

# Implementation of Contextual Approach in Learning orientation and Mobility in Visual Impairment Students in SLB PGRI Sentolo

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**Abstract**— The quality of learning is influenced by the learning approach chosen by the teacher so that an active approach is needed to involve the students. This study aims to describe the implementation of contextual approach to orientation and mobility learning for students with visual impairment in SLB PGRI Sentolo. This research is a qualitative descriptive study. Technique of collecting data is done by interview, observation and documentation. Data analysis is done by reduction, display data, and conclusion drawing / verification. The results showed that teachers have applied a contextual approach in orientation and mobility learning. There are seven components applied: constructivism, questioning, inquiry, learning community, modeling, authentic assessment and reflection. These seven components have been applied, but there are some components that need improvement such as: (1) the components questioning the students are still passive and difficulty in asking questions, (2) the inquiry components of the students still need guidance from the teacher, (3) the learning community components of students are still passive in doing activities, (4) the authentic assessment component, the teacher has not done attitude assessment so the assessment is not thorough, (5) the reflection component, the teacher has not helped the student connect the newly acquired knowledge with prior knowledge. Recommendations for further research can make an intervention effort by applying contextual approaches according to the condition of students to improve the quality of learning. Further research can make innovations on learning approaches, media, teaching materials, materials, assessment.

**Keywords**— *contextual approach, orientation and mobility learning, visual impairment students*

## I. INTRODUCTION

Visual impairment students have difficulty receiving information through visuals so that other senses are used besides vision. Visual impairment students use touching and hearing to learn [1]. This condition causes visual impairment students have some limitations. These limitations include limited experience, limitations of interacting with the environment and the limitations in the ability to get around [2]. The limitations of moving places become a major obstacle that affects other limitations. Moving ability can reduce the limitations in communicating, interacting with the environment and various other areas of life [3]. This is the reason for the importance of handling the limitations in the ability get around to students with visual impairment.

The limitations in the ability get around can be overcome by practicing orientation and mobility skills. Orientation and mobility are two distinct, but interconnected activities. Orientation is the process of using the senses that still function to know the cues and objects in the environment, while mobility is the ability to move places [4]. Orientation and mobility skills can help the visually impaired in their environment and support independence in the environment later [5]. This causes the importance of a visually impaired person to master orientation and mobility skills.

Orientation and mobility abilities are studied by visual impairment people at school in a special program. In the 2013 curriculum, orientation and mobility capabilities are integrated in orientation mobility, social and communications program (OMSK). Specifically developed programs are not based on ladder, educational unit and grade level [6]. The program is developed based on the ability and needs of students so that the implementation is more flexible.

This orientation mobility program is given to students with visual impairment in SLB PGRI Sentolo. Orientation and mobility programs are provided for students to move safely. Based on the results of the interviews it is known that SLB PGRI Sentolo teachers use a contextual approach in orientation and mobility learning. The contextual approach emphasizes the involvement of students and links the subject matter with a real-life context or an environmental context [7]. When viewed, this approach is suitable to be applied to mobility-oriented learning because it provides opportunities for students to be active in the learning process, as well as presenting material in accordance with real-life contexts. Students can better understand and master the material that have been being studied because it is related directly to everyday life. Based on the observation of the facts in the field, it was shown that students were still crashing when walking, had not used orientation and mobility techniques and were still often coupled by careful mentors when walking. This means that students have not been able to move places safely and independently. Five out of six research subjects did not use canes while performing mobility[8]. This condition illustrates that students have not been able to apply the lessons learned into everyday life.

The existence of this phenomenon requires further study on the implementation of contextual approach on orientation and mobility learning in SLB PGRI Sentolo. In addition, there is not much information that fully discloses the

application of a contextual approach to the learning of a special program of mobility orientation so this research is important to do. This research can also be used as a reflection for educators to improve and optimize the applied learning system. Therefore, this research is focused to produce a description of the application of contextual approach to the learning of special program of orientation and mobility on students with visual impairment in SLB PGRI Sentolo.

The rest of this paper is organized as follow: Section II describes the literature review. Section III describes the data used and proposed methodology. Section IV presents the obtained results and following by discussion. Finally, Section 5 concludes this work.

