, small group trials and field group trials. Furthermore, testing the effectiveness and practicality of the learning model. The research findings show: (1) the learning model developed is an inquiry learning model to improve the speed reading ability of elementary school students which consists of syntax, social system, reaction principle, support system, instructional impact and accompaniment. The learning model developed is equipped with tools, namely model books, lesson plans, teacher books, and student books. The whole set of inquiry learning models based on (2) the developed inquiry learning model is proven to be effective in improving student learning outcomes, this is proven by statistical testing t-test where the value of tcount (9.98) is higher than ttable (2 .00), and (3) the developed inquiry learning model has a practicality level with a score of 3.39 in the practical category without improvement.

Keywords
inquiry learning model; speed reading; reading skill

I. Introduction

The reading ability of each student is different, some have high speed and some have low speed. Reading ability can be improved through gradual practice, because speed reading is not an inherited skill or talent. This is confirmed Manoli and Papadopoulou (2012:818) that areading skills and abilities are person'sobtained through trainin/learning so that a high success rate is obtained. The statement above, confirmed by Vongkrahchang and Chinwonno (2016: 1) that reading skills increased after the intervention, supervision and evaluation were carried out. The average result of reading ability before the intervention was 2.54 while after the intervention was obtained an average of 2.72.

The ability to read must be trained continuously from an early age, this is explained by Nurhadi (2008:134) that the ability to read is not an innate ability. However, reading ability is the result of training which is also supported by certain innate factors, so that a higher level of effectiveness is obtained.

Theoretically, reading mfethods include speed reading methods. Speed readingis a practical technique that will lead a person to the ability to read speed to the fullest speed

reading. This is a skill that students must learn to be able to read faster. One of the success of students participating in the learning process is determined by the ability to read. Students who are not able to read fluently and quickly will have difficulty participating in learning activities. Students will have difficulty understanding the contents of the textbook. As a result, student learning outcomes do not increase compared to students who read quickly. For this reason, efforts to improve learning achievement of speed reading skills, there are many ways that can be done, including using a learning model in the implementation of learning in the classroom, in this case the researcher examines the inquiry learning model.

Inquiry learning model designed to help students directly into the scientific process through guided exercises so that they can improve the process skills of observing, collecting and processing data, increasing student activity and independence, verbal disclosure, and collaboration.

Learning activities that are not planned and designed properly cause the possibility of obstacles to achieve the expected learning outcomes. Therefore, learning activities must be designed in such a way that the learning process and learning outcomes can be achieved optimally.

II. Review of Literature

2.1 Speed Reading

Soedarso (2010: 5) states that speed reading is a kind of exercise to quickly manage the process of receiving information. Someone will be required to distinguish the required information or not. The information is then stored in the brain. Speed reading is also a skill that must be learned in order to be able to read faster while understanding everything contained in the reading in question. No one can speed read because of talent, so it must be understood that speed reading is not related to the speed of breaking the code and quickly finishing a book. Speed reading is how readers can read with better understanding and faster time and remember it well too.

Real reading skills are not just the ability to voice written symbols as well as possible, but further is the ability to understand what is written correctly and quickly. In this case, Wainwright (2007:42) explains that the *effective reading rate* (ERR) is the speed at which the reader reads effectively. Regarding effective reading speed, Wainwright (2007:42) explains that in order to increase effective reading speed, it is necessary to increase reading speed and increase reading comprehensionThrough speed reading, students are expected to be more efficient in using time in learning. With a continuous pattern of practice, it is hoped that students can read at a maximum reading speed per minute without losing the meaning of the reading.

2.2 Speed Reading Ability Measurement

Sometimes a student can read quickly but cannot understand the contents of the reading, then the purpose of speed reading is not achieved. So it should be between the speed of reading and understanding the content of the reading must be appropriate, so that the purpose of reading is more effective.

Fitria (2010:40) standards for effective reading speed according to the category and level of education are as follows: (1) the category of effective reading speed is low below 250 kpm, medium speed is 250 – 350 kpm, and high speed is above 350 kpm. (2) effective reading speed according to education level, elementary school: 150 – 250 kpm, junior high school: 200-250 kpm, high school: 250 – 300 kpm and university: 300 – 350 kpm.

