Development of Swimming Learning Modules to Increase Learning Interest and Learning Efficiency of Swimming Motion Techniques in Beginner Children

Zuly Frendiyanto , Nasuka & Donny Wira Yudha Kusuma

Universitas Negeri Semarang, Indonesia

Article Info

Abstract

The availability of teaching materials that can increase the activeness and independence of children's learning, especially beginner swimmers in the efficiency of improving the ability of motion techniques, greatly affects the quality and success and ability of students to digest the material and increase their own interest to always be enthusiastic in the swimming learning process. The purpose of this study is to produce swimming learning modules in increasing interest in learning and efficiency of swimming motion techniques in children. The method used in this research is (*Research and Development*) from Borg and Gall which consists of ten steps. This study uses research instruments in the form of interviews with prospective module users including children and beginner swimmers to find out the response to the module. Based on the student response questionnaire, the results obtained were students' interest and positive responses to the modules that had been made. At the development stage the product was produced in the form of a swimming learning module for beginners, validated by 6 experts, and a questionnaire in response to the module. The module testing phase was conducted in 20 children who are beginner swimmers in several Semarang City clubs. Modules are prepared by taking into account aspects of the accuracy of the contents, digestibility of modules, stages of swimming, module attractiveness, appearance, and use of language and terms. Overall, the modules produced were declared valid and according to the experts included in the criteria were eligible to be used. Modules were produced with design and content components that have been tailored to the needs of users

INTRODUCTION

Swimming sports are generally also called water sports which include games, competitions, and matters related to safety, especially for people who have daily activities related to water such as swimming pools, marine tourism, life on the edge of the river, related to that everyone is required to have knowledge and skills about swimming (M. Faradise Lekso, 2013). Water sports can provide more benefits for us, especially in swimming which is very good for growth and development (Christiani, 2014), and swimming is a form of anaerobic activity that can improve body fitness (Carlo & Elizabeth, 2009). In swimming, the fastest style is the *crawl* that usually used by athletes in freestyle numbers, (Ade Bagus, 2014). This is because in the *crowl* force the barriers are few so the rate is maximal. There are areas of freestyle concentration (crawl), i.e. (1). Body attitude (2). Leg movements (3). Arm movements (4). Breathing and coordinating motion (C. Rob Orr and Jane B. Tyler (2008: 14). *Swimming provides the possible of developing both the physical and psychological characteristics which form the basis for all types of athletics activities* (Baryam Temur, 2018).

In general, childhood is the ideal age to make athlete seeds. Children still receive little movement information and are still very *flexible* to accept new movement skills, but it should be noted that the movement skills of children are still limited. Motion skills become prominent in human life, they cannot be obtained practically because of the need to practice and repeat the motion continuously (Septian, W, 2018). Activities in water from an early age help children to develop a spirit of maintaining physical fitness, muscle strength, coordination and balance (Hernawan, et al .: 2018).

Fine motor skills are skills that require the ability to control small or fine muscles to achieve the implementation of good skills (Yudha. F, 2016). Skills are the ability to use reason, thoughts, ideas and creativity in doing work. Motion skills become prominent in human life, movement skills cannot be obtained practically because of the need to practice and repeat the motion continuously (Septian, W, 2018). In the

child's space, special attention needs to be given to get the child's maximum movement. Anthropometric based talent identification can be done at a mature age where the body is more stable (Nasuka, Erwin Nizar Priambodo: 2017). In achieving achievements in sports an athlete or swimmer must have four main aspects which include physical, technical, tactic and mental which must be developed through regular training based on the principles of correct training (Ikhvanus Shava, et al; 2017).