## II. LITERATURE REVIEW

### A. *Orientation and Mobility Program for visual impairment Students*

Visual impairment is a condition of loss of part or all their visual abilities. A student is stated visual impairment if they require special tools, special methods or special techniques to be able to learn without vision or with limited vision [9]. There are two types of visual students who do not have residual vision (blind) and still have residual vision (low vision). Visual impairment students use touching and hearing to learn [1].

Orientation and mobility consist of two interconnected terms. Orientation is the process of using the senses that still function to know the cues and objects in the environment, while mobility is the ability to move places [10]. This skill should be owned by a visual impairment person so that a visual impairment person gets this special program to be able to move independently. The main purpose of this program is to make a visual impairment person walk safely and independently at a high level [11]. Cmar found that a highly oriented and high mobility visual impairment such as traveling outdoors, using public transport and using trains independently can significantly earn work after school [12]. If these skills are not mastered, then visual impairment students will look stiff and depend on others.

The orientation and mobility programming are based on the results of the needs assessment and the ability of the students. The implementation of this program is more flexible and in accordance with the needs of students. In the learning process there are several principles that need to be considered is doing, concrete, integrated and focused on the students [6]. These principles should be applied in the learning process.

The principle of pragmatism can be applied to the orientation and mobility of the visually impaired the practical life benefits that can be applied to cognitive processes or knowledge to familiarize themselves with the environment with respect to terrain features, signs, numbering systems, measurements and directions wind [13]. A teacher did not adjust lesson plans with visual impairment characteristics, and rarely used media on orientation and mobility learning [14]. This research has similarities with research that will be done that is related to learning orientation and mobility and have the same type of research that is descriptive type. In the research that will be done

more specific on the application of contextual approach. The direct learning has a significant effect on improving the orientation and mobility of students with visual impairment [15]. This study proves that the direct learning model influences the improvement of orientation and mobility while the researcher will review the application of contextual approach.

### B. *Contextual Approach*

Contextual approach is a learning concept that helps teachers to present real conditions in the learning process so that they can encourage students to connect their knowledge with their daily life [16]. Learning with a contextual approach is designed so that students can gain hands-on experience so that learning is expected to be more meaningful for students. The contextual approach consists of seven components, namely constructivism, inquiry, asking, learning society, modeling, authentic reflection and assessment [17]. The seven components can be studied as follows: (1) constructivism, the process of building students' knowledge to be actively involved in the learning process, (2) Inquiry, the process of finding their own knowledge and skills, (3) asking questions, stimulating students to raise questions, (4) learning, co-operation with others to solve problems, (5) modeling, modeling that can be replicated, (6) reflection, recalling knowledge and skills learned, (7) Authentic assessment, assessment includes cognitive, affective and psychomotor aspects. In this research will be examined the application of this contextual approach in the process of orientation and mobility learning.

## III. MATERIAL & METHODOLOGY

This research is descriptive with qualitative approach. The research was conducted at SLB PGRI Sentolo, because this school provides educational services for students with visual impairment. The purpose of this study is to obtain a description of the implementation of contextual approach in orientation and mobility learning in SLB PGRI Sentolo. The study was conducted for four weeks in April 2018. The data was collected every Saturday because the orientation and mobility-specific program learning was conducted on that day.

The study involved a teacher of mobility orientation and visual impairment students. The teacher who teaches this mobility orientation is 57 years old woman. The teachers graduated on stratum 1 of extraordinary education and take the concentration of the visual impairment. The teacher is a civil servant and has been teaching in an Extraordinary School (SLB) for 21 years since November 1996. Participants are selected because the teacher teaches orientation and mobility in visual impairment students.

Data collection techniques used are observation, interview and documentation. In this study, nonparticipant observation was done so that the researcher only observed various activities conducted by teachers and students on the orientation and mobility orientation program. The researchers recorded important information from descriptive observations. Interviews were conducted to teacher orientation and mobility. Interviews were conducted by

asking questions based on interview guidelines. Documentation is done by reviewing documents such as the Lesson Plans.

Data were analyzed descriptively qualitative. Data analysis is done by data analysis' step according to Sugiyono consist of reduction, display data, and conclusion drawing / verification [18]. Data reduction is done by sorting data from interviews, observation and documentation in accordance with research questions. The presentation of data is done in narrative form. The conclusion is done by classifying the data analyzed in accordance with the research questions and giving meaning.

