

Exploration of Learning Implementation for Deaf Students During the Covid-19 Pandemic

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ARTICLE INFO

Article history:

Received June 24, 2021

Revised June 30, 2021

Accepted March 23, 2022

Available online June 25, 2022

Kata Kunci:

Covid-19, Pendidikan Luar Biasa, Siswa Tunarungu

Keywords:

Covid-19, Special Education, Deaf Students



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ABSTRAK

Pandemi Covid-19 mengakibatkan terjadinya transformasi dalam berbagai bidang kehidupan manusia, salah satunya pendidikan. Pandemi Covid-19 menyebabkan proses pembelajaran harus dilaksanakan dari rumah. Semua siswa, termasuk siswa tunarungu harus belajar dari rumah, dan orang tua dituntut untuk dapat membimbing anaknya selama proses belajar di rumah. Penelitian ini bertujuan untuk mengeksplorasi pelaksanaan pembelajaran bagi siswa tunarungu selama masa pandemi Covid-19. Penelitian ini menggunakan metode penelitian studi kasus. Subjek yang terlibat dalam penelitian ini antara lain, guru, siswa tunarungu, dan orangtua. Pengumpulan data dilakukan dengan metode wawancara mendalam dan studi dokumentasi. Proses analisis dilakukan secara deskriptif kualitatif. Hasil penelitian menunjukkan bahwa selama pandemi Covid-19 guru membuat bahan ajar khusus dan melakukan penilaian setiap minggu secara manual untuk memfasilitasi siswa tunarungu. Siswa atau orang tua tunarungu sering pergi ke sekolah untuk mengambil bahan ajar baru dan membawa hasil penilaian minggu lalu. Situasi ini membuat guru perlu mengatur pengajaran untuk tunarungu lebih sederhana dan menarik untuk meningkatkan belajar mandiri kepada siswa. Implikasi dari penelitian ini adalah pemerintah menyediakan media pendidikan khusus untuk anak tunarungu.

ABSTRACT

The Covid-19 pandemic has resulted in transformations in various fields of human life, one of which is education. The Covid-19 pandemic has forced the learning process to be carried out from home. All students, including deaf students, must study from home, and parents are required to be able to guide their children during the learning process at home. This study aims to explore the implementation of learning for deaf students during the Covid-19 pandemic. This research uses case study research method. Subjects involved in this study included teachers, deaf students, and parents. Data was collected using in-depth interviews and documentation studies. The analysis process was carried out in a qualitative descriptive manner. The results showed that during the Covid-19 pandemic, teachers made special teaching materials and conducted weekly assessments manually to facilitate deaf students. Deaf students or parents often go to school to pick up new teaching materials and bring last week's assessment results. This situation makes teachers need to make teaching for the deaf more simple and interesting to improve independent learning for students. The implication of this research is that the government provides special educational media for deaf children.

1. INTRODUCTION

The Covid-19 pandemic is changing all countries globally and affected many aspects of life with no exception, all citizens should be aware of this situation with social distancing to prevent the spread of Covid-19. The education sector faced obvious challenges during the COVID-19 pandemic. The term of "school from home" or "remote teaching" illustrated how the social distancing are taken to respond prevent the spread of Covid-19 (Putria et al., 2020; Widagdo et al., 2020). Teacher had to quickly respond to an unexpected and 'forced' transition from face-to-face to online teaching, they need for a comprehensive knowledge of the pedagogy of online education that integrated with technology (Carrillo & Flores, 2020; Davies et al., 2021; Wiryanto, 2020). The various of schools and colleges have created provided clear instructions for students

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on how to cope and follow up. Remote teaching made teachers seeking a practical way to complete this daunting task (Eadie et al., 2021; Muthiadin et al., 2020; Wang, 2021). Covid-19 pandemic affected the system of education due to almost all infected countries shut down all educational organizations and asked all stakeholders to stay home (Madhesh, 2021; Yousfi et al., 2021). The quick adaptation to distance learning for all levels and courses has been a struggle for teachers and students (Alshawabkeh et al., 2021; Reimers et al., 2020). That experience may have been even more intense and harder to adapt for students with disabilities (Alshawabkeh et al., 2021; Baroni & Lazzari, 2020).

