THEORY CONTRIBUTION OF THORNDIKE'S THEORY IN LEARNING BASIC BRAILLE ALPHABET FOR STUDENTS WITH VISUAL IMPAIRMENTS IN SLB

Misbahul Arifin[1*], Sunardi[2]

[1]Universitas Sebelas Maret, Indonesia
[2]Universitas Sebelas Maret, Indonesia

[*]Corresponding Email: misbahularifins3ip@student.uns.ac.id

Abstract

The development of paradigms in education has implications for practices that take place in almost all lines of education, both formal education institutions and informal education institutions, including in special schools. One of the lessons conducted in SLB is the teaching of Braille letters starting from basic Braille teaching, to expert level Braille. In its teaching, especially the teaching of basic Braille writing, tends to use repetition in its teaching. Repetition is intended to reinforce students with visual impairments in mastering the codes in Braille. In this article, the contribution of Thorndike's theory in teaching Braille alphabet letters to students with visual impairments will be explained. This research uses a qualitative descriptive method, with interview data collection techniques and analyzed descriptively. The results of the research that has been conducted show that Thorndike's Theory has a great contribution in teaching basic Braille letters for students with visual impairments because in teaching it uses repetition in writing the dot codes of the Braille alphabet letters. The repetition aims to make students with visual impairments master the dot codes in the Braille alphabet.

Keywords: Learning, Thorndike Learning Theory, Students with visual impairment

Abstrak

Perkembangan paradigma dalam pendidikan berimplikasi pada praktik yang berlangsung hampir disemua lini pendidikan baik lembaga pendidikan formal maupun lembaga pendidikan informal termasuk di SLB. Salah satu pembelajaran yang dilakukan di SLB adalah pengajaran huruf Braille dimulai dari pengajaran Braille dasar, sampai Braille tingkat ekspert. Dalam pengajarannya, khususnya pengajaran menulis Braille dasar, cenderung menggunakan pengulangan dalam pengajarannya. Pengulangan pengajaran dimaksudkan sebagai penguatan siswa dengan hambatan penglihatan dalam menguasai kode-kode dalam huruf Braille. Dalam artikel ini akan diberikan pemaparan mengenai kontribusi teori Thorndike dalam pengajaran huruf alfabet Braille kepada siswa dengan hambatan penglihatan. Penelitian ini menggunakan metode deskriptif kualitatif, dengan teknik pengumpulan data wawancara dan dianalisis secara deskriptif. Hasil penelitian yang telah dilakukan menunjukkan bahwa Teori Thorndike memiliki kontribusi yang besar dalam pengajaran huruf Braille dasar bagi siswa dengan hambatan penglihatan sebab dalam pengajarannya menggunakan pengulangan dalam menulis kode-kode titik huruf alfabet Braille. Pengulangan tersebut bertujuan agar siswa dengan hambatan penglihatan menguasai kode titik dalam huruf alfabet Braille

Kata kunci: Belajar, Teori Belajar Thorndike, Siswa dengan hambatan penglihatan

INTRODUCTION

Learning is a process that must be passed by every individual without exception. Learning plays an important role in human life, without us realizing it, in daily activities, every human being uses the knowledge he has to achieve the goals of the activities carried out. Learning can be done all the time, both in formal educational institutions such as schools and informal educational institutions such as home schooling. A person is said to have learned if he has experienced a change in behavior desired by

the environment

According to Slameto (2010: 2), learning is a process of effort by a person to obtain a new change in behavior as a whole, as a result of his own experience in interaction with his environment. The same thing was also expressed by Siregar (2014: 4) that learning is a process of changing behavior in individuals because of interactions between individuals and their environment so that they are better able to interact with their environment. Thoifuri (2013) describes learning as a process to gain knowledge, whether done by individuals, groups, or with teacher guidance so that behavior changes. The purpose of behavior is individual habits, both in the form of knowledge, attitudes, understanding, and skills. Pane and Darwis (2017) also say that learning is a process of changing behavior caused by interactions between individuals and their environment that are dynamic, functional, positive, active and directed continuously. Based on the understanding of learning that has been mentioned above, it can be concluded that learning is a process of change towards a better direction and is carried out continuously. Therefore, an effective learning method or theory is needed so that the learning objectives can be achieved optimally.