#### IV. RESULTS AND DISCUSSION

This section presents the results obtained and the following by discussion.

##### A. Result

Orientation and mobility learning are given to students with visual impairment. This research was conducted at SLB PGRI Sentolo. The study was conducted for four months every Saturday. The results showed about the implementation of contextual approach in orientation and mobility learning. Learning orientation and mobility are given from simple to complex and consider individual needs. Program preparation begins with the assessment. As a result, it is known the abilities and needs of students. This data is the base for the preparation of the program for students.

At Sentolo SLB PGRI, teachers use various approaches, methods and strategies to support the learning process. Contextual approach is one approach used by teachers. The application of contextual approaches to learning consists of the stages of planning, implementation to evaluation. Each stage is divided into several small steps. Following is the implementation of each of these stages, namely:

##### B. Planning Phase

Orientation and mobility learning at SLB PGRI Sentolo begins with planning. The planning stage consists of three steps, namely:

##### a) Assessment's Implementation

The planning phase begins with an assessment to find out the abilities, strengths and weaknesses of visual impairment students. Assessments include knowledge of body image, motor skills, cognitive aspects, and sensory aspects. Assessment is done by observation and interview on the parent. Assessment is carried out in conjunction with the implementation of the lesson, so the teacher does not devote special time to the assessment. The results of this assessment form the basis for teachers to design appropriate learning for students. Teachers do not document the assessment results so that no file relates to the students' assessment results.

##### b) Arranging the syllabus

Assessment results form the basis of goal setting and the orientation of mobility orientation programs for students. The teacher prepares the syllabus and the lesson plan. The

syllabus was prepared at the beginning of the new school year. This syllabus is prepared in accordance with the 2013 curriculum which refers to core competencies and basic competencies. The components of the syllabus consist of the names of schools, subjects, semesters, core competencies, basic competencies, learning materials, learning steps, achievement indicators, assessment, time allocation and learning resources.

##### c) Arranging a Lesson Plan

The lesson plan's goals are to make the learning time being more directed and to set the clearer stance. One lesson plan can include learning materials that are held in several meetings. The lesson plan component consists of the name of the school, class or semester, subject, time allocation, core competencies, basic competencies, learning objectives, learning materials, learning methods, learning steps, learning resources and assessment. Lesson plan that arranged by teachers is only an outline.

In lesson plan, the learning material includes the technique of pre-long cane that is traveling by self-protecting technique in the environment consist of upper hand crossing technique, lower hand crossing technique, trailing technique, perpendicular to the object technique (squaring off) and looking for falling objects technique. Learning media prepared in the form of objects such as chairs, tables, and objects around. Assessment is planned with a type of practice test.

In the learning steps, the lesson plan reflected the implementation of contextual approach. The teacher designed the constructivism stage by asking the previous material and asking how the student walked into the school environment without a cane to know the student's early skills. The questioning phase is designed with the student asked to make a list of questions about the pre-long cane technique. The inquiry phase is designed with observing activities, filling allegations and concluding about protected body parts and how to protect such body parts when using pre-long cane techniques. The learning community phase is designed by guiding students to conduct joint discussions on pre-long cane techniques. The modeling phase is designed with the teacher giving an example of how to use the pre-long cane technique. The authentic assessment phase is designed with students being asked to answer short questions and being asked to practice pre-long cane techniques. At the phase of reflection, students are asked to pretend and to remember the lesson that they have learned.

##### d) Implementation Phase

Orientation and mobility learning at SLB PGRI Sentolo was followed by one student with visual impairment grade IV elementary school. In the implementation activities of teachers trying to implement lesson plans that has been designed. The learning activity begins with the teacher saying hello and greets the students. Teachers put students to focus in following learning. Implementation of learning is done based on contextual approach that has been designed in lesson plan. The teacher asks the material learned at the previous meeting and the teacher asks the way the student walks around the school without a long cane

(constructivism). These questions lead to an interaction between teachers and students. The next phase the teacher asks the students to make a list of questions about the knowledge you want to know, but the students are just silent and difficult to make a list of questions (questioning). Teachers try to provide stimulus so that students can ask questions. Students can only ask one question after being given help by the teacher. Teachers answer questions asked by students.