Swimming clubs in big cities are quite a lot, coupled with individuals who open private lessons that are mushrooming in the community. Optimizing the implementation of training and swimming learning will certainly be very influential to support someone in developing and practicing both from the side of the child and the coach himself. Facilities and infrastructure will certainly greatly support the potential and ongoing swimming activities in each region. In the city of Semarang there are several pools that are commonly used for swimming activities. The following is a list of swimming pools in Semarang:

Table 1. Swimming pool in Semarang

No	List of Swimming pool in Semarang
1	Manunggal Jati swimming pool
2	Jatidiri swimming pool
3	Oasis Swimming Pool
4	Ngalian Tirta Indah swimming pool
5	Marina swimming pool
6	Gor Karangrejo swimming pool
7	Water Blaster
8	Bukit Duta swimming pool
9	Paradise Club swimming pool
10	Jungle toon Water Park
11	Western Star Hotel swimming pool
12	Tirta Sekar swimming pool

Source: data.jatengprov.go.id

Swimming clubs in general have their own training classes according to the ability of children, so that the training will be in accordance with its portions and on target. One of the clubs in Semarang that has quite good coaching is the

Spectrum club, this club has been established since 2001 so that the coaching is good enough, coaching or training for early childhood or beginners is done with the programm from the most basic training for gliding, foot training, hands to coordination motion for breathing. Swimming requires a child to move his arms and legs so that they can float and move from one place to another. And leg and hand movements are carried out continuously until reaching the finish (Sriningsih, 2017).

Swimming training at an early age or beginner must always be accompanied by a trainer to justify the style technique, at the beginner level this style technique is trained to be the basis of future movement techniques. Exercise is a process of self-empowerment through an activity that is systematic, repetitive, and increasingly adds to the burden of the task. (Sabaruddin Y, 2018). Swimming is a sport that competes in the speed of swimming athletes in the ability to swim (Edo Prasetyo and Moch. Yunus: 2017). According to Rudi Susilana and Cepi Riyana in their book entitled Learning Media (2008: 14-15), printed media is the visual media for making it through a printing process. This printed material media presents its message through letters and pictures illustrated to further clarify the message or information presented. From the explanation above, the researchers have an idea or solution to make a swimming learning module book containing swimming techniques along with illustrative drawings that are interesting and easy to understand, especially for children. So that swimming learning is more efficient in time and space, because in addition to swimming, children can learn movement by imagining or practicing swimming technique movements with limited space, so that when they are in pool, the child is able to be more proficient in practicing the swimming movements instructed by the trainer. The trainer does not have to repeat the material at each meeting and will greatly save time for children to master the swimming style.

METHOD

The research design used in this research is *research and development*. It is called research-based development. Development research methods are research methods used to produce certain products and assess the effectiveness of these products. Another case, to produce a particular product needs analysis and to test the effectiveness of the product. The research procedure that will be used in this study is in accordance with the steps in using the *Research and Development* (R & D) Method. Then the procedure for developing a swimming learning module book is summarized as follows: (1) identifying problems, (2) collecting data, (3) designing product, (4) validating design, (5) revising design, (6) testing product, (7) revising product 1, (8) using trial, (9) revising product 2 and, (10) doing mass product. The type of data obtained in this study is used to assess the quality of the swimming learning module produced so that it is suitable for use. The data obtained consist of two types of data, namely quantitative data and qualitative data.

Quantitative data is the main data obtained from experts and swimmers about the assessment of swimming learning modules. Qualitative data are in the form of suggestions and input for the improvement of swimming learning modules obtained during validation to material experts and media experts, as well as from swimmers during limited trials and readability trials. The participants in this research are material experts, instructional media experts, senior coaches of several clubs in the cities of Semarang and Jepara. Material experts are lecturers from Semarang State University who teach or teach swimming subjects, while learning media experts are lecturers from Semarang State University who are experts in learning media. The product trial was carried out on novice swimmers in the cities of Semarang and Jepara. Determination of the sample used a *purposive sampling* pattern gradual technique (aimed at certain considerations). Each trial phase used a different sample. Limited product trial samples were carried out in small groups and in trials of using large groups. The use

of *purposive sampling* patterns can be seen from the way that the researchers determine their own samples taken because there are certain considerations. The sample represents all levels of beginner swimmer abilities, namely students with high, medium and low abilities in the beginner's sphere. It is intended that the final results of the product can be accepted by all swimmers with their different abilities.

Data collection instruments used in this study are non-test instruments in the form of questionnaires. It is intended to facilitate their work and the results will be better, which means more thorough, complete and systematic so as to facilitate processing data. The instruments in this study consist of: 1) product validation sheets; 2) questionnaire or response questionnaire; and 3) interview.