In the context of learning, students must be seen as a whole person, namely as a unified nature of individual beings and social beings, as a physical and spiritual entity, and as God's creatures. By looking at these characteristics and characteristics, in essence every human being is a person or individual who is whole, cannot be divided, cannot be separated and is unique. This means that humans cannot be separated from their body and soul, spiritually and physically, the activities of the soul in daily life are the activities of the whole body and soul, not just the activities of the soul and vice versa. Being unique shows the characteristics that distinguish the individual from other individuals, that in this world no one is exactly the same. Thus students as individuals have different characteristics from other students (Sunarto, 2006:2).

Elementary school students are at the end of childhood which lasts from the age of 6 s.d. 12 years (Yusuf, 2014:23). Individuals who carry out learning activities are students, therefore in the process and learning activities students cannot be separated from their individual characteristics, abilities and behavior. The diversity of characteristics can be seen physically, personality and behavior such as speaking, acting, doing tasks, solving problems, etc. Of the various characteristics of students, the most important thing to understand by teachers is the diversity in abilities and personalities (Makmun, 2009:53). The existence of information about individual characteristics has implications for the learning process, namely learning must be adapted to the characteristics and abilities of students as individuals. The very important thing in carrying out the learning process is that the teacher creates conducive conditions so that each individual student can learn optimally, even though they are in a group. Thus in the learning process each individual requires different treatment, the strategies and implementation efforts will also be different.

One variety of students who are still considered different are students who experience obstacles in mobility, interaction and behavior disorders or what are commonly called students with special needs.

Students with special needs need learning methods and techniques that adapt to the needs of students with special needs with each variety. One student who is classified as having special needs is a child who is diagnosed with visual impairment or can be referred to as a visual sensory disability. Somantri (2006: 66) defines visual sensory disability as a person whose sense of sight is impaired or damaged so that his sense of sight cannot function normally. This definition is reinforced by the understanding according to Wardani et al (2007) that children who are visually impaired are children who have impairments or damage in their eyesight that hinders optimal learning achievement, unless adjustments are made in the approaches to presenting learning experiences, the properties of the material used. used, and or learning environment. Individuals with visual impairments have several adjustments in carrying out daily life, both in interactions and social life. Children with visual impairments have language barriers in terms of acquiring concepts. This can be understood when reviewing their language development at the beginning of language development, children with visual impairments reach the echolalia stage (mimicking.ed) like other children in general but after one year of age they are only able to imitate words without knowing the meaning of the words they speak (Triwiaty and Assjari, 2017). In addition, various obstacles that arise due to visual disturbances include difficulties in orientation and mobility, difficulty seeing objects in front of individuals to the inability to read and write, obstacles in carrying out social interactions, to carrying out daily activities (Brebahama and Listyandini, 2016).

Based on some of the expert opinions above, it can be concluded that there are some obstacles that are owned by individuals with visual impairments, in education such as barriers to understanding visual media, orientation and mobility barriers, barriers to non-verbal expression and social interaction. Obstacles caused by the loss of vision of students with visual impairments, do not reduce the cognitive abilities of students. In general, students with vision problems or those who are classified as blind have the same cognitive abilities as students who do not have vision problems. The thing that is different for students with visual impairments is that they usually require greater effort to understand the information they receive from the environment (Pradana and Aguwirara, 2022). Basically, the condition of the intelligence of students with visual impairments is no different from other children. If it is known that the intelligence condition of children with visual impairments is lower than children (watch out, see) in general this is caused by children with visual impairments experiencing perceptual barriers, thinking comprehensively in looking for causal sequences, even though their thinking processes are no different from other children. Generally knowledge or information that a person has is obtained through the senses; in this case the sense of sight occupies the most important role; the rest through other senses, namely touch, hearing, smell, and taste. Especially for children with visual impairments, the sense of sight is neglected, but the sense of touch is stronger. The process of entering information is not the same as that of a watchful child; only objects that can be felt, heard, smelled, and tasted that can be recognized by a child with a visual impairment. So that giving information to children with visual impairments does not go through sight but through other senses, maximizing the senses that are still there (Susanto, 2009).

