MULTICOLOUR FLAG GAME (MFG) AS AN ALTERNATIVE LEARNING METHOD FOR ADAPTIVE STUDENTS

Sutaryono[*1], Fajar Awang Irawan[2], and Dhias Fajar Widya Permana[3]

[1]Faculty of Education Science, Universitas Negeri Semarang, Indonesia
[2,3]Faculty of Sport Science, Universitas Negeri Semarang, Indonesia

[*]Email: sutaryono@mail.unnes.ac.id

Abstract

Physical education is a component that can unify cultures, languages, and nations. The purpose of this study was to facilitate deaf students to get the correct information and motivation to participate in physical activities in their class. Multicolour Flag Game (MFG) is a research tool that is used in this study to evaluate the adaptiveness of the subjects. The physical fitness elements include running back and forth, zig-zag running, and running past obstacles. The total number of subjects that participated in the trial and test for phase I, phase II and Phase III are eight, ten and fifteen students, respectively. It was shown from the study that the cognitive, affective and psychomotor evaluation for the phase I is 93%, 94% and 83%, respectively. Whilst for phase II and III, the aforesaid evaluations are 96%, 94% and 87% as well as 98%, 96% and 90%, respectively. Therefore, it could be concluded that the MFG approach does significantly improve the learning outcomes of the subjects, and could be further used to entice challenged students in participating in physical activities.

Keywords: Development game, adaptive student, physical activity

Introduction

Physical education is a component that can unify cultures, languages, and nations. It is worth noting that education is for all, and no one should be left out from it, even with students with limited abilities (challenged). A student who experiences hearing impairment (deaf) often face difficulties understanding instructions from teachers in learning physical education (Wijayanti, Soegiyanto, & Nasuka, 2016). Diono, Mujaddid, & Prasetyo, (2014) suggests that in the physical education classes, deaf students have equality as a normal student in learning, but the differences in the learning process including how to transfer the information to the students.

Wijayanti, Soegiyanto, & Nasuka (2016) remarked that such student interest in the learning process of physical education is not satisfactory. These might be because of the unsuitability of the teaching methods employed were to the deaf student in the class. Demonstrations are often used to get student's attention, but hearing limitations are hampers the motivation of adaptive students in physical education learning.

The development of an educational game model in physical education learning is an appropriate method that assists the teacher in giving information to the student. The purpose of this study is to facilitate deaf students to get correct information and motivation for participating in physical activity in their class through the use of multicolour flag game (MFG).

Methods

The main subject of the MFG is an educative modification that has several elements of physical fitness (Irawan & Sandiyudha, 2018; Irawan, 2011; Sudrajat, Nasuka, & Irawan, 2019). The physical fitness elements in this study are running back and forth, zig-zag running and running past obstacles. The distance is around 10 meters, and the cone space is 1 to 5 meters in the running track with two flags for each track. This MFG is easy and competitive as it could improve teamwork, motivation, and inculcate high spirit. MFG also consists of physical conditioning components such as speed, agility, balance, accuracy, and endurance. The total participants in phase I (trial and test) are 8 students. After completing and adding some recommendation from the experts, phase II and phase III that consists of]10 and 15 students, respectively were executed. The participants for each phase were different to minimise the intervention of the test. All participants completed an informed consent form before carrying out the test. The research protocols were divided into 7 phases: 1) Observation and collect the information, 2) Develop the instrument and rules, 3) Evaluation from the expertise, and trial and test I, 4) Product revision I and evaluation from the expertise from phase I, 5) Phase II, 6) Revision of Phase II, 7) Phase III. The protocol of the study began when the researcher(s) explained about MFG, and then the participants tried to play the game as well as they could guidance from the assistant. The materials for MFG are multicoloured flags shown in Figure 1 and the exercise is carried out at a field within the vicinity of the schoolyard.

Figure 1: Multicoloured Flags

The data collection of the present study includes observation, documentation, and questionnaire. The instruments used include an evaluation sheet, student skills checklist and questionnaire for each student. Evaluation sheet was used to collect the data from the physical education expert and the expertise of the product lesson. The student skills checklist was used to see the student psychomotor skills and attitudes in the field. While the questionnaire was used to analyse the student's understanding when doing the activity (MFG). Recommendation and suggestion in an additional form used to complete the data from the respondent. All data in the score were analysed in terms of percentage.