The deaf pupils based on the study of Meizen-Derr research since 2014 and 2019 concluded that the deaf have problems which include the development of spoken language/language delay, so that it has a direct impact on communication and social interaction. Furthermore deaf or hearing impaired children have a risk of experiencing language delays because they do not have the same quality of hearing experience, so they lose opportunity to hear speech like normal (hearing) people (Mantzikos & Lappa, 2020; Meizen-Derr et al., 2017). Through the ACC (augmentative and alternative communication) pilot project deaf pupils improve their oral language development (Meizen-Derr et al., 2014). Hence, language development problem has a direct impact on social interaction. In the results of this study, technology is an alternative to improve communication skills in terms of language (Meizen-Derr et al., 2019). Almost all deaf children have a certain residual hearing level.

This social distancing engender study from home term that make inconvenient situation for the deaf pupil. Deaf pupils deal with some of the barriers that exist at various levels of distance learning such as the structural nature of most online courses in terms of content, tools, presentation methods, and communication requirements (Abdulhalim et al., 2021; McKeown & McKeown, 2019). The COVID-19 outbreak affects not only the lives but work of deaf teachers also (Alqraini & Alasim, 2021; Mantzikos & Lappa, 2020). Parents of deaf abrupt be a teacher because the Covid-19 coerce deaf pupils study from home without the teacher. Although, more than 90-95 percent of parents of children whom were deaf and hard of hearing is hearing parents (DesGeorges, 2016). To cope with the situation, teachers should rearrange instructional approaches and engage parents of the deaf pupils to cater to such a new way of teaching and learning process. This study intended how teacher create instructional materials and conduct assessment for adapt distance learning amid covid-19 was assessed under the systematic design of instruction framework by Walter Dick, Lou Carey & James O. Carey. The Dick Carey and Carey instruction framework using to assessed the design learning, because The Dick and Carey instructional design presents a systematic orientation that structures learning in a way that puts the learners' interests first, while incorporating feedback at all levels of the design process to improve teaching (Friedman & Schneider, 2018).

Recently, number of studies present the use of the Dick, Carey & Carey framework such as, the study of Friedman & Schneider integrated statistic course and technology using Dick and Carey model report that this model indicated positive attitudes toward the technology used in the course (Friedman & Schneider, 2018). First, study about developing social studies learning using Dick and Carey Instructional Design conclude revitalization of social studies teaching have to consider focusing on three domains there are the formulation of goals, the organization of teaching materials, evaluation techniques (how to know that the competencies have been achieved (Khoiron et al., 2020). Second, producing electronic materials of Strategy of Instruction based on problem based learning using Dick and Carey model got very good responses from student (Muga et al., 2017). Thirth, study about designing the instructional media with Dick and Carey model to provide guidance for instructional components are designed. (Mawardi, 2018). Study involved 32 students of Education Technology University Bengkulu developed of Dick and Carey learning design in the course of ICT conclude the application of the Dick and Carey learning design is very effective to actualize ICT Design courses (Sapri et al., 2019). Fifth, producing multimedia interactive operation system study using Lectora Inspire reveal that the Lectora Inspire effective as a learning tool to supporting learning students (Wibawa, 2017). Furthermore, developing teaching materials to strengthening of the characters resulted the systematic teaching-learning and model evaluation to students high school (Desiningrum et al., 2018).

Technology can be used to amplify and amplify sound to create productive residual hearing. Nevertheless technologies alone did not improve learning processes (Baroni & Lazzari, 2020; Citrohn & Svensson, 2020). In Indonesia context, there are many difficulties of the distance learning and there is a need for the development of creativity from teachers in learning (Fikri et al., 2021; Yunita et al., 2021). Teachers had faced huge changes, such as adaptive and transformative for teaching and learning activities (Khanna & Kareem, 2021; Shodiq & Zainiyati, 2020). Recommendation to improve the teachers' competencies could be driven through engaged online-driven competencies in planning, implementing, and assessing the performance of their students (Marschark M, 2012; Toquero, 2020). From the studies, author assume that the teacher as a design instructor a center point of the problem, because teacher as the maker

of lesson plans, the professional mentor for deaf and the determinative factors success of learning. This study intended to reveal how teacher create instructional materials and conduct assessment for adapt distance learning amid covid-19 and this study could be used to the next research or the data teacher professional development for deaf or special education. The implication of the research can used as needs assessment for developing media learning or design instructor for enhancing deaf competences through developing meaningful and joyful amid distance learning.

In Indonesia, the developing module for class of fashion in SMK Al-Mujtama' Pamekasan showed that the module content fashion decoration topic improved motivation learning and helped for XI students to enhance productivity of practice the theory (Tri Astuti et al., 2019). Meanwhile, other study using Dick and Carey model to develop reading teaching material for grade VII Middle School reveal that reading textbooks are rated as effective and serviceable for teaching reading in schools (Ramdan, 2020). Tenth, study concerning the learning module using concept mapping in economic lessons for class XI IPS at SMA Negeri 1 Sampang showed the module is proper to be learning material for student (Widyastuti et al., 2019). This study aimed to investigated how teacher create instructional materials and conduct assessment for adapt distance learning amid covid-19 and this study could be used to the next research or the data teacher professional development for deaf or special education.

2. METHOD

This study used a qualitative approach to analyze the design of instruction framework. For the purpose of investigation, research methods employed qualitative case study in order to investigate the in-depth phenomenon within its real-life context (Yin, 2015). Case study using and develop a "how" or "why" question that would be investigate the relevant behaviors and the desire is to study some contemporary event or set of events (Yin, 2018). The data was collected through deep interviews and document study. In this study, social study interviewed to collect information pertaining to how to create instructional materials and conduct assessment for adapt distance learning amid covid-19. Interviews using to find out information related to instructional designs was in accordance with the concept of Dick and Carey. In this study, the teachers who participated from teachers special education in SLB Negeri Surakarta. Study documents are used to provide concrete evidence of how instructional designs and assessments were arrange. The partisipant of the deaf teacher is Mrs. C (56 years old) who have taught 30 years since 1991 in SLB Negeri Surakarta.

3. RESULT AND DISCUSSION

Result

Covid-19 pandemic made teacher adapt distance learning with re-arrange method, strategy, and tools to held efective learning. The teacher told that distance learning builds not only knowledge but enhancing technology skill also. Furthermore, distance learning is a positive impacts that made teacher, deaf pupils and their parent used to enrich experience learning, knowing natural learning motivation of deaf pupils, and learn more independently (time management). Teachers developed design instructional during the COVID-19 pandemic by creating paper based modules every week from The Government's KI (Kompetensi Inti) and KD (Kompetensi Dasar. The teacher taught the class made a summary includes all indicators, KI and KD from social studies lessons. Teacher was adjusting the 2019 lesson plans (before the covid-19 pandemic) to recompiling the module during covid-19 and condensing the material so that students can study from home during the Covid-19 pandemic. Teacher gave the a module once a week with weekly practice questions. Mrs. C urged deaf pupils went to school in monday, but in realitation deaf pupils went to school not only in monday but in another day because the deaf pupils have a non-academic activities such as sports competition so that a number of pupils have to practice besides do a academic tasks. Mrs. C attempted to interact with the deaf pupils through whatsapp group and google meeting. Whatsapp group was effective to stimulate also recorded deaf pupils to communication and distribute images to illustrate materials in moduls. The google meeting used to received the questions or feedback for the students. The process of recompiling the module during covid-19 and condensing the material as shown in the Figures 1 and Figure 2.

The procedures of the modules had been arranged by teacher shown with adjusting the lesson plan before Covid-19 for new lesson plan during study from home based on KI and KD. Then, teacher made a new lesson plan and compiling moderate material learning based on Government-published social textbook through resume the materials in the book. Furhermore, teacher made a quiz to provide practice questions and printed the modules and the quiz and distributed to deaf pupils Gauging the learning during the Covid-

19 pandemic, teacher should readjusted assessment using paper based test and using google meets and whatsapp to control final exam or year-end asesment.

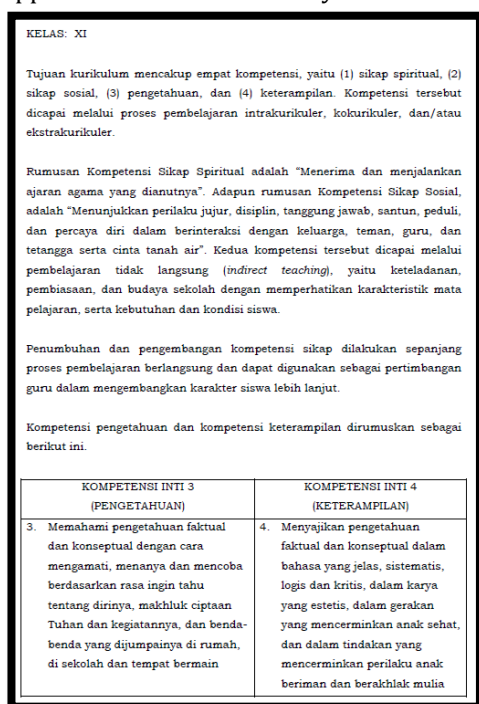


Figure 1. KI and KD from Government

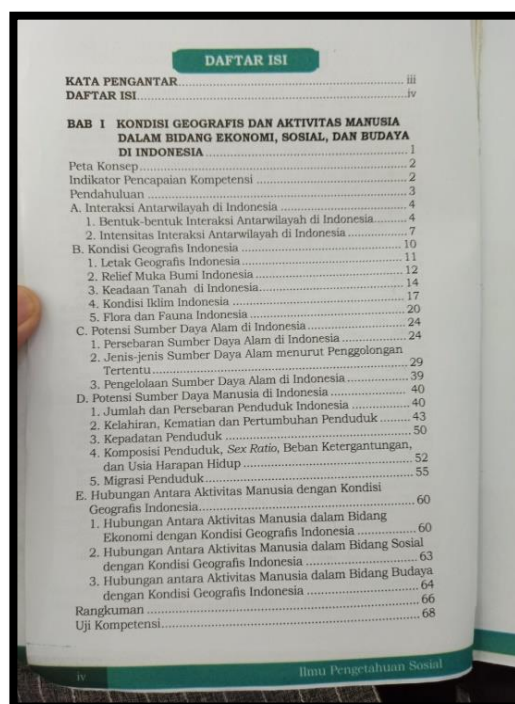


Figure 2. Social Textbook

Based on the finding, teacher made the design instruction similar to the Dick, Carey and Carey model. First, teacher expressed a goal based on the KI and KD. The goals to imply what new knowledge and skills of KI and KD should mastered deaf pupils during distance learning. Although instructional goals derived from lesson plan before covid-19, the re-designing of lesson plan and the materials consist of performance analysis, needs assessment, practical experience with learning difficulties of students, and the minimum achievement of the condition. There are simpler goals learning during covid-19 learning, teacher set the goals that deaf pupils able to learning dependently and continuously. Second, in step conduct instructional analysis teacher made the indicator learning to represent the steps to students are doing for complete mastery of the goal. Third, in step of analyze students and contexts is the step to teacher consider the condition of student, simplicity the modules and device to reach distance learning. Fourth, step to write performance objectives, teacher wrote the goals of learning such as deaf pupils able to describe the form of interaction, deaf pupils able to explain how the connectivity of region. Fifth, step of develop assessment instruments that is teacher made the grading grid to measure the student's ability what implied in weekly practice questions. Sixth, in the develop instructional strategy teacher chose model, media, strategy and the method learning to deliver the material. In this case, teacher chose the self-regulated learning using module to foster student learning in distance learning, because the deaf pupils not to be able to hear and independent in real life, so the visual and the text is most suitable to deliver the materials and the module aimed to drill their self-regulated learning.

Furthermore, in step develop and select instructional materials teacher produce the module paper based. Eighth, the quiz to provide practice questions aimed to represent step of design and conduct formative evaluation. Ninth the step of revise instruction teacher began revising the learning-based on the reality of the deaf pupils takes and submit the practice question in the school. By controlling the neatness of students' assignments and discipline in learning, the teacher formulates how to design and conduct summative evaluation contained in PAT. In fact, summative evaluation held through google meet or WhatsApp to monitoring deaf pupils' assessment. The illustration focusing on learning design during distance learning are portrayed in Figure 3.

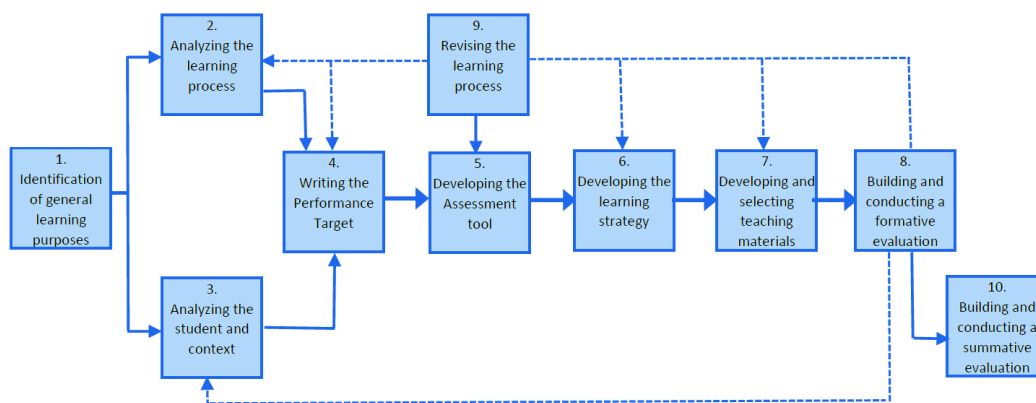


Figure 3. Dick, Carey, and Carey Learning Design Model Made by Author

Discussion

The deaf pupils have problems which include the development of spoken language/language delay, so that it has a direct impact on communication and social interaction. The instructional goals derived from lesson plan before covid-19 has different with goal that emphasizes components to foster student learning during remote learning. Dick and Carey model consist of three main theoretical positions are behaviorist, cognitivist and constructivist views and had influenced by Gagne’s conditions of learning. In the deaf learning during covid-19, they are need to adapt new situation forced ability to self-learning without teacher as educators (Coskun & Mitrani, 2020; Murray et al., 2020). This situation examined teacher competent as instructional designers. Dick and Carey (2015) declare master teachers and instructional designers translated their own views of learning theory into pedagogical practices based on their own decisions about goals, students, and learning environments. A study about teachers increased efficiency of the dyslexic learner on vocabulary acquisition from 18 to 88 points. In this context, Mrs. C produced learning process engaged deaf pupils to stay learning though they don’t have experiences to remote learning. Creating module to foster student learning in distance learning due to visual and the text is most suitable to deliver the materials learning is very suitable for alternative studying (Purnamasari et al., 2020; Sopacua et al., 2020; Suryanto & Kurniawan, 2020). Dick and Carey model is not suitable to be applied in large-scale learning. Nether less, the weakness of the Mrs. C developed design in structure, the design in structure is not clear during the trial should be carried out, and revision activities were only carried out after the formative test was held.

The study highlights how the Dick and Carey instructional design model assessed the instructional which teacher had created to rearranged approaches to learning and engage parents of the deaf pupils to cater to such a new way of teaching and learning process. Dick and Carey argue the components needed in the learning system are the pupils, educators, teaching materials, and the learning environment (Magister et al., 2021; Widyastuti et al., 2019). Based on the data was collected through deep interviews and document study, there are all components needed in the learning system. In the context Covid-19 pandemic, face-to-face changed to remote learning that made a learning environment and teaching has a direct impact in learning process. The educators changed teaching method, made teaching materials, and created new experiences using WhatsApp or g-meet during remote learning. Furthermore, the learning environment changed deaf parents to control the learning process during study from home, meanwhile the deaf pupils learning by their self-promoting self-regulated e-learning indirectly. Creating learning environments illustrated by Mrs. C made a group WhatsApp for their parent, produced the policy to distributed modules and collected pupils’ task every Monday, and gauging the learning assessment using paper-based test and using google meets and WhatsApp to control final exam or year-end assessment. Study which integrated statistic course and technology using Dick and Carey model had impact to build a curriculum that specialized in visualization, providing pupils with an understanding learning (Friedman & Schneider, 2018; Sapri et al., 2019). Mrs. C applying design instruction involved WhatsApp and Google Meet to interact with her pupils, attempt to redesigning his lesson plan, developing module, and gauging the learning assessment during remote learning is the effort to integrated technologies with goals learning, developing learning strategy and selecting teaching materials so that the deaf learning can reach out visualization learning.

Developing e-learning modules using the Dick and Carey model showed the e-module learning improved self-regulated learning and engaged students with the content and more actively involved in their own learning (Crisdiana, 2021; Logan et al., 2021). Nether less Mrs. C had not been made the e-module learning, but her decision to made paper-based module during distance/remote learning is necessary to be valued and need to consider to get development and innovation in learning. Mrs. C undertook to create

learning with chose the self-regulated learning using module to foster pupil learning in distance learning, because the deaf pupils are not to be able to hear and independent in real life, so the visual and the text is most suitable to deliver the materials and the module time to drill their self-regulated learning. This were also encouraged to provide pupil manage their time study and give feedback to Mrs. C to revise instruction and an ongoing process of using information to reassess assumptions and decisions on the module itself.

Feedback's instructor during learning process to the pupils is portrayed as information and achievement comments by the instructor that is Dick & Carey defined as the most powerful components in the learning process, hence, instructors' feedback should be a critical source in e-learning (Butler & Winne, 1995; Kwon & Block, 2017). Mrs. C interacted with deaf pupils through WhatsApp group and google meeting is the form of how the Mrs. C attempt to give and take feedbacks from her learning process. As educator which teach and re-designing learning instruction, Mrs. C created teaching material was represented by module, gauging the learning assessment using paper-based test and using google meets and WhatsApp to control final exam or year-end assessment. Refers to a discussion pertaining to the framework the Dick and Carey instructional design model, the re-designing of instructor made by was suitable with the Dick and Carey model. Based on findings, author is gaining insights in relation to learning analytics features and design learning that would be useful for data to developing media learning from a Covid-19 remote learning. Crucially in the early remote learning, teacher had been be designer which support deaf students' performance through self-regulated learning. According to evidence of study showed deaf-inclusivity, interpreters do not replace instruction, networks, or community and do not provide the inclusivity of deaf schools (Joseph J. Murray et al., 2020). The alternative to engage and promote self-regulated learning to deaf students is teacher create and develop design of learning meaningful remote learning involved technology occasionally aimed to improving learning performance for the 21st century.

The limitation of this preliminary study is a few relevant studies either deaf learning in the Covid-19 pandemic context or professional development for special educational. That affected this study only surface analysis. This study can also serve as reference for future studies relative to the effects of COVID-19 in special educational system, especially deaf education. It is suggested that the studies of deaf learning or special needs more be focuses to give information into obstacles, challenges, or opportunities in remote learning. Government or stakeholders can provide more reachable learning sources such as management learning for disabilities pupils through television or another media and the development of interactive multimedia to learning for the 21st century. The author concludes that the teacher has compiled a design instruction based on the Dick, Carey and Carey framework indirectly. Meanwhile, design instruction have not been involved technology to improving student interactivity in learning whereas deaf student which faced revolution industry 4.0 necessary to have skill of skill to amid education 21st century such as communication, collaboration, critical thinking and creativity. This study could be use to the next research or the data teacher professional development for deaf or special education. The implication of the research can used as needs assessment for developing media learning or design instructor for enhancing deaf competences through developing meaningful and joyful amid distance learning.

4. CONCLUSION

The results were established that teacher of SLB N Surakarta imply the Dick and Carey Model in re-designing instruction process during covid-19 pandemic indirectly. The learning was developed by teacher is suitable for alternative studying with small-scale learning. Deaf condition and dependend learning with others made the teacher develop suitable module to is implemening the Dick and Carey Model, that might teacher revise the instruction. The deaf pupils have needed to mentoring from others, therefore teacher ask their parent to accompany deaf pupils in the early of distance learning, this illustrated learning environment in the Dick and Carey concept namely the components needed in the learning system. The findings of this study could be the recommendation for the stakeholders in school to develop design learning more creative, systemized, meaningful and joyful learning for the special education. For the government provide the education media to relay in the television specifically for deaf pupils.

5. ACKNOWLEDGEMENTS

Thank you notes addressed to teacher of SLB's Negeri Surakarta for supporting this study with enormous data. Thanks for LPDP RI for the supporting the funding.

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