

The Implementation of Background Music and Inquiry-Based Learning (IBL) Model to Improve Students' Acivities and Learning Outcomes

Putri Yanuarita Sutikno, Novi Setyasto, Bayu Wijayama

Abstract: Based on the results of a preliminary study in Sadeng 03 Elementary School in Semarang, problems were found in social studies learning in class V. Students found it difficult to memorize the historical actors, places and time of events so that student learning outcomes were low and they were less active in learning. This research is classroom action research. This study aims to improve students' activities and learning outcomes by implementing background music and inquiry-based learning (IBL) model. The samples of this study were 26 students. Data was obtained through observation, tests, field notes, and documentation. Data analysis techniques using qualitative and quantitative descriptive analysis. The results showed that the application of the background music and IBL was effective in increasing student activity from the high category (1st cycle) to the very high category in 2nd Cycle and 3rd Cycle. The learning model also had an impact on improving student learning outcomes as evidenced by an increase in the average score of results Social studies student learning from 50 (Pre cycle) to 83 (3rd Cycle). Based on these data it can be concluded that the application of the background music and IBL model is effective for increasing the activity and learning outcomes of fifth grade students of SDN Sadeng 03.

Keywords: background music, IBL, students' activities, learning outcome.

1 BACKGROUND

The aim of social studies in elementary schools as mandated in the Minister of National Education Regulation No. 22 of 2006 concerning Content Standards is to direct students to become democratic and responsible citizens of Indonesia, as well as peaceful citizens of the world. Social studies subjects are designed to develop knowledge, understanding, and analytical skills of the social conditions of the community in entering a dynamic social life. (KTSP, 2006). To encourage the achievement of national education goals in which the objectives of the IPS are stipulated, a Minister of Education and Culture Regulation (Permendikbud) No.22 of 2016 was issued regarding a standard process that states that learning in every unit of primary and secondary education must be interactive, inspiring, enjoyable, challenging, and motivating students to actively participate . The implication of this principle is the shift in the educational paradigm, from the teaching paradigm to the learning paradigm. The issuance of Permendikbud Number 22 in 2016 is also due to the fact that so far student-centered learning has not been able to be realized optimally, especially at the elementary school level. As Sanusi revealed in Winataputra (2008), social studies teaching in schools tends to focus on the mastery of memorization, the learning process that is still teachercentered, and the lack of utilization of existing learning resources, so that the learning situation is boring for students. Preliminary studies conducted at Sadeng 03 Elementary School showed that the learning tools used were still not in accordance with the standard processes, namely the syllabus and lesson plans that were used were still simple yet not centered on students.

 Putri Yanuarita Sutikno PGSD Faculty of Education Universitas Negeri Semarang Observation results during social studies showed that teachers still dominated learning, the use of learning models was still Inaccurate not in accordance with the situation of students, the teacher still conveys information with lecture methods guided by existing textbooks. Student participation is also low, which tends to be passive and lack concentration because students only listen to the teacher's explanation and are assisted with drawing media as they are, then work on the questions in the textbook. Social studies subjects in grade 5 have a broad scope of material and tend to be history learning. Students often find it difficult to memorize the perpetrators of history, place and time of the incident. These things cause the level of understanding of students towards the material is low, which has an impact on student learning outcomes to be low. This is evidenced by the results of student tests, of 26 students only 12 people who reached the minimum completeness criteria (KKM = 65) and the average score of learning outcomes was 50. As a result, efforts to improve student learning outcomes and activities through classroom action research are needed. Inquiry-based learning (IBL) is a learning model where students learn by following steps that resemble professional scientists in the context of constructing knowledge (Sesman, 2003). IBL can also be interpreted as a process of finding a causal relationship (causal relations), with students first formulating a hypothesis and testing it with experiments or observations (Pedaste & Sarapuu, 2012). While Arends (2012: 341) defines IBL as a learning model that is developed with the aim of giving lessons to students about how to think. Class teachers in IBL no longer play the role of delivering the main information, but as a facilitator in investigative activities and discussions between students, directing students to learn independently, and directing students to achieve meaningful understanding (Fullan, 2013; Hattie, 2009; Sweetland, 2008; Mergendoller et al., 2006). The application of IBL in learning can increase student activity and involvement, intrinsic motivation, and student learning outcomes (Blessinger & Carfora, 2014; Carfora, 2011; Lee, 2013). IBL aims to encourage students to be involved in a process of scientific disclosure that is authentic or related to the real world (Bybee et al, 2006). IBL can be relevant and can be applied to all disciplines and grade levels in the world of education in both

mimi_uty @mail.unnes.ac.id

Novi Setyasto PGSD Faculty of Education Universitas Negeri Semarang

[•] novisetyasto@mail.unnes.ac.id

Bayu Wijayama SDN 03 Sadeng Kec. Gunungpati Kota Semarang

formal and informal learning situations. The core of IBL is a disclosure learning model where all learning activities and assessment or conscious assessment are designed to familiarize / maintain a higher-order thinking process through the creation of scaffolding of knowledge and through exploration of questions / problems that are authentic and meaningful (Blessinger, P., & Carfora, JM, 2015: 13). Based on the Inquiry-Based Learning (IBL) syntax, it can be understood that IBL is centered on students and teachers are more likely to be facilitators and motivators. IBL can be applied systematically to improve the ability of students in the process of disclosure / problem solving and also mastering knowledge in accordance with competency standards in learning in elementary schools. Furthermore, background music needs to be applied as an effort to improve concentration and facilitate students in understanding social studies material. This is consistent with the study conducted by Rauscher et al. (1993) am Husain et al. (2002) claim that music seems to have a positive and stimulating effect which could improve learning. In addition, Park et al. (2011) states that music is typically necessary to help students remember and understand the learning content. Thompson et al. (2011) revealed that music characteristics such as tempo and intensity have an influence on learning outcomes. In this study background music is defined as music that plays in the background while students study. This study aims to improve the activities and learning outcomes of 5th grade students at Sadeng 03 Elementary School through the application of background music and inquiry-based learning.

2 METHODOLOGY

This research is a classroom action research (CAR) consisting of four stages, namely: 1) planning, 2) action, 3) observation, 4) reflection (Arikunto, 2006: 91). This research was conducted in 3 cycles. The samples of this study were 26 students in grade 5 of SD Sadeng 03. Data collection techniques used were observation, test, documentation, field notes. Qualitative and quantitative descriptive analysis was used in this study.

3 RESULT AND DISCUSSION

A. Students' learning outcomes

Student learning outcomes are obtained through tests given to students about the material of the Indonesian Independence Proclamation Event which is taught in 3 learning meetings where each meeting has different indicators and learning objectives. Learning results show an increase in student learning outcomes from 1st cycle to 3rd cycle as shown in Figure 1.

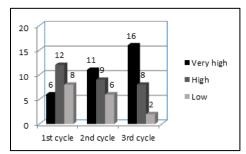


Figure 1. Increase of Learning Average Score

Figure 1 shows an increase in the average score of student learning outcomes from pre-cycle or before learning tools are applied to cycles 1, 2, and 3 where background music and inquiry-based learning (IBL) has been applied. This is evidenced from the average previous learning outcomes in the pre-cycle of only 50 and increased in cycle 1 (69), cycle 2 (74), and increased to 83 in cycle 3. This shows that the application of background music and IBL can improve student learning outcomes on social studies subjects. In addition, the number of students who achieved the KKM also increased from cycle 1 to cycle 3 as shown in Figure 2.

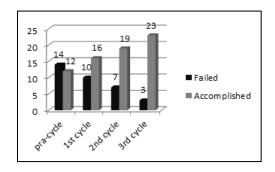


Figure 2. Number of Students Completed KKM

Figure 2 shows the number of students with learning outcomes that reach KKM and students who have not yet completed KKM starting from pre-cycle to cycle 3. Based on Figure 2, the highest number of students who do not complete KKM is in pre-cycle (14 students), and in gradually the number decreased in cycle 1 (10 students), cycle 2 (7 students), and finally in cycle 3 there were only 3 students who did not complete KKM. In contrast, the number of students with KKM complete learning outcomes increased from only 12 students during the pre-cycle, to 16 students in cycle 2, and 19 students in cycle 2, and 23 of 26 students succeeded in achieving KKM in learning cycle 3. Based on these results it can be proven that the application of background music and IBL is effective to improve student learning outcomes in social studies subjects. During the pre-cycle, the teacher did not apply the IBL model and background music, but the teacher only used text books and simple drawings to teach social studies material to students. Learning outcomes obtained by students are far from expectations, where there are only 12 out of 26 students who complete KKM and the average score of student learning outcomes is only 50. Instead, starting from cycle 1 to cycle 3, conditions change due to the application of background music and inquiry-based learning (IBL) in the learning process. Student learning outcomes have increased significantly in cycle 3 with 23 out of 26 students successfully completing the KKM and the average score of student learning outcomes reached 83. These results are in accordance with several studies that have found background music to influence mood (e.g., Juslin and O'Neill, 2001; Sloboda and Juslin, 2001; Schmidt and Trainor, 2010). Background music leads to different emotions depending on whether they are composed in a major or minor mode (Husain et al., 2002). Moreover, several theoretical approaches and state studies that influence mood learning (Pekrun, 2006; Goetz and Hall, 2013; Heuer and Reisberg, 2014; Pekrun et al., 2017). In general, positive mood is associated with better learning outcomes (Isen, 2002) while negative mood or boredom hinders learning (Pekrun, 2006). In addition, the application of inquiry-based learning

(IBL) in learning can improve student learning outcomes (Blessinger & Carfora, 2014; Carfora, 2011; Lee, 2013). IBL directs students to learn independently, and directs students to achieve meaningful understanding (Fullan, 2013; Hattie, 2009; Sweetland, 2008; Mergendoller et al., 2006).

B. Students' activities

Student activity data obtained from observations in the social studies learning process in cycle 1, cycle 2, and cycle 3. The observed indicators consisted of 6 indicators, namely: 1) questioning, 2) Hypothesis generation, 3) Investigation, 4) Data interpretation, 5) Communication, and 6) Reflection. Observation results show an increase in student activity from cycle 1 to cycle 3 as shown in Figure 3.

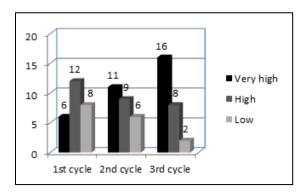


Figure 3. Increase of Student Activity

Figure 3 shows an increase in student activity in the social studies learning process from cycle 1 to cycle 3. In cycle 1, there were 6 students with very high activity categories while 12 others were included in the high activity category and there were still 8 students with low activity. This happens because students in general are still unfamiliar with the application of background music and inquiry-based learning models. Some students still find it difficult to formulate hypotheses and conduct investigations, they feel confused because they are previously accustomed to activities that are guided by textbooks and listen to the teacher's explanations, causing them to feel doubtful and afraid of wrong opinions. Likewise the background music applied by the teacher is still not in accordance with the student's condition. Some students actually feel disturbed by the volume of music that is too loud and the type of music with a fast rhythm. In cycle 2, the number of students with very high activity categories increased to 11 people while 9 students with high activity categories, and the number of students with low activity categories decreased to 6 students. Students begin to adjust and feel familiar with the application of background music and most students already understand the stages of IBL. The teacher uses Mozart's instrumental music which is responded positively by students because it has the right rhythm and tempo for learning. Students feel happy and more focused in carrying out learning activities. This is consistent with the results of the study of Thompson et al. (2011) which states that only soft fast music has a positive influence, while loud fast as well as soft slow or loud slow music hindered learning. In addition, Perham and Currie (2014) claimed that instrumental music disturbs learners less than music with lyrics. Furthermore, in cycle 3, the number of students with very high activity categories increased to 16, while 8 others had activities with high

categories, and there were still 2 students with low activities. This is due to several reasons, such as: the teacher gives clear instructions to students about the learning objectives and what must be done by students during the learning process, students are familiar with the IBL model with background music (Mozart) and in conducting their learning activities are facilitated with sheets Student work (LKPD) as a tool in formulating questions, hypotheses, conducting investigations, interpreting data, testing hypotheses, and making conclusions. This is reinforced by the increase in the average score of student activity from learning in cycle 1 to cycle 3 as shown in Figure 4.

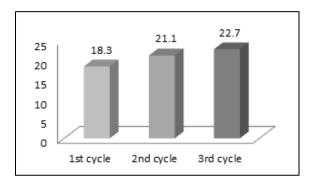


Figure 4. Improvement in Student Activity Average Score

Figure 4 shows in cycle 1, the average score of student activity was 18.3 with a high category and in cycle 2 it increased to 21.1 and in cycle 3 it increased to 22.7 with a very high category. This shows that the application of background music and IBL is effective in increasing student activity in social studies learning. This is in line with the results of research conducted by Thompson (2011) revealed that soft fast music has a positive influence on student's activities. Schmidt and Trainor (2010) states that background music can be a mood booster for students which will have an impact on increasing motivation to learn. In addition, Schmidt and Trainor (2010) said that music can stimulate students to be more involved in physical activities. Meanwhile, the application of IBL in learning can increase the activity and involvement of students, intrinsic motivation (Blessinger & Carfora, 2014; Carfora, 2011; Lee, 2013). Furthermore, IBL encourages each student to be involved in a process of scientific disclosure that is authentic or related to the real world (Bybee et al, 2009)

4 CONCLUSION

The application of background music and inquiry-based learning (IBL) models in grade 5 SD Sadeng 03 is effective in increasing student activity as evidenced by the increase in student involvement in the inquiry learning process. Student learning outcomes also increased as evidenced by an increase in the average learning outcomes of each cycle, from the original 50 in the pre-cycle to 83 in the third cycle. Based on these data, it can be concluded that the application of background music and IBL is effective in increasing the activities and learning outcomes of 5th grade students, especially in Sadeng 03 elementary school.

5 REFERENCE

[1] Arikunto, Suharsimi. 2006. Penelitian Tindakan Kelas. Jakarta: Bumi Aksara.

- [2] Barrows, H. S. 1996. Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson & H. Gilselaers (Eds.). Bringing problembased-learning to higher education: Theory and practice. San Francisco, CA: JosseyBass.
- [3] Blessinger, P., & Carfora, J. M. 2014. Inquiry-based learning for faculty and institutional development: A conceptual and practical resource for educators. Bingley, UK: Emerald Group Publishing.
- [4] Blessinger, P., & Carfora, J.M. 2015. Inquiry-Based Learning for Multidisciplinary Programs: A Conceptual and Practical Resource for Educators. Wagon Lana: Emerald Group Publishing Limited.
- [5] Bybee, R.W., 2009. The BSCS 5E instructional model and 21st century skills. Colorado Springs, CO: BSCS.
- [6] Carfora, J. M. 2011. Navigating between teaching, learning and inquiry. International HETL Review. Retrieved from https://www.hetl.org/opinion-articles/teaching-learning-inquiry.
- [7] Flynn AE, Klein JD. 2001. The influence of discussion groups in a case-based learning environment. Educ Technol Res Dev 49(3):71–86.
- [8] Fullan, M. 2013. Stratosphere: Integrating technology, pedagogy, and change knowledge. Don Mills, ON: Pearson.
- [9] Goetz T., Hall N. C. (2013). "Emotion and achievement in the classroom," in International Guide to Student Achievement eds Hattie J., Anderman E. M., editors. (Abingdon: Routledge;) 192–195.
- [10] Hattie, J. (2009). Visible learning: A synthesis of over 800 metaanalyses relating to achievement. New York: Routledge.
- [11] Heuer F., Reisberg D. (2014). "Emotion, arousal and memory for detail," in The Handbook of Emotion and Memory: Research and Theory ed. Christianson S.-A., editor. (New York, NY: Psychology Press;).
- [12] Husain G., Thompson W. F., Schellenberg E. G. (2002). Effects of musical tempo and mode on arousal, mood and spatial abilities. Music Percept. 20 151–171. 10.1525/mp.2002.20.2.151
- [13] Isen A. M. (2002). An influence of positive affect on decision making in complex situations: theoretical issues with practical implications. J. Consum. Psychol. 11 75–85. 10.1207/S15327663JCP1102_01
- [14] Juslin P. N., O'Neill S. A. (2001). "Psychological perspectives on music and emotion," in Music and Emotion: Theory and Research eds Juslin P. N., Sloboda J. A., editors. (New York, NY: Oxford University;) 71–104.
- [15] Keselman, A. 2003. Supporting inquiry learning by promoting normative understanding of multivariable causality. Journal of Research in Science Teaching, 40, 898–921. doi:10.1002/tea.10115.
- [16] KTSP. 2006. Standar Isi dan Standar Kompetensi Kelulusan Untuk Satuan Pendidikan Dasar SD/MI. Jakarta: BP Cipta Jaya.
- [17] Lee, V. S. 2013. Supporting students' search for a meaningful life through inquiry-guided learning. In Kovbasyuk & Blessinger (Eds.), Meaning-centered education: International perspectives and explorations in higher education. New York, NY: Routledge.

- [18] Park B., Moreno R., Seufert T., Brünken R. (2011). Does cognitive load moderate the seductive details effect? A multimedia study. Comput. Hum. Behav. 27 5–10. 10.1016/j.chb.2010.05.006
- [19] Pekrun R. (2006). The control-value theory of achievement emotions: assumptions, corollaries, and implications for educational research and practice. Educ. Psychol. Rev. 18 315–341. 10.3109/0142159X.2012.643265
- [20] Pekrun R., Lichtenfeld S., Marsh H. W., Murayama K., Goetz T. (2017). Achievement emotions and academic performance: longitudinal models of reciprocal effects. Child Dev. 88 1653–1670. 10.1111/cdev.12704
- [21] Permendikbud Nomor 22 Tahun 2016 tentang Standar Proses. Jakarta: Kemendikbud.
- [22] Rauscher F. H., Shaw G. L., Ky K. N. (1993). Music and spatial task performance. Nature 365 611. 10.1038/365611a0
- [23] Schmidt L. A., Trainor L. J. (2010). Frontal brain electrical activity (EEG) distinguishes valence and intensity of musical emotions. Cogn. Emot. 15 487– 500. 10.1080/02699930126048
- [24] Sloboda J. A., Juslin P. N. (2001). "Psychological perspectives on music and emotion," in Music and Emotion: Theory and Research eds Juslin P. N., Sloboda J. A., editors. (New York, NY: Oxford University;) 71–104.
- [25] Sweetland, Julie. 2008. Inspired Issue Brief: Inquiry Based Teaching. Washington, DC: Center for Inspired Teaching.
- [26] Thompson W. F., Schellenberg E. G., Letnic A. K. (2011). Fast and loud background music disrupts reading comprehension. Psychol. Music 40 700–708. 10.1177/0305735611400173
- [27] Winataputra, U. S. 2008b. Materi dan Pembelajaran IPS SD. Jakarta: Universitas Terbuka.