This instrument is used to obtain data on expert evaluations of swimming speed calculation products. The results of the experts' assessment are the basis for product improvement before being tested. Researchers provide swimming learning module books that have been designed for several experts (validators) to be assessed. The validators fill out the product validation sheets by writing down categories of assessment of each product sub-section. The assessment category consists of 4 assessment criteria, namely: very poor (value 1); not good, (value 2); good (value 3); and very good (value 4). In addition, validators are welcome to write criticisms and suggestions directly on the text of the device or on the validation sheet, which has been provided by putting a check list (√). The instrument was developed using a Likert scale with 4 scales. The lowest score was given number 1 and the highest score was given number 4. The data analysis technique used was descriptive data analysis technique. Descriptive analysis is used to determine the feasibility of the swimming learning module. The measurement scale used is a Likert scale with four answer choices: Very Good (score 4), Good (score 3), Not Good (score 2), and Very Not Good (score 1). To determine the interval between Very Good and Very Poor is used.

FINDINGS AND DISCUSSION

Based on the research that has been done, it was obtained data regarding the process of developing swimming learning modules to increase interest in learning and the efficiency of swimming motion techniques in beginners as well as the results of limited trials to determine student responses to modules. This research and development resulted in a product in the form of a swimming learning module with content that is processed to increase interest in learning and the efficiency of beginners' movements in the hope that public interest or students who think swimming is difficult becomes easier. The beginner swimming learning module in this study was developed through several stages in accordance with the procedure of ADDIE development, namely: (A) analysis, (D) essay, (D) e-development, (I) implementation, and (E) valuation). The ADDIE application in product development was carried out with several stages which were of course in accordance with established procedures. The Validation Test was carried out by validating the product to 4 material substance experts as swimming practitioners, 1 media design expert, 1 learning expert in general as an expert in the field of learning. This product validation was carried out with the aim of obtaining a feasibility assessment, suggestions and input from competent experts in their respective fields so that the modules developed have good quality. This step was carried out by formulating a research instrument in the form of a module content validation sheet by experts according to their respective fields. The appointment of experts was based on the field of expertise as seen from the activities and works or achievements of each expert. This validation sheet was used as a measurement tool to assess or improve the quality of modules that have been made before entering the implementation phase, in addition to this stage the researcher also formulated a student questionnaire sheet in the form of a positive statement as much as 50 items covering several aspects. Questionnaire responses of these students were used as a module assessment tool.

The assessment of modules was carried out by experts according to their respective fields of expertise. Several aspects assessed in the development of the module were the aspects of content suitability, linguistics, and presentation techniques for the substance expert swimming experts. The media design expert assessed 6 points, namely the presentation of the module, the feasibility of graphics, the quality of the display, the color, the readability of the writing, and the attractiveness of the cover. While swimming experts assessed three points, namely the focus of the presentation of swimming material, the quality of swimming material, and the effectiveness of swimming material. The module assessment results include data in the form of scores and then converted into five categories, namely Very Good (SB), Good (B), Fairly Good (CB), Less (K), and Very Less (SK). The scores obtained were also processed into percentages for eligibility criteria. This study aims to produce a program in the form of swimming modules for beginners to find out students' responses to the modules developed. Module development was carried out through the stages of developing the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) models.

CONCLUSION

Based on research and development conducted by the researchers, it can be concluded that the design of swimming module preparation for beginners used by researchers through a development model included the stages of analysis, design, development, implementation and evaluation. The analysis phase included the gap analysis stage until development objectives were generated. The design phase produced indicators and tasks in the module that are integrated with the contents tailored to the needs of users to produce content that is ready to be poured in real form into the module at the development stage. The development stage produced products in the form of swimming modules for beginners with the basic concepts of module that have been developed. After the module was declared valid by the expert, the next stage of the implementation was in the form of a module trial phase by the users to find out students' responses to the module. This research is a module development research as a means of independent learning. In connection with the development of the module, it is necessary to do a follow-up to obtain a swimming module for beginners that is better and has a good quality.