According to Astuti et al (2019) Education is an obligation of every human being that must be pursued to hold responsibilities and try to produce progress in knowledge and experience for the lives of every individual. Education is one of the efforts to improve the ability of human intelligence, thus he is able to improve the quality of his life (Saleh and Mujahiddin, 2020). Education is expected to be able to answer all the challenges of the times and be able to foster national generations, so that people become reliable and of high quality, with strong characteristics, clear identities and able to deal with current and future problems (Azhar, 2018).

The speed reading ability of elementary school students which is read in the number of words per minute must be in accordance with the standards, namely for Class I 60 – 80, Class II 90 – 100, Class III 120 – 140, Class IV 150 – 160, Class V 170 – 180, and for Class VI 190 – 250 words per minute (Tarigan, 2008:29).

Nurhadi (2008:42) explains that students at the end of elementary school or students at the junior high school level are considered adequate at around 200 words per minute. For high school students, reading speed is considered adequate if they are able to read 250 words per minute. For the student level, the minimum reading speed is 325 words per minute, postgraduate or doctoral 400 words per minute. The thing to remember is that reading speed must be accompanied by an understanding level of 60%.

2.3 Inquiry Learning Model

Inquiry learning model designed to invite conventional students into the scientific process in a relatively short time. In the inquiry learning model, students are actually placed as learning subjects, while the role of educators is as a guide and learning facilitator. The main task of an educator in the inquiry learning modelis choosing a problem that needs to be used as a problem that will be solved by students. Inquiry learning modelcan improve understanding of science, products in creative thinking and students become skilled in obtaining and analyzing information (Trianto, 2007:115).

The learning model *inquiry training* can be well designed with the teacher controlling the interaction and implementing research procedures. However, research standards are cooperation, intellectual freedom and balance, as well as interaction between students is also encouraged. The intellectual environment is open to all relevant ideas, teachers and students should participate equally in which ideas can be connected to each other.

The support system in the application of thelearning model *inquiry training* is a set of materials that can confront problems, a teacher who can understand intellectual processes and research strategies and source materials that contain certain unique problems.

The learning impact of the application of thelearning model *inquiry training* is to offer research strategies, values, and attitudes that are important in the realm of research which include: processing skills, namely observing, collecting and processing data, identifying and controlling variables, formulating and test hypotheses and explanations and draw conclusions. Thelearning model *inquiry training* combines several process skills very well into a meaningful unit of experience (Joyce and Weil, 2003:138).

III. Research Method

This research and development seeks to develop products that are feasible, effective and practical to use in learning. The products developed in this research are model books, lesson plans, teacher books, and student books. The development of the designed learning design model is carried out by applying *research and development* (R&D). According to Richey and Klein (2007: 1), R&D is a systematic study related to design, development and evaluation that aims to develop products, whether educational or not, related to products and the latest findings. The place of this research is SD Adhyaksa Medan having the address at Jalan HM Said No. 23 District of East Medan. This research was conducted from June 2020 – May 2021.

The research development model referred to is Gall, Gall and Borg (2007:590) which adopted Dick, Carey and Carey with the following stages:

(1) the first stage: *identify instructional goal/ s* (identifying learning objectives), (2) second stage: *conduct instructional analysis* (performing learning analysis), (3) third stage: *analyze learners and contexts* (analysis of learner characteristics and learning context), (4) fourth stage: *write performance objectives* (writing specific/specific learning objectives), (5) fifth stage: *develop assessment instruments* (developing assessment instruments), (6) sixth stage: *develop instructional strategy* (developing learning strategies), (7) seventh stage: *develop and select instructional materials* (developing and selecting learning materials), (8) eighth stage: *design and conduct formative evaluation of instruction* (designing and developing formative evaluation), (9) the ninth stage: *instruction revision* (revision of learning design), and (10) the tenth stage: *design and conduct summative evaluation* (designing and developing a summative evaluation).

The research population at the stage of identifying the instructional needs of the research target is the fifth grade students consisting of 2 classes and the Indonesian language teacher. By using *cluster random sampling technique,* class V-1 with 32 students was selected as the research sample at the learning model development stage (treatment class/experimental class). While class V-2 with 31 students as the control class. Furthermore, the object of this research is teaching materials in Indonesian subjects.

