



Analysis of Difficulties and Strategies in Learning of Visually Impaired Students in West Kalimantan

Venny Karolina*, Yusawinur Barella, Hadi Wiyono, Khairunnisa,
Daud Fiqo Ghafika

Teacher Training Faculty, Tanjungpura University, Indonesia

* Corresponding Author. E-mail: vennykarolina@fkip.untan.ac.id

Receive: 05/08/2021

Accepted: 21/12/2021

Published: 01/03/2022

Abstrak

Penelitian ini mengeksplorasi strategi dan kesulitan belajar siswa tunanetra. Penelitian ini melibatkan empat siswa tunanetra di Pontianak, Provinsi Kalimantan Barat. Peneliti mengumpulkan data melalui wawancara semi terstruktur. Pendekatan kualitatif digunakan dalam penelitian ini. Empat mahasiswa informan mengikuti penelitian ini. Semua informan bersekolah di tingkat pendidikan menengah. Para peneliti mengkodekan transkripsi wawancara. Hasil penelitian menunjukkan bahwa siswa tunanetra lebih suka menggunakan sumber belajar auditori dan strategi pembelajaran aktif. Mereka menganggap kedua strategi pembelajaran tersebut penting untuk membantu mereka memahami materi pembelajaran. Selain itu, informan siswa juga menyatakan bahwa pemahaman bacaan, efikasi diri dan kepercayaan diri mereka rendah. Ide-ide ini dapat memfasilitasi pendidik untuk memahami apa yang dibutuhkan siswa tunanetra dalam pembelajaran mereka dan membantu pendidik mengakomodasi pengajaran mereka sesuai dengan kebutuhan siswa tunanetra.

Kata Kunci: *murid tuna netra, strategi belajar, kesulitan dalam pembelajaran, pembelajaran aktif*

Abstract

This study explored the learning strategies and difficulties of visually impaired students. The study involved four students with visual impairment in Pontianak, West Kalimantan Province. The researchers collected data through semi-structured interviews. A qualitative approach was employed in this study. Four informant students took part in this study. All of them were in their secondary education level. The researchers coded the transcription of the interviews. The results showed that visually impaired students preferred to use auditory learning resources and active learning strategies. They perceived these two learning strategies as essential to help them understand the learning materials. Besides, the informant students also claimed that their reading comprehension, self-efficacy and confidence were low. These ideas may facilitate educators to understand what visually impaired students need in their learning and help educators accommodate their teaching in line with what blind students require.

Keywords: *visually-impaired students, learning strategies, learning difficulties, active learning*

Pendahuluan

Visual impairment is defined as a state in which a person does not see, and this condition cannot be remedied (Naipal & Rampersad, 2018). Visual impairment may cause restriction of someone in moving around and controlling; this might lead to feeling isolated and depressed (Ishtiaq et al., 2016). Moreover, blind individuals might suffer from

inferiority, anxiety and depression because of their incapacity compared to healthy people (Ishtiaq et al., 2016). Students with visual impairment will struggle to learn as they have no access to a reading. Although Braille may help them, still they might find difficulties as blind learners have no access to images that may enhance their comprehension of material learnt (Godfrey & Loots, 2015). In 2018, 3,800

Indonesian students were visually impaired (Lokadata, 2018).

Visually-impaired learners may apply specific learning strategies to comply with their incapacity to catch up with their learning like other students. A case study held in Ponorogo mentioned that visually impaired learners apply specific learning strategies (Galerin, Indriastuti, & Mustikawati, 2021), such as memory, affective, and metacognitive and auditory strategies. Moreover, it is suggested that blind learners can focus on their hearing capacity despite their visual ability. Susanto & Nanda (2018) indicated that visually impaired learners could achieve their learning potential if educators can use their hearing capacity and work with peers to achieve learning targets. Therefore, auditory learning strategies and working with others can be emphasized during visually impaired students' learning.

A learning strategy is defined as procedures individuals set to complete the learning tasks (Hecwitt, 2008). Furthermore, learning strategies are not merely about learning skills; instead, they are related to purposeful and goal-oriented attempts in learning (Hecwitt, 2008). Past researchers offered some learning strategies that students can apply. First is the active learning strategy (Gleason et al., 2011) covering students' engagement to the learning environment or called a student-centred approach. Active learning is the application of knowledge, skills, and attitudes. Active learning is not about rote memorization; instead, this learning strategy focuses on students' understanding of information to retain what they have learnt (Gleason et al., 2011).

