

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter will explain about theory and literature. It included the Theory of teaching strategy and also Theory of teaching strategy to student with special needs.

a. Theory of teaching strategy to student with special needs.

Watson defines learning as a process of interaction between stimulus and response, but the stimulus and response are intended to be observable and measurable. So although he acknowledges the mental changes in a person during the learning process, he considers them to be unnecessary because they can not be observed. Watson is a pure behaviorist, because his study of learning is aligned with other sciences such as physics or biology that are heavily oriented to empirical experience only, to what extent can be observed and measured..¹

Teaching is a proses transferring of knowledge or information built for the student from the teacher. Sometime some strategy will apply to make the teaching easier. In this point the researcher will discuss about the definition of teaching strategy and some Kind of teaching strategy.

¹ Wiliam crain, teori perkembangan. 271-272

1. Definition of Theory of teaching strategy to student with special needs.

Teaching student with disability is something special to do for some teacher according to J David Smith, he divided teaching strategy for student with special needed into two kinds. That is Educational needs for students with visual impairments and How to help students with visual impairments to succeed in inclusive (learning).

2. Kind Theory of teaching strategy to student with special needs.
 - 1) Educational needs for students with visual impairments

At some point in the educational experience, a child with visual impairment has a need that can only be met in places that are only very specialized such as boarding schools or special schools. Braille teaching for some students, for example, is best suited to those very places, while for other students, this teaching may be appropriate to be given by a special teacher of a regular general. For other students again, regular classes are common. For other students, regular classes with consultation may be most appropriate. The most important point is the selection of the best facilities that can meet the learning needs of students with vision deficiencies at their best development point.²

² Smith, J. D., (1998) *Inclusion, School For All Student*. Wadsworth publishing company.

a). Reading and writing braille.

According to the definition of education discussed in advance, students who are blind (totally blind) if they cannot read the letters-even in special circumstances even for these students, the ability to read and write through braille is important for communication and learning. Braille letters are a system that uses code in the form of a highlighted point to reveal letters, numbers and other symbols. This system is based on a six-dot cell with two horizontal and three vertical dots.

In general, blind students get an early recognition of braille at the first high, usually students with impaired [longer-control braille systems than normal students for reading ordinary letters. For braille reign bias always requires a slower process compared with ordinary letters, even students who have advanced using braille though, will read more slowly than the average normal letter reader.

In learning braille, students are taught to read by fingering through the finger nudge of one hand and to keep the page read vertically with the other hand they are guided to read in smooth motion, horizontal constant and reduce the vertical movement. Fingerprints of light finger and

softness are required to sense the pointed point configuration as the hand moves above the points. Expert readers sometimes use the index finger of both hands in reading.

Students learn to write using slate and pen (stylus) and Perkins braille. When wearing slate and stylus, the stylus is emphasized on the slate holes. Prominent points will form paper located between the folds of the slate.³

b). Keyboarding

Ability to use using a standard keyboard is a way for people with visual impairment can communicate in writing with others. This can be an important factor for the students' ability to follow in-class education with teachers and students who can see. Students with visual impairment are usually taught using the keyboard as early as possible, according to each student. The keyboard system is used as the main response model for home work tests and other schoolwork, when the braille letter cannot be used properly only one handwriting ability is emphasized on these students in making a signature.

³ Ibid.,

c). Counting tools

In mathematics, abacus has become an important tool for blind people to play the seeds of abacus, basic mathematical calculations can be performed and the result is in tactile form, which can be touched with the fingers. Now more commonly used is a small electronic calculator that provides input / entry and output (in the form of sound). People with visual impairment can monitor the accuracy of entry, also get calculator calculation results. This calculator can be used to facilitate calculations in higher heights.

d). Optacon

Optical-to-tactile converter (optacon) was developed by Stanford university electronics laboratory. This machine, which is the size of a small tape recorder, works to change the material printed in vibration patterns at the user's fingertips. Optacon consists of a camera with photosensitive elements associated with the 'password-praba' arrangement (tactile pin) corresponding to a particular letter. One letter that is addressed by the camera that will produce a certain vibration pattern that can be felt by palpating. The user puts the tip of his finger on the pin and will feel different vibrations as the camera moves over

each letter and word. This camera can 'see' fields around the size of a single letter at a time. To use optacon requires intensive requirements and training.