To determine the success of the implementation of the learning model, an evaluation is carried out, both formative evaluation and summative evaluation. Formative evaluation is carried out by the developer during the design of the learning model in the design process in order to support increasing its effectiveness, which is carried out with the technique of *one-to-one evaluation, small group evaluation* and *field trial evaluation.*

Furthermore, summative evaluation is carried out to determine the effectiveness of the final product of the learning design, in this case carried out by other parties outside the learning design developer. For this reason, a field test was carried out using the class where this learning model was applied. To see the usability of this learning model, the effectiveness of the learning model was tested by performing statistical tests using the t-test. The instruments used in this study were questionnaires and tests. In line with this instrument, the data collection techniques used in this study were test and non-text techniques. The test technique is used to obtain data on the effectiveness of the learning model product in the form of measuring data for the speed reading speed of students.

The non-test technique was used to obtain data on the feasibility of the developed learning model product. Non-test techniques are in the form of validation sheets for both research instrument validation and product validation sheets developed. Data analysis to see the feasibility of the learning model product is carried out after the data and information needed are collected. The assessment sheet is then scored, and calculates the

average score and then determines the appropriate category by comparing it with the eligibility criteria. Hypothesis testing to see the effectiveness of the inquiry learning model is used statistical analysis t-test.

IV. Results and Discussion

4.1 Development of Learning Models

The implementation of Indonesian language learning carried out by teachers is still dominantly using direct learning by using the lecture method, where the teacher delivers the subject matter directly, is lectured, occasionally asks questions and gives practice assignments to students. During the learning process, group learning has not been maximally carried out. Students have not been actively involved during the implementation of learning, where the communication that occurs is one-way, students look passive as listeners when the teacher delivers learning material in class.

Other findings indicate that during the implementation of learning Indonesian in the classroom, teachers apply learning strategies that are less relevant to the characteristics and objectives of learning Indonesian. The implementation of Indonesian language learning in the classroom does not pay attention to and develop activities and students' speed reading skills. Teachers do not take advantage of good learning interaction patterns during learning that can grow and improve learning activities and students' speed reading abilities.

Associated with the characteristics of elementary school fifth grade students who are eleven years old or twelve years old.Where the main characteristics of elementary school students at that age are that they display individual differences in many aspects and fields, including differences in intelligence, abilities in cognitive, language, personality development and physical development.

From the analysis of academic results on students classified as not achieving maximum results. This can be proven from the results of the calculation of the Indonesian language value of students in the end-of-semester test of the 2019-2020 school year, which is 63.50, which is below the maximum completeness criteria (KKM) that has been previously set, which is 85.00. This analysis is also supported by the results of interviews with teachers who confirm that the academic ability of students, especially in Indonesian subjects is still low and only a few students are able to get good grades at the end of each semester test.

4.2 Assessment Instrument Development

To measure the achievement of learning objectives, namely the students' speed reading ability, a reading ability test instrument was designed. The test developed in the form of a narrative consists of 263 words. The implementation procedure is that students are given a certain duration of time to read the test and then their reading ability is calculated using the reading speed measurement formula, so that later students' speed reading abilities are obtained in minutes or known as words per minute (kpm).

4.3 Development of Learning Strategies

Development of learning strategies in the product development of inquiry learning models refers to the previous stages, namely by paying attention to the learning objectives and characteristics of students and the learning context. In this case, the development of learning strategies in the implementation of learning includes: (1) descriptions of teacher activities, and (2) descriptions of student activities. The display of the components in the

learning strategy in the form of learning scenarios for the development of inquiry learning models is listed in the learning implementation plan.

4.4 Development of Learning Materials

Development of Indonesian language learning materials or materials for grade V elementary school is contained in the student book which consists of 6 discussion chapters, namely: (1) ecosystems, (2) changes in ecosystems, (3) relationships between living things, (4) chains food, (5) energy in ecosystems, and (d) changes in environmental balance.

