

Model Development of Response to Intervention for Children with Disabilities in Central Jakarta Inclusive Schools

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ABSTRACT

The general objectives of this research and development are as follows: (1) Knowing the teacher's ability to carry out learning for mild mentally retarded students at SDN 03 Kemayoran. (2) Develop a learning model of the Response to Intervention (RTI) for mild mentally retarded children in inclusive schools. (3) Knowing the effectiveness of using the Response to Intervention (RTI) learning model for students with special needs in inclusive schools. This research approach uses based development research and development research (R & D), which was proposed by Atwi Suparman, known as the MPI Model. The results of the study showed that the average score of the material expert was 3.28 which means the product was considered good and the learning design expert was 4.07 which meant the product was very good. Then in the test phase to students the average score for the face to face tryout stage is 3.63 which means the product is considered very good and at the

small group stage is 3.47 which means the product is considered very good. The results of the interviews with teachers obtained very good results. In conclusion, the module of the response to intervention model can be said to be good, but still needs to be improved in accordance with expert advice, as well as teachers as users.

Keywords: Development Research, MPI Model, Response To Intervention

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INTRODUCTION

Education of a nation will never stop and finish. Like the pepata grows lost in turns, finished solving a problem, another problem arises that is no less complicated. With attitudes and behaviors that take place through teaching, the activity is called education. In Indonesia teaching and training processes are experienced in three sectors, namely: formal, non-formal and informal. These three sectors are very strong and close networks, so education really leads to maturation, knowledge and skills of a person.

Inclusive education is an education system whose implementation provides an opportunity for all students who have abnormalities and have the potential for intelligence and / or special talents to participate in education or learning in an educational environment together with students in general (Ministry of National Education, 2009). Inclusive education is designed to respect the equal rights of people to education without distinguishing age, sex, ethnicity, language, disability, etc. As revealed by DK Lipsky and AD Gardner in the *Inclusive Education Training Module* (Kemendiknas 2009) stated as follows: "Inclusive education as: providing to all students, including those with significant disabilities, equitable opportunities to receive effective educational services, with supplemental needed aids and support services, in age-appropriate classes in their neighborhood schools, in order to prepare students for productive lives as full members of society" [1].

Inclusive education is an education system that is provided for all students, including students with disabilities to get decent opportunities in obtaining effective education services, accompanied by the assistance of additional service

support in their classrooms, in order to prepare them for life productive as full community members.

The ideal conditions for achieving equality in education for children with special needs in inclusive schools are basically not easy to achieve. The difficulty to reach the goal of inclusive education is certainly caused by various obstacles or problems in the delivery. One of the problems that arise especially at the school level is that not all teachers and principals understand and are able to apply education and learning to children with special needs, so that children integrated in public schools are not well served. As a result the school policy becomes inaccurate, and the learning process becomes ineffective.

A model is something that describes a pattern of thinking. A model usually describes the whole concept that is interrelated. The model can also be seen as an attempt to concretize a theory as well as an analogy and representation of the variables contained in the theory [2]. While Reigeluth and Chellman put forward the term model as an abstraction of a phenomenon. Abstraction is the ability of humans to understand the complexity of an object, which in learning is needed to understand in an integrated manner the components of strategy, summaries, use of examples, and the use of practices to provide motivation to students [3].

An ideal learning model is a concept and practice that can facilitate the learning process carried out by educators with their students. As expressed by Joyce, Weil, and Calhoun, the teaching model is truly a learning model, as we help students obtain information, ideas, values, ways, thinking, and on average express themselves, teaches how to study. In fact, the most important long-term results of learning enable learners to improve their ability to learn more easily and effectively in the future, both because the knowledge and

skills they have acquired and mastery over which they have acquired [4].

Strategy comes from the Greek word "strategic" means planning the use of a country's army to achieve its objectives. In this case the purpose of a battle. In the world of education, especially in the learning process, strategy implies a different meaning from the concept of strategy in the military world, even though it contains these elements. Strategy is a learning activity that must be done by teachers and students so that learning objectives can be achieved effectively and efficiently. So that the meaning of "Strategy" is a learning activity that can provide material or learning packages effectively and efficiently.

Furthermore the term learning describes the teacher's effort to make students do learning activities. Learning activities will not be meaningful if they do not produce learning activities for their students. Learning activities will only succeed if students actively experience the learning process themselves. A teacher cannot represent students' learning. A student cannot be said to have learned only because he is in a room with the teacher who is teaching.

The response to this intervention is a multi-tier model that applies intervention in the learning process. Interventions are based on responses given by students with monitoring through tiered and systematic observation [5].

RTI can be used as a process of one evaluation to specifically determine the child's difficulties in learning. The RTI process includes: (1) *instruction* science-based classroom; (2) Assessment of students with class focus; (3) School screening (academic and behavioral); (4) Monitoring the ongoing progress of students; (5) Implementation of appropriate research-based interventions; and (6) Measurement of correct learning.