Based on this opinion, students with visual impairments have the same cognitive level as other students, but require modifications in learning such as teaching media and teaching media abstractions. To accommodate the learning needs of students with visual impairments, especially at school, students with visual impairments are given the skills to write and read Braille. Badiah et al (2019) explained that the implementation of Braille learning in class always begins with (1) fine motor development exercises and tactual sensory training. This motor development exercise and tactual sensory training aims to train children's readiness to read and write Braille, (2) the learning method used by teachers when teaching early reading and writing uses a variety of methods, including the lecture method, drill method, demonstration method and other methods. question and answer. In choosing learning methods, teachers often use a variety of methods, using the accuracy of using learning methods with the characteristics of blind students.

METHOD

Based on the approach and type of data used, this research is included in qualitative research so that it will produce descriptive data in the form of words. Qualitative research is intended to collect information about the status of an existing phenomenon, namely the condition of the symptoms according to what they were at the time the research was conducted. While the respondents in this study were two SLB teachers who were selected by purposive sampling technique. The data collection technique uses interview techniques with question sheets that have been developed by researchers.

The analysis used in this study uses descriptive analysis. Based on the method in this study which uses a qualitative approach, the researcher also uses descriptive analysis to obtain interactive and credible data. Data in the form of words is processed into meaningful sentences so that the necessary information is obtained. In addition, the researcher also wants to describe in detail the contribution of Thorndike's theory in teaching Braille in SLB which has been carried out so far, and the researcher also describes the research results in detail in a descriptive form which hopes to be useful for special education providers such as special schools (SLB).

RESULTS AND DISCUSSION

Based on interviews conducted by researchers with two teachers in two special schools, several things were found, including:

Interview I. The teacher with the initials "S", revealed that "during my ten years of teaching the methods and techniques I have used in teaching the basic Braille alphabet to students with visual impairments are almost the same. The first step taken when students with visual impairments use a reglet and a stylus, a six-holed ruler and a paper awl used to write Braille, is to first introduce writing techniques. Because, if the ability to write has been achieved, then the ability to read will follow. Writing using a reglet and stylus teaches children to get to know letters and the location of dots on the Braille alphabet. With this method, the children themselves punch holes in the Braille dots on the paper

themselves. Even so, this technique still has weaknesses, namely, children become slow to read.

In addition to teaching reading and writing Braille letters using a reglet and stylus, teacher "S", also teaches Braille letters to read and write using a Braille typewriter. "Meanwhile teaching children to read while typing Braille letters via a Braille typewriter will be much faster. This is because children only press six points to form Braille letters. It's just that, the weakness of the technique of reading with a Braille typewriter is that the child never knows where the formations of the Braille dots are.

In teaching these two reading techniques, Teacher "S", usually uses singing. Teacher "S" added that one of the important factors for children's ability to read Braille letters is memory and practice. Children who diligently read Braille at home will be able to spell and understand words in a sentence more quickly.

Interview II. The teacher with the initials "M", gave answers in teaching reading and writing Braille letters, "when I teach reading and writing Braille, especially teaching basic Braille letters, I first give an overview of Braille letters. My students gave examples of letters of the Braille alphabet that had already been written. I gave them Braille stationery in the form of a reglet and stylus so that it would be an illustration for students with visual impairments about Braille letters.

After giving an overview of writing, writing tools, and how to write Braille, I still don't allow students with visual impairments to write as they please. I still always supervise and describe the words or sentences that students have to write. I did this to avoid students' spelling mistakes in certain words, such as words that have double letters and words that have letters that sound almost the same.

Apart from learning to use a stylus and reglet, I also teach students with visual impairments to be able to write using a Braille typewriter. It's just that writing Braille using a Braille typewriter aims to give flexibility to students with visual impairments in exploring the letters, words and sentences they have mastered, then they write using a Braille typewriter, as my evaluation in teaching the concept of Braille letter codes and words that have sounds the same word or words that have a double letter in their writing.

The method I have used in teaching students with visual impairments in writing Braille still has many shortcomings, such as the saturation level of students, so that in the middle of teaching Braille I have to give stories to students to increase student learning motivation and eliminate boredom in learning basic Braille . In addition, the use of monotonous media in conveying the concept of Braille letters sometimes raises questions for students to use other media in learning to write Braille letters.