Active learning strategies include cooperative learning, problem-based learning, team-based learning, and case-based learning. In addition, learning strategies may cover cognitive learning strategies, behavioural learning strategies, and self-regulatory strategies (Hewitt, 2008). Cognitive learning strategies include rehearsal, in which students learn the materials by repetition. This organization covers the procedure to identify critical material issues and elaboration that provides for examining implications and making connections. Meanwhile, behavioural learning strategies cover strategies to seek help or get assistance from other people, help-seeking from written materials, such as books and the internet, and learners' ability to practice what has been learnt. Lastly, self-regulatory strategies cover emotion control (tackling anxiety),

maintaining motivation and monitoring comprehension (Hewitt, 2008).

Visually-impaired learners may apply specific strategies to succeed in their learning. This research explored the learning strategies of visually impaired students of Panti Rahmah in Pontianak. Such exploration has not been investigated yet in this context; therefore, this researcher intended to fill the gap. This research covered the following research questions: what learning strategies visually impaired students used and the difficulties during their learning.

Methodology

This study employed a qualitative approach. The researchers collected data through interviews. An interview is an interchange of ideas or opinions concerning a specific topic. Through interviews, qualitative researchers see human interactions as the centre of knowledge (Cohen, Manion, & Morrison, 2007). These researchers developed interview questions derived from learning strategies theories from past researchers (Galerin et al., 2021; Hecwitt, 2008; Susanto & Nanda, 2018). There were four students interviewed in this study. The visually impaired students interviewed in this study stayed at Panti Rahmah Tuna Netra Pontianak, West Kalimantan Province. The students were in the first year of Junior high school (2 students) and the second year of senior high school (2 students).

Before interviewing the students, the researchers have received consent from parents and teachers as students' gatekeepers. The researchers also obtained permission from informant students. The study employed semi-structured interviews. This kind of interview excels on the structure of discussion for the interview, but it should not be strictly followed (Kallio et al., 2016). Furthermore, a semi-structured interview allows the reciprocity between interviewers and informants and the chance for interviewers to create the follow-up questions responding to the informant responses (Kallio et al., 2016), which allows space for participants' verbal responses. The results of the interviews were recorded and then transcribed. Moreover, the transcription was coded. The researchers grouped visually impaired students' learning strategies using past researchers' ideas (Galerin et al., 2021; Hecwitt, 2008; Susanto & Nanda, 2018). The researchers used a pseudonym in this report to protect participants' privacy.

Findings and discussions

This study revealed that visually impaired students in Panti Rahmah Pontianak used two similar learning strategies. Firstly, students realized their visual constraints should not impede their dreams to succeed in their learning. They claimed they could rely on their auditory skills and focus on their knowledge through audio resources. The students mentioned that videos are useful to support their learning and motivate them to learn. Carissa (16 years old) claimed, *"I cannot see anything; I learn many things through the reading book using Braille printings. However, listening explanation using audio resources is easier to understand the learning materials. I can imagine how it is like through verbal description. I love listening to Kick Andy tv show; the host and the guests give us hope. I can succeed in my life despite my constraints. I cannot see, but my brain and effort will help me achieve my dreams. I will not end being a massager; I will be an English teacher"*.

This is in line with Lahav et al.'s (2018) study, which explained that without vision, visually impaired students rely on their auditory senses to gather information to accomplish their learning goals. In line with this, Susanto & Nanda (2018) also supported that the hearing capacity of visually impaired students can help them understand the information of learning materials. Therefore, teachers who work with blind students might open their access to learning by integrating auditory learning resources so that blind students can incorporate in their classes well in mixed classes. In this way, visually impaired students can also accomplish their tasks like other peers with sight (Klingenberg, Fosse, & Augestad, 2012).

The second idea that mainly was revealed from informants was the active learning strategy. Three informants mentioned that they felt they mastered the learning materials as they practised through active learning, which made them understand easier. One of the informants, called Eko (15 years old), suggested that *"when I listen to teacher explanation, I understand it, but I need to practice it on my own. Practising what I have learnt makes me remember and understand what has been told to me. I practised with friends, which made me understand the details of the material learnt. Also, when I communicate with my friends, the information sticks in my mind easily. So, I love to communicate with friends to discuss what we have learnt; it is like*

bringing me to the other world in which I am like an expert ha ha ha (laughing)". It aligns with Gleason et al.'s (2011) idea that student engagement during learning is significant to improving students' retention. Students' active learning in which students become the centre of learning gives students a chance to practice their knowledge. In this way, students actively participate in their education and improve their understanding. Besides, cooperation among students during their active learning is prominent. Concerning cooperative learning, Bandura (1999) through his Social Cognitive Learning Theory suggested that people learn through interactions in a social context. Bandura (1999) further claimed that learners might gain self-efficacy in learning through action and experience. The experience can be achieved through interactions, actions and behaviours practising what has been learnt with their peers or teachers. The experience may improve students' self-efficacy of positive perception on their capability to achieve goals in their learning.