Lise Fox, Judith Carta, at all [6] (. Suggests that: *Response to Intervention (RTI) is a systematic decision-making process designed to allow for early and effective responses to learning and behavioral difficulties, providing a data-based method of instruction. for evaluating the effectiveness of instructional approaches.*

This means that Response to Intervention (RTI) is a systematic decision-making process designed to provide an early and effective response for children who experience learning difficulties and behavioral deviations by providing learning tailored to the level of need and then providing data-based methods to evaluate the effectiveness of the learning approach.

Research by Charmion et al [7]. The results show that its response to intervention, or RTI, is based on the premise that, evidence-based decision making and practice, children who may otherwise have been identified as receiving early learning interventions thus have the opportunity to remain with their peers in general education settings

RTI is a series of strategies used to screen students in general education by developing instructions through systems or levels (tiers), by monitoring their progress and making data to decide the next step in their education placement and curriculum that suits their needs.

The National Research Center on Learning Disabilities (NRCLD) suggests the RTI definition is an assessment

process and intervention to systematically monitor student progress and make decisions about the need for instructional modifications. Interventions are given according to needs, so the process of this model will work or be appropriate for students. This was also supported by the following statement: "Significant changes in the reauthorized Individuals with Disabilities Improvement The Education Act of 2004 (US Department of Education, 2005) includes a model of prevention, effective instruction, and *response to intervention (RTI)*).

This research is a continuation of previous research (Rush, et al.[8] that uses the RTI model concept to address children who have learning disabilities in educational settings including: "*Response to Intervention: Right on Track. Standard (2010), Secondary Teachers' Knowledge of Response to Intervention*" Kent [9] *RTI as A Model to Facilitate Inclusion for Students with Learning and Behavior Problems.*" *Response to Intervention in Canada*". Doglas [10] "*Implementing RTI in a High School: A Case Study.*" Riana (2014) "*Development of a Model Based Learning Service Supporting Positive Behavior for Children with Attention Concentration Disorders and Hiperactivity.*" Mulyono [11] *Response to Intervention (RTI) Model: An Alternative to Identify Students With Specific Learning Disability (SLD)*, research by Jack M. Fletcher and Sharon Vaughn's results show that the RTI Process has the potential to integrate general and special education and suggest new directions for research and public policy related to LD

RESEARCH METHODOLOGY

This research approach uses-based development *research and development research* (R & D), proposed by Atwi Suparman, known as the MPI Model, is a process used to develop and validate educational products, which are not only material such as textbooks, learning films, learning media, etc., but also include procedures and processes, such as learning strategies, learning methods or learning management methods. Educational research and development includes several stages where a product is developed, tested, and revised in accordance with the results of tests in the field.

This stage of research and development describes the procedures adopted in developing the learning model. From this method it is expected that results will be obtained that this model can effectively achieve academic targets for students with special needs, especially mild mental retardation students at the elementary school level inclusion.

RESULTS AND DISCUSSION

Results

results of the study showed the average score obtained at the expert trial stage as follows. The average score of material experts is 3.28 which means the product is considered good and the learning design expert is 4.07 which means the product is very good. Then in the testing phase to the teacher the average score for one to one stage is 3.63, which means the product is considered very good.

Table 1: Value of one to one

Component	Average		
	High	Average	Low
Learning Design	4.0	3.33	3.16
1. Learning method	4.0	3.0	3.0
2. Example given	4.0	4.0	3.0
3. Evaluation	4.0	4.0	3.5
Module Function and Size	3.66	4.0	3.33
Principles of verbal message design	3.83	3.50	3.50
1. language	3.66	4.0	4.0
2. sentence structure	4.0	3.0	3.0
Visual message design principles	4.0	3.75	3.50
1. layout	4.0	4.0	3.0
2. typography	4.0	4.0	4.0
3. illustration	4.0	4.0	3.0
4. color	4.0	3.0	4.0
Average	3.87 (very good)	3.64 (Very good)	3.37 (Very good)
Overall average	3.63 (Very good)		

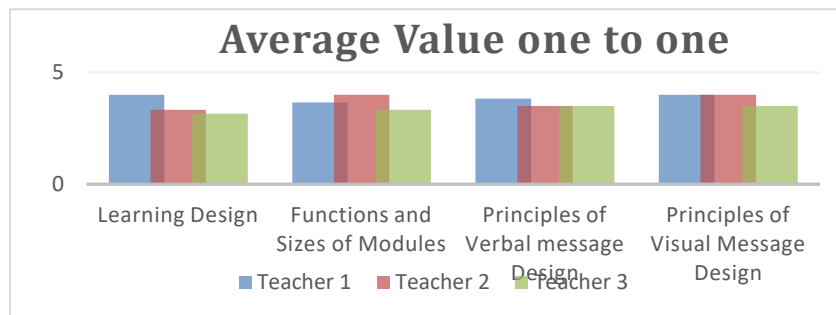


Figure 1. Graph of Average Value one to one

In the small group stage is 3.47, which means the product is considered very good.