Behavioristic theory is a theory that studies human behavior. The behavioral perspective focuses on the role of learning in explaining human behavior and occurs through stimuli based on (stimuli) that give rise to reactive behavior (responses) to mechanistic laws. The basic assumption regarding behavior according to this theory is that behavior is completely determined by rules, can be predicted, and can be determined (Rahyubi, 2012). According to this theory, people engage in certain behaviors because they have learned, through past experiences, to associate those behaviors with rewards. Stimulants are none other than the child's learning environment, both internal and external which are the causes of

learning. Meanwhile, the response is the result or impact, in the form of a physical reaction to stimulants (Muhibbinsyah, 2013).

Learning means strengthening bonds, associations, traits and behavioral tendencies S-R (Stimulus-Response). Behavioristic theory emphasizes environmental factors, emphasizes part factors, emphasizes visible behavior using objective methods, is mechanical and emphasizes the child's experience. One of the well-known figures in this theory is Edward Lee Thorndike.

Learning according to Thorndike. According to Thorndike's Learning Theory, changes in behavior as a result of learning activities can be concrete, namely those that can be observed, or non-concrete, namely those that cannot be observed. Stimulus is anything that can stimulate learning activities such as thoughts, feelings, or other things that can be captured through the senses.

Stimulus is a change from the external environment that becomes a sign to activate the organism. to react or do or respond is any behavior that arises because of a stimulus.

The hungry cat experiment that was put in a cage (puzzle box) found that in order to achieve a relationship between stimulus and response. There needs to be the ability to choose the right response and go through trials and failures beforehand. The most basic form of learning is "trial and error learning or selecting and connecting learning" and takes place according to certain laws.

Therefore, the learning theory put forward by Thorndike's Learning Theory is often referred to as connectionism learning theory or association theory. Thorndike's Learning Theory suggests that the occurrence of this association between stimulus and response follows the following laws:

1. The law of readiness, namely the more ready an organism is for a change in behavior. Then the implementation of these behaviors will lead to individual satisfaction so that associations tend to be strengthened.

2. The law of exercise, namely the more often a behavior is repeated/trained (used), the stronger the association will be.

3. The law of effect (law of effect), namely the stimulus-response relationship tends to be strengthened if the result is pleasant and tends to be weakened if the result is unsatisfactory.

In line with Thorndike, Nahar (2016) revealed that the essence of behaviorism is

1. Behaviorism focuses on observed learning events as indicated by stimulus and response relationships,

2. Learning always involves a change in behavior,

3. Mental processes should be excluded from the scientific study of learning,

4. The laws governing learning apply to all living things, including humans,

5. Living things begin life as a blank slate: no innate behavior,

6. Learning Outcomes from external events in the environment,

7. Behaviorism is a deterministic theory: the subject has no choice but to respond to appropriate stimuli.

Based on the results of interviews with two SLB teachers and discussion of Thorndike's learning theory, an analysis can be drawn that (1) Learning to write Braille requires a stimulus in describing what Braille is for students with visual impairments (especially for students learning basic Braille), so that students understand what it's Braille. (2) In learning to write Braille, the teacher must provide a lot of repetition and habituation for students with visual impairments to write letters, words and simple sentences, in learning basic Braille letters, until students with visual impairments master the dots (codes) in Braille letters. . (3) Learning to write basic Braille, using teaching methods that are not monotonous, students always write, but students must often be given practice writing words using Braille letters to be used as evaluations for the teacher, and when students are successful, the teacher can continue reading basic Braille.

Based on the results of this analysis, it can be concluded that Thorndike's Behavioristic Theory is very closely related to basic Braille teaching, especially in teaching Braille writing. This shows that there is a stimulus from the teacher before students write Braille letters using Braille letter dots so that students have an idea of Braille letters. Repetition in writing Braille is also highly emphasized in teaching writing Braille which aims to students with visual impairments mastering the alphabet letter codes in Braille well and students with visual impairments can minimize mistakes in writing words/sentences in Braille.

CONCLUSION

Based on the research background and the theories used, it can be concluded that Thorndike's Behavioristic theory is very influential in teaching basic Braille writing for students with visual impairments. Repetition of practice, and habituation will make students with visual impairments become accustomed to and know the alphabet letter codes in Braille. Through the existing Braille teaching methods in the results above, the researcher suggests improvements in similar research, and this research provides an opportunity for the development of digital-based teaching media in providing interactive and fun basic Braille teaching in class.

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