REFERENCES

Ade bagus. P. "Pengaruh Viskositas Air Kolam Renang Terhadap Kecepatan Renang Gaya Crawl. *Journal of Sport Sciences and Fitness.*

Carlo M. Dan Elizabeth M. (2009). *The Effect of Reherseal Learning and Warm-up on the Speed of Different Swimming Strokes. The International Journal of Research and Review. The International Journal of Research and Review* (Volume 2): 2094-1420.

Christiani Endah Poerwati. 2014. "Meningkatkan Kreativitas Dan Keterampilan Motorik Melalui Pengenalan Sains Berbasis Eksperimen sederhana Pada Anak Tk Tunas Mekar Ii Dalung". *Journal Program Pascasarjana Universitas Pendidikan Ganesha Program Studi Pendidikan Dasar.* (Volume 4 Tahun 2014).

Edo Prasetyo dan Moch. Yunus. 2017. *Hubungan antara Frekuensi Gerakan Kaki dengan Prestasi Renang Gaya Crawl 50 Meter.* Indonesia Performance Journal. IPJ 1 (2) (2017). ISSN 2597-3624.

Hernawan dkk. (2018). Pengembangan Model Pengenalan Air Untuk Anak Usia Dini. Jurnal Pendidikan Anak Usia Dini. (Volume 12 Edisi 2 Tahun 2018).

Ikhvanus Shava, Donny Wira Yudha Kusuma & Tri Rustiadi. 2017. *Latihan Plyometrics dan Panjang Tungkai terhadap Kecepatan Renang Gaya Dada Atlet Renang Sumatera Selatan.* JPES 6 (3) (2017): 266 – 271. Journal of Physical Education and Sports. P-ISSN 2252-648X e-ISSN 2502-4477.

M. Faradise Lekso. 2013. "Pengaruh Metode Latihan Dan Power Tungkai Terhadap Kecepatan Berenang 50 Meter Gaya Dada Pada Atlet Kelompok Umur IV Perkumpulan Renang Spectrum Semarang". *Unnes Journal of Sport Sciences*

Nasuka, Erwin Nizar Priambodo. 2017. "Hubungan Panjang Lengan dan Panjang Tungkai dengan

Kemampuan *Vertical Jump, Spike Jump Reach dan Block Jump Reach* Remaja Putra". Jurnal Media Ilmu Keolahragaan Indonesia. Volume 7. Nomor 1. Edisi Juli 2017. P-ISSN 2088-6802 | e-ISSN 2442-6830.

S. Eko Putro Widoyoko. 2014. Penilaian Hasil Pembelajaran di Sekolah. Yogyakarta: Pustaka Pelajar.

Sabaruddin Yunis Bangun. 2018. "Implementasi Latihan Olahraga Renang Anak Autis". *Jurnal Olahraga Prestasi.* 14(1): 90-107.

Septian Williyanto, Nasuka & Donny Wira Yudha Kusuma. 2018. *The Development Of Badminton Skills Test Instruments for Athletes in Age Groups of Children, Cub, Teenager and Youth*. Journal of Physical Education and Sports. JPES 7 (1) (2018) : 50 – 54. P-ISSN 2252-648X. e-ISSN 2502-4477.

Sriningsih. 2017. "Keterampilan Renang Gaya Kupu-Kupu Melalui Pendekatan Bermain Dalam Pembelajaran Akuatik. *Jurnal Pendidikan Jasmani dan Olahraga.* 9(2): 43-52.

Rob Orr,C and Tyler,Jane B. (1987). Dasar-dasarRenang. Bandung; Angkasa.

Rudi Susilana.Cepi Riyana,.2008. Media Pembelajaran. Bandung :CV Wacana Prima.

Temur, Baryam. 2018. *Investigation of the Relationship Between Basic Swimming Instruction and Some Physical and Motor Characteristics. Journal of Education and Training Studies.* 6(11): 2324-805X.

Yudha febrianta. 2016. "Alternatif Mengembangkan Kemampuan Motorik Kasar Anak Usia Dini Dengan Aktivitas Akuatik (Berenang). *Jurnal Pendidikan Anak.* 2(2): 85-96.