Table 2. Recapitulation of small group evaluations

No	Aspects assessed	KLP 1	KLP 2	KLP 3	Total Score	Note
1	Flow reading	5	5	4	4.7	Very good
2	Relationship between aspects	4	4	5	4.3	Very good
3	Compliance with needs	4	5	5	4.7	Very good
4	Reflects learning RTI	5	5	4	4.7	Very good

In conclusion, the module of the response to intervention model can be said to be good, but still needs to be improved in accordance with expert advice, as well as teachers as users.

DISCUSSION

1. Development of the RTI Learning Model

Development of the RTI learning model for teachers of SDN 03 Kemayoran Jakarta Pusat with research and development procedures by Borg and Gall with the aim of producing a learning model product that can be used to improve efficiency, effectiveness and power student learning in a more optimal direction.

This is supported by research conducted by Abou-Rjaily and Stoddard (2017) the results of the study indicate that the use of RTI as an initial intervention to overcome significant learning and emotional social behavior, as well as for students who are culturally and linguistically different [12]. Research conducted by Otaiba, Wanzek, and Yovanoff (2016), the results show that the Response to Intervention (RTI), or multi-tiered support system, for early literacy improves student reading outcomes [13]. Research conducted by Reschly (2005), the results show that the importance of early primary and secondary interventions for children in the academic domain for the purpose of improving overall academic competence often leads to the diagnosis of special learning disabilities [14].

Response to interventions is very much needed for children with special needs, especially those who attend public schools.

This RTI model was used with the modification of the MPI learning model design at Atwi Suparman. The research and development steps start with a preliminary study, planning, then design a learning program in the form of an RTI learning model, conduct an initial trial, then test the learning model, make improvements to model learning (revision), field testing / operations, and do a model validation test so that the learning model is produced as the final stage, so as to produce a suitable learning model according to the characteristics of students.

Explanation and development of the process of learning steps in the research development of the RTI learning model begins with the stages:

a. Requirement Analysis Phase. The development of learning models is a very important need at this time, after the researchers observed and analyzed that the current situation was far from perfect because the teacher did not yet have the teaching material for the RTI learning model. This gap is an important needs analysis phase for researchers to develop RTI learning modules that are tailored to the student characteristics and curriculum models.

b. Planning stage. Based on factual analysis and findings, in the planning stage, the steps for preparing the RTI learning model are determined according to student characteristics, namely: (a) formulating general learning objectives and specific learning objectives, (b) formulating the form of implementation of RTI learning developed, (c) formulate evaluation forms that will be developed for students, (d) design appropriate image designs.

c. Development phase. The study of RTI that will be developed and implemented in the product of this development, is then assessed by expert expert learning (expert Jusment / expert material) as a weighing expert in the validity of the data, the feasibility and validity of items or instrument items and each item (item) in the instrument re-evaluation to get approval and validity of the data.

d. Trial and Revision Phase. The Trial and Revision Phase was carried out in the research and development of the RTI learning model after the design design of the learning development model was completed. The trial of the RTI learning model was conducted to measure whether this learning model was feasible to develop or not and also to see the extent to which the products that developed the RTI model had been designed to achieve the goals and objectives of the development model.

In this research and development of the RTI learning model there are three stages of testing the model developed, namely:

1) Expert Judgment. Expert trials are carried out by material experts (content) who provide input on additional meanings, objectives and input on the formative and summative tests carried out. Then the input from the construc design expert who constructs the RTI learning

model in a better direction, this RTI learning model is more effective and efficient for the teacher. The next expert test is testing the media expert (lay-out) giving input that the icons in the RTI module must be added.

2) One to one trial. This trial was carried out after the revised data from the staff had been revised and the revised data on the learning module had been revised in one to one to determine the applicability of the learning model, effectiveness and efficiency in the learning process. In each trial conducted aims to draw conclusions from the results of test data analysis in explaining the product or learning model developed which was tested as a basis for making decisions whether the resulting model needs to be revised or not, decision making to revise the model needs a dissertation with learning support that after being revised this model would be better, more effective, efficient and have an attraction for teachers. This trial which involves the teacher aims to determine whether the design of the learning module developed can be applied correctly by the teacher. The results and limited trials are revised so that the design of the RTI learning module is ready for small group trials.