About the second research question, the informants suggested that they have difficulties reading comprehension. Although Braille has facilitated them in learning, the informant students still find it hard to understand materials. They further claimed that typical students get advantages from visions and pictures that might reinforce their reading understanding. Eka (13 years old) said that *"my mom described a picture on the book to help me understand the book's content. If I could see, I am sure that I would better understand learning materials, such as biology lessons that discuss living things. I imagine it through my mom's description. I once visited a printing centre for the blind in Bandung. It was so impressive. It is a big and spacious place for blind people. I never saw it, but my mom described the place in detail. Therefore, although I think that having lack of vision leads me to the difficulties to understand reading materials, description from other people is essential to enhance my understanding toward something"*. It was reported that there was a gap in reading rate between Braille readers and printing readers (Nannemann et al., 2017). Printing readers can read two times quicker than Braille readers. The challenge lies in perceptual span or the number of symbols that can be perceived to understand the reading. It is claimed that printing readers can have a width of 14 to 16 perceptual spans (Savaiano, Compton, &

Hatton., 2014). Having limited access to reading span may lead to blind learners' difficulties to understand their reading materials. It is also suggested that Braille readers used sounded words, which might help learners use their listening capability to understand printing words and have quicker reading rates (Nannemann et al., 2017).

The second difficulty in learning is their low access to self-efficacy and confidence. Informant students in this study perceived that their capabilities are lower than their peers. They also conveyed that they might have little chance to compete in the university entrance test as they felt that their subject accomplishment is low compared to other students. They recognized their cognitive capabilities much lower than their peers with their vision capability. Lia (14 years old) claimed, "*I work hard to understand reading passages, particularly science books. Science book offers pictures, and I could not see them. I knew it from my mom when she described it. I think science is only for those who have no sight problem. I think that science is not for us as it is very hard. My friends without visual impairment mostly have high scores in science. I think I will never have a good score in science*". In line with this research finding, Farrand, Wild, & Hilsen (2016) claimed that visually impaired students had lowered self-efficacy, particularly self-efficacy to science. Narsimulu (2016) also found that visually impaired students had lower self-efficacy than students with no visual impairment.

Conclusion

This qualitative study employed interviews with four visually impaired students in Pontianak, West Kalimantan province. The study found that students preferred to use auditory resources for their learning and student-centred learning activities to practice their knowledge with their peers. This study also noticed that visually impaired students have difficulties in reading comprehension and have low self-efficacy in learning, particularly in learning science. This study contributed to practical implications for educators to adjust their teaching strategies in line with learning strategies that they felt more comfortable in learning, such as providing auditory resources as complimentary for improving the understanding of visually impaired students. It is also suggested that educators create learning tasks that involve students' participation so that blind students can experience their learning, which might

improve their knowledge and comprehension. This study only involved four students in secondary schools. The researchers suggested that future research also allowed visually impaired primary school students to voice their learning strategies and learning difficulties. Their learning strategies and problems might differ from those of secondary students due to their younger age.

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Daud Fiqo Ghafika is a student of social studies education at Teacher Training Faculty, Tanjungpura University. He is in his third year at university. His research interest covers education related to social studies and students' evaluation in learning.

Profil Penulis

Venny Karolina is a lecturer at Teacher Training Faculty, Tanjungpura University. Her research interest includes English Language Teaching, Assessment, and Psychology in Education.

Yusawinur Barella is a lecturer at Teacher Training Faculty, Tanjungpura University. She feels interested in research dealing with professional development among English teachers and intensive reading for EFL learners.

Hadi Wiyono is a lecturer at Teacher Training Faculty, Tanjungpura University. He is interested in conducting research in line with social studies and assessment.

Khairunnisa is a student of social studies education at Teacher Training Faculty, Tanjungpura University. She is in her third year at university. Her research interests cover social studies education.