e). Kurzweil reading machine

Engineers and linguists about ten years in developing 'Kurszweil reading machine' this machine can read a book printed the results of the letters issued in the form of sound. When printed material is placed in an electronic scanner glass (scanner) and the machine is turned on by pressing a button, it will be sounded by an artificial sound reading it. When another button is pressed, a voice will be heard continuously repeating the word, phrase, paragraph several times, or spelling the specific word requested. As this machine continues to be modified and developed, its size and price will fade. The model was initially sold for \$ 50,000 but now its portable unit is only about twice the size of a suitcase costing about \$ 20,000. It is estimated that with increasing technology and production will result in dramatically lower prices.⁴

f). Voice book

Talking book has become a standard educational tool for people with visual impairment. This talk book program is

⁴ Baraga, N., and J. Erin. (1992). *Visual Handicaps and learning*, 3d ed Austin.

sponsored by library of congress books and magazines recorded on disk or cassette and distributed to people who experience visual impediment for free. These books are read by volunteers and can be heard in an average of 160-170 words per minute for fiction, and about 150 words per minute for nonfiction. Upon request, a qualified individual may order a recording of a book.

g). Technology computer

Advances in computer technology have had a positive impact on the education of students with visual impairments. Available software can display large letters in the monitor, then print a final copy of this standard size allowing students with weak visibility to create and do tasks that can be read and assessed by regular classroom teachers as well as computer systems that can take input-inputs, both in braille and ordinary letters, which produce output in both forms.

This system will enable people with visual impairments to follow the educational process more effectively in inclusive classes. There is also hardware and software computer that can sound read, both written in braille and print. Such technology is expanding rapidly and will

continue to open new learning opportunities for stunted student students.

h). Orientation and mobility training

Students with visual impairment often experience delays in movement within their environment. In order for them to be independent at home, in school, and in the community, students should be able to recognize the surrounding atmosphere and the relationship to it-the student's orientation needs to also move safely and effectively in the loop-the mobility.

2) How to help students with visual impairments to succeed in inclusive (learning).

With the growing commitment to place students with visual impediments to more inclusive places, classroom teachers need to find ways to meet the needs of students with visual impairment. Working with students with barriers for the first time can create questions and concerns even for experienced and dedicated teachers. The main principle for the teacher to engage in this situation should be remembered that, as previously noted, students with and without visual impairment have similarities rather than differences. They have the same basic needs, usually every fear or negative feeling in the teacher who will handle

these students will gradually fade when he knows the student's ability and ability.

The overall objective of the student's education is to experience many visual barriers to their students. The key to teaching these students in the public classroom seems to be done by optimizing teaching, encouraging self-veilace and self-reliance.⁵ It is important to remember that these students are not a homogeneous group, but their commonalities are diminished vision or impairment. Some suggestions that may be useful for classroom teachers who will deal with those with vision problems for the first time are published.

a) Utilize the rest of vision

Students who still have partial vision should be encouraged and taught the best way to take advantage of the remaining vision. The main academic objective for these students is to read a printed book, because the degree of loss of vision is very different among these students who are considered partly functional. The needs of each individual must be carefully assessed so that the chosen development, teaching strategies, and teaching aids will be sufficient. The most commonly used ways to make it easier

⁵ Ibid,

to read a print book are to adjust the light, change the font size, and use the magnifying tool.

b) Adjustment of lighting

Sufficient light systems become important for the success of students who experience visual impairments in class, both light intensity and the type of lighting should be taken into account. Some students can see better even though the light intensity is reduced. Other students may need special lights on their benches. blinding light can be a major difficulty, it can be reduced with customized desktop and special shielding, as well as the proper arrangement of the cradle. Wear should not be slippery and glowing. Students must sit in a place away from disturbance of light.

c) Use a large print book

Material made in capital letters can be useful for students with visual impairments. The most popular size is the 18 point type. Larger prints are available to students in need. Large print letters are also useful for adults who experience visual decline due to age factor, cannot read smaller letters effectively. Some newspapers and magazines are available in large prints. American writing printing house for the blind and some other publications make learning materials with large print letters.

d) Magnifier

Optical magnifier helps students with visual difficulties. special glasses and hand magnifiers are often used to enlarge ordinary letters. Sometimes telescoping devices are used to help these students read from the blackboard. Closed circuit television systems are available and can show an ordinary letter enlargement on the TV screen. Students who have vestiges of vision often do not realize how useful the visuals are still in them. Teachers need to be sensitive-even to be sensitive-to this issue. Through training and assistance, this side can learn by optimizing their visioning function.

In the past the attitude of nominees often forbade people with visual impairments to become self-reliant as part of the community. Social attitudes towards people with visual limitations need to be uplifted by the current social climate. It seems to provide a greater opportunity for community participation for people who are totally blind and under-aggregate. Teachers who understand the needs and potential of these students will make this happiness materialized.