3) Small Group trials. This trial aims to determine whether the RTI learning module design has been implemented correctly and how effective the results of the application of the learning module are to achieve the research objectives. The main trial was conducted on 9 teacher participants. The emphasis of the main trial at this stage is still focusing on the effectiveness, efficiency and attractiveness of the design of RTI learning module materials using the results of the improved draft module material design.

The process of implementing the main trial is as follows: first the respondents are introduced to the RTI learning module material by explaining the steps on how to use the learning module material, participants are given pre-tests and after the participants have the opportunity to read the module, by looking at the learning module 1 then the learning module 2 material, after that the learning module 3 material, the respondents were also directed to follow a joint discussion schedule. On the occasion this discussion presented the teachers, so that discussions could solve the problem. The discussion used with the teacher depends on the module material used, because it varies according to the module instructions. The questionnaire used to collect data was questionnaire sheets and open interviews. Observations were made during the research process, the participants also carried out pre-tests and posts to support the data. After the trials were carried out two trials starting with one to one trials and then revisions, the small group trials were revised again, the results of these two trials showed that the RTI learning module was optimal to be validated (validastest).

e. The Validation Stage Model Validation

Stage Model was conducted in the research and development of the RTI learning model aimed at determining the level of applicability of the model, whether the developed learning model was truly ready to be used without direction or assistance by the model researcher /

developer and concluded whether the model developed was more effective have an impact on students' abilities compared to the models carried out during conventional learning.

The validation of the RTI learning model was carried out at SDN 03 Kemayoran Central Jakarta, and the teaching material was in the form of a summary of the material made by the teacher. The 10th step of the research and development of Borg and Gall in this research model of learning development is not done, namely dissemination because it requires a lot of energy, funds and time involved. Furthermore, the researcher conducted a readability test with the Fox Index formula so that the readability of module materials was increasingly more interesting to be implemented in print media.

This was supported by research conducted by Abdalraheem and Al-Rabane (2006) in a study entitled "Utilization and Benefits of Instructional Media in Teaching Social Studies Courses as Perceived by Omani Students" The results showed that the use of textbooks in the classroom was still very dominant [15].

The results of research conducted by Pannen, et al (2003) found that the use of learning materials and textbooks in learning was very dominant compared to other learning sources such as libraries, laboratories, field studies, slides and the internet, computers and others. However, the use of computers in learning shows a significant increase nowadays [16].

Teachers who apply the RTI implementation model are motivated to teach, are more intent and more interested in teaching

2. Product strengths and weaknesses

From the description of the discussion on the results of the development of the learning model through the five stages of discussion that have been carried out to develop this learning product, the researcher knows and realizes there are several strengths / advantages of this RTI learning product and also the weaknesses / limitations and products of this learning model.

As for the advantages of the product, this learning model is 1) Modules produced are in accordance with the needs of subject matter teachers. 2) The resulting module also stimulates teachers to teach more independently with more efficient and effective times. 3) The results of the module are also patterned with images that have the attraction to teach. 4) Stimulating the attractiveness of the teacher. 5) The product of the module becomes a guide for teachers in applying learning to students. 6) the RTI module becomes a guide and guide for the teacher in exploring RTI learning so that the teacher is more directed and constructed to look for instructional materials to be developed 7) The RTI learning module can be used as a learning medium.

Whereas the limitations / weaknesses of the product RTI's learning module are:

The RTI learning module product is only limited to the temporary introduction of the teacher in accordance with the theme of the module.

2. Limited funds so that learning module products are only limited to Book products that should be able to produce appropriate teaching aids products.

CONCLUSION

The RTI lesson modules developed have been very good and need to be maintained, but there are still module components that need to be improved and developed in terms of the four feasibility tests and one effectiveness test that is carried out:

Validation or testing of learning design experts carried out by experts in design design learning. This activity was carried out to review the initial product design of the learning model to be developed and to subsequently carry out several stages of testing, in the one to one trial and small group trials. Which gives input to the design of this learning model are experts (experts) designer of design (Expert Judgment) by carrying out conceptual analysis and subsequently revised.

First, learning design experts assess that the RTI module has fulfilled the learning needs of students both seen from the objectives, presentation and follow-up of the descriptions presented and presented. Second, based on the assessment of material content experts, the material meets the criteria of complete, consistent, and rigorous. Suggestions from module content experts should not only be boring text, you should be able to display more interactive material, so that the teacher will better understand the material and training assignments. Material content experts provide an assessment that this module is interesting, as an alternative to learning in addition to face-to-face learning can also be done independently. Third, media expert validation aims to find out the interests including the readers in studying the contents of this Module, seen from the instructions, learning objectives, description of the contents of the Module, summaries, practice questions, reading lists, and answer keys found in each learning activity. Media expert validation is captured using instruments. Media experts, only said that they were quite interested because they were related to a simple appearance. Suggestions from media experts, emphasize again that the Module should not only be boring text, it should be able to display more interactive material, which can display images and animation.

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