The teacher invites students to observe, file allegations and conclusions about which organs should be protected when walking without using a long cane (inquiry). Students can do these activities with teacher guidance. The teacher directs students to discuss how to walk without a long cane (learning community). Students tend to be passive and teachers always actively provide stimulus for discussion. The teacher gives examples of the use of long cane techniques by means of student asked to feel the position and movement of the teacher (modeling). Students are asked to imitate with teacher guidance. At the end of the learning the teacher assesses by providing essay and practice test (authentic assessment). Students are asked to do the question and practice the long cane technique. Before the learning activities are ended, the teacher invites the students to reflect, recall and record the material that has been studied (reflection).

#### *e) Evaluation Phase*

Evaluation phase, teachers evaluate the successful implementation of learning and the ability of students. The success of learning is evaluated by reflecting on the planning and implementation of learning. Evaluate the ability of students is implemented when the learning process and at the end of learning. Aspects that are evaluated include the ability of students in following the learning process and the ability of students in answering questions given by teachers. The ability of students is evaluated through verbal and written tests and performance tests. Teachers do not have written assessment guidelines on assessed aspects and no scoring criteria. Teachers evaluate only by comparing differences in students' ability before learning and after learning.

#### *C. Discussion*

Orientation and mobility can help a visually impaired person know his or her position and move. SLB PGRI Sentolo provides orientation and mobility learning for students with visual impairment. Learning process at SLB PGRI Sentolo begins with the preparation, implementation and evaluation of learning, this is in line with Ambarita that the learning process begins with the planning, implementation and evaluation [19]. Mobility orientation program is individualized, so it must be tailored to the needs of students. In the preparatory phase the teacher first assesses the ability and needs of students' orientation and mobility. This is in line with Mumpuniarti's opinion that program design developed with an individual approach conducted through the assessment [20]. Assessment results are used as the basis for programming, but the results of these assessments are not documented by teachers. Though

documentation of assessment results is very important because this document can be used by teachers or other experts as a reference to know the condition of students.

The teacher designed the syllabus in accordance with the current curriculum of curriculum 2013. Syllabus became the basis for teachers to develop lesson plan. Lesson plan components arrange by teachers outline consist of the name of school, class or semester, subject, time allocation, core competency, basic competence, learning objectives, learning materials, learning methods, learning steps, learning resources and assessment. The lesson plan has not been described in detail but has been in line with the lesson plan coverage based on *PERMENDIKBUD* number 81 A of 2013 on the implementation of the general instruction guidance curriculum which explains the first phase of learning according to the standard process of designing lesson plan with reference to syllabus, lesson plan covering school data, subjects, classes or semesters, materials, methods, media, learning steps and assessment [21]. Learning materials include pre-long cane techniques. Learning media prepared in the form of objects such as tables, chairs and objects around. Assessment is planned with a type of practice test.

At the phase of the implementation of the orientation of mobility learning begins with the teacher opens the learning by saying greetings and greeting students. Teachers condition students to focus on learning. This is relevant to Majid's opinion explaining that preliminary activities are conducted to motivate, focus and know what the child has learned about the material being studied [22]. Activity motivates and focuses the teacher's consistent attention on preliminary activities.

In this learning the teacher uses a contextual approach. The constructivism component is designed and implemented in a way the teacher asks the previous material and asks how the student walks in the school environment without a cane to know the student's early skills. This is in line with Nurhadi which suggests that the constructivism component is done by packing learning into the process of "constructing" rather than "receiving" knowledge so that students build their own knowledge through active involvement in the learning process [23].

The questioning component is done to gain information, check understanding, generate response, know curiosity, focus attention, guide to conclude something [24]. This contradicts the facts of the field, the teacher designs the students to make a list of questions about pre-long cane techniques, but in the implementation of the students just silent and difficult to make a list of questions so that teachers try to provide stimulus so that students can ask questions. Provision of appropriate stimulus is important to encourage students to raise questions. Questioning activity can assess students' thinking ability. The ability to ask students should continue to be developed to train students to think critically.

An inquiry or finding component is designed and executed by observing, suggesting and concluding the organs that must be protected when walking without a cane, but in practice the student still needs teacher guidance. This is in line with Sanjaya which suggests that the process of inquiry is done by formulating problems, observing,

gathering information, testing hypotheses, and making conclusions [24]. Inquiry activities will help students find their own knowledge and skills so that learning will be more meaningful for students.