4.5 Development of Formative Evaluation

Formative evaluation is intended to obtain information that is used as a basis for improvement in terms of improving the quality of the designed inquiry learning model product. The steps taken are as follows: (1) compiling formative evaluation instruments, and (2) conducting formative evaluations including: (a) *expert evaluation*, namely evaluations from material experts, learning design experts, and language experts, (b) *one-on-one to-one learner evaluation*, namely evaluation of three students to see the clarity of the learning process and its feasibility for students as well as assessing the adequacy of the tests used to measure student learning outcomes, (c) *small group evaluation*, namely evaluation of 10 students, and (d) *field trial*, namely field trials conducted on 30 students.

4.6 Instructional Revision

Based on the results of formative evaluation in the form of suggestions for improvement submitted by *experts* and students, a revision was made to the inquiry learning model.

4.7 Summative Evaluation Development

Summative evaluation aims to see and assess whether the designed learning model is better than previously existing learning materials. In this case, Pribadi (2011: 109) explains that summative evaluation does not involve a learning design designer but involves an independent assessor. This is one reason to state that summative evaluation is not included in the learning system design process. The same thing is explained by Suparman (2012: 328) that summative evaluation is not part of the learning design process but is an advanced stage of the learning design process.

4.8 Eligibility of Model Books

Experts who provide validation for inquiry learning model books are design experts, material experts, and language experts. The recapitulation of the results of expert eligibility validation in the first stage of the inquiry learning model book can be seen in Table 4.5 below:

Table 1. Expert Feasibility Recapitulation of the Model Book (First Stage)

No	*Expert*	*Scores*
1	***Learning Design***	***2,79***
2	***Material***	***2,93***
4	***Languages***	***3,00***
Average		*2,90*

Based on the data in Table 1, it can be seen that the expert's feasibility assessment of the inquiry learning model book in the first stage obtained an average score of 2.90 and was in the appropriate category.

4.9 Feasibility of the Learning Implementation Plan

Experts who provide validation of the feasibility of the learning implementation plan of the developed inquiry learning model are design experts, material experts, and language experts. The recapitulation of the feasibility assessment of the learning implementation plan by experts in the first stage can be seen in Table 4.10 below.

Table 2. Recapitulation of Expert Assessment of RPP *(The first stage)*

No	*Expert*	*Scores*
1	***Learning Design***	***2,87***
2	***Material***	***2,90***
4	***Languages***	***3,00***
Average		*2,94*

Based on the data in Table 2, it can be seen that the recapitulation of the feasibility assessment of the learning implementation plan by the expert in the first stage obtained an average score of 2.92 and was in the appropriate category.

Based on the results of reflection and observing the suggestions submitted by experts, improvements were made to the development of the inquiry learning model. The improvements made resulted in the 3rd model prototype. Furthermore, the 3rd prototype was tested by the second trial phase to the experts.

Based on Vygotsky's explanation above, it can be understood that the use of the inquiry learning model in learning can stimulate higher mental functions so that it is hoped that students' speed reading abilities will increase. This is because the concepts and principles of learning can be understood through inquiry learning, there will be interactions that are understood by students as a knowledge system and interactions in their groups can be used as educational interaction patterns that regulate student activities during the learning process. Social interaction among students will spontaneously be created due to an understanding of the social system found in students and teachers. In this case, the development carried out resulted in an inquiry learning model that was designed by following the principles ofresearch methodology *research and development.*

The inquiry learning model developed has been validated by experts, namely learning design experts, material experts, and language experts. The validation results show the feasibility of the product being developed, then individual trials, small group trials and field group trials are carried out. then tested the effectiveness and practicality. the result is an inquiry learning model.

V. Conclusion

Based on the previous discussion, it is concluded as follows:

1. The learning model developed is an inquiry learning model to improve the speed reading ability of elementary school students which consists of syntax, social system, reaction principle, support system, instructional impact and accompaniment. The learning model developed is equipped with tools, namely model books, lesson plans, teacher books, and student books. The whole set of inquiry learning models has been

validated by design experts, material experts, and linguists showing that the learning model products are feasible to use.

2. The inquiry learning model that has been developed has proven to be effective in increasing the achievement of students' speed reading ability results, this is proven through the t-test statistical test where the $t_{count\ value}$ (9.98) is higher than the t_{table} (2.00).
3. The inquiry learning model developed has a practicality level with a score of 3.39 in the practical category without improvement.

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