**Table 1:** Factor, indicator, and student assessment.

Number	Factors	Indicators
1	Cognitive	Student able to understand the game and the rules
2	Affective	Student shows the attitudes (discipline, sportsmanship, responsibility, confidence, and honesty)
3	Psychomotor	Student able to perform Multicolor Flag Game

Table 1 shows the student assessment in Multicolor Flag Game. The assessment included cognitive, affective, and psychomotor aspects. The grade system had a range of values of Very Low (0%-20%), Low (20,1%-40%), Moderate (40,1%-70%), Good (70,1%-90%), and Very Good (90,1%-100%). The sign using a checklist in the form and can be filled in the available column.

Result and Discussion

The product (MFG) has been evaluated by a physical education expert, physical education teacher as well as a classroom teacher to validate the study. The evaluation aspects consist of equipment, facilities, and rules. The first draft with the evaluation form was given to the experts. The results from the three experts included assessments and suggestions to

improve the MFG. The assessment from the teacher's evaluation forms was based on the student questionnaires as a reference for product development. The next stage is the use of the MFG product in phase I. Suggestion and comment become a reference in the revision for a better trial & test procedure in phase II. The purpose of the trial and test is to determine the issues such as weakness, and trial error in the field.
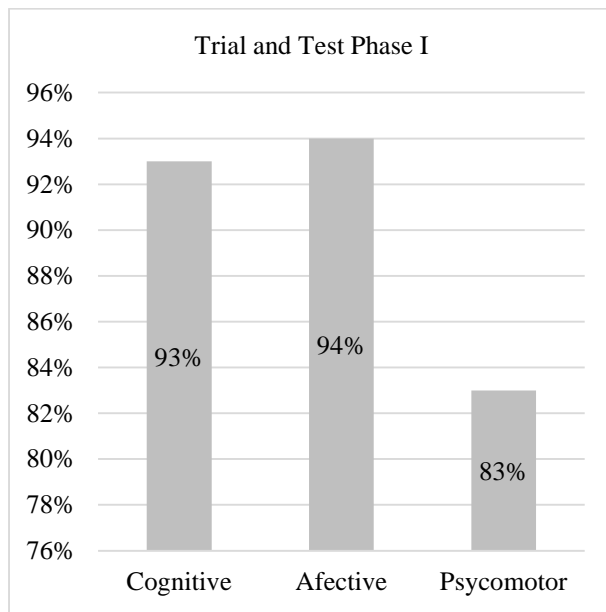
(a)
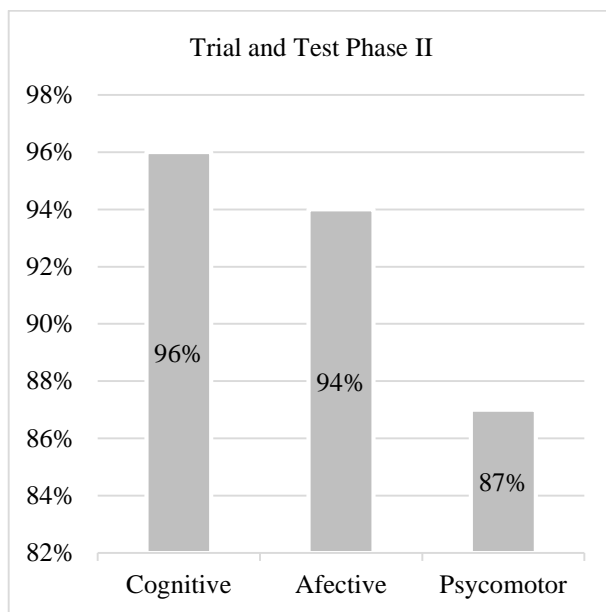
(b)

Figure 2: The Results of Trial and Test

The results of the trial and test in phase I demonstrated that two of three aspects evaluated were Very Good. The cognitive, affective and psychomotor evaluation were 93%, 94%, and 83%, respectively. The second phase in the trial and test was amended based on the feedback from the experts. Such improvements include additional cones in the court to assist students in running and replacement of the tire media using cardboard when running past obstacles. Based on Figure 2, the results of the trial and test for phase II was better, albeit not significant. The cognitive, affective and psychomotor aspects in the trial and test phase II was shown to be 96%, 94%, and 87%, respectively. It could be seen that there is an improvement in the cognitive and psychomotor aspects.

The protocol began when the teacher divides the students into two groups. The students played MFG as explained at the opening class under monitoring from the assistant. MFG has three steps; running back and forth, zig-zag running and running past obstacles. There are the students compete to run and take the flag (colourful) as fast as they could. These methods are easy to understand and receive the information clearly from the teacher. To teach concentration, the teacher puts the flag moving down and up alternately according to the signal, and