Components of learning communities designed by guiding students to joint discussions on pre-long cane techniques, instead students tend to be passive and teachers are always active to stimulate the discussion. Learning outcomes are come from cooperation with others such as sharing among groups [23]. Teachers have tried to apply the components of the learning community but in the execution, students tend to be passive. The teachers can make efforts by designing an interesting learning community environment so that students have an interest to engage in activities. Learning community activities can be done outside the classroom, such as working with "experts" or professions, working with class groups on it and working with the community.

The modeling component is designed and implemented by teachers giving examples of how to use pre-long cane techniques and students to imitate, but in the implementation the students still need guidance to imitate. Modeling means giving a model that can be imitated [23]. This means the teacher is appropriate in applying the modeling component. In visual impairment students need special handling in mimicking. This is done to provide accommodation to the students.

The authentic assessment component is designed and executed. The student is asked to answer the short questionnaire and to practice the pre-long cane technique. Assessment is done on all aspects namely cognitive, affective and psychomotor to describe the learning's development of the students [24]. The teachers only conduct assessments on the cognitive and psychomotor aspects but have not done an attitude assessment. This indicates that the assessment can't be said to be an authentic assessment because it has not assessed the overall aspect of the assessment.

The reflection component is designed and implemented by teachers to invite students to reflect, recall and record the material that has been studied. The reflection component is done by precipitating what it just learned as a new knowledge structure, which is an enrichment or revision of previous knowledge [23]. The teachers are appropriate in performing reflection activities, but on reflection activities teachers should help students connect newly acquired knowledge with prior knowledge.

At the evaluation phase, teachers evaluate the success of learning and the ability of students. Evaluate the ability of students is implemented when the learning process and at the end of learning. It means that the teachers have conducted a formative evaluation, this is in line with Sudijono explains that formative evaluation carried out in the middle of learning or when learning takes place, carried out in each unit of learning or sub-topic able to be completed to know the achievement of learning objectives [25]. Aspects that are evaluated include the ability of students in following the learning process and the ability of students in answering questions given by teachers. The ability of students is evaluated through verbal or written test

and deed test. Teachers do not have written assessment guidelines on assessed aspects and no scoring criteria. Teachers evaluate only by comparing differences in students' ability before and after learning.

The findings of this study indicate that learning of orientation and mobility in schools has been implemented. The teachers are use a contextual approach to design orientation and mobility learning. Phases of learning include the planning phase, the implementation phase and the evaluation phase. The seven components of the contextual approach have been implemented but there are still some aspects that require improvement such as providing stimuli to generate the curiosity, providing guidance when conducting the inquiry activities, designing an interesting learning community environment so that students have an interest to engage in activities, conduct a thorough authentic assessment includes affective, cognitive and psychomotor and helps students connect newly acquired knowledge with prior knowledge to reflection activities. The results of this study become important to provide an overview of the implementation of contextual approach in orientation and mobility learning and can be used as a means of evaluation of mobility orientation learning. Subsequent research can make intervention efforts to improve the quality of learning in the preparation phase, phase of implementation or evaluation phase. Subsequent research can make innovations on learning approaches, media, teaching materials, materials, assessment.

## V. CONCLUSION

Based on the results of research and discussion can be concluded that the learning orientation and mobility begins with the planning phase, implementation phase and evaluation phase. Preparation is done by conducting assessment, preparing syllabus and preparing lesson plan. The teachers have applied a contextual approach in orientation and mobility learning. There are seven components applied: constructivism, questioning, inquiry, learning community, modeling, authentic assessment and reflection. These seven components have been applied, but there are some components that need improvement such as: (1) on the component questioning students are still passive and difficulty in asking questions, (2) on the inquiry components of students still need guidance from teachers, (3) on the learning community components of students are still passive in doing activities, (4) on the authentic assessment component, teachers has not conducted a stance assessment so the assessment has not been comprehensive, (5) on the reflection component, the teacher has not helped the student connect the newly acquired knowledge with prior knowledge.

At the evaluation phase, the teacher conducts a formative evaluation conducted on the learning process and after learning. Evaluation is done by written or oral test and practice test. Recommendation for subsequent research is to make intervention effort by applying contextual approach in accordance with the condition of students to improve the quality of learning in the preparation phase, implementation phase or evaluation phase. Further research can make

innovations on learning approaches, media, teaching materials, materials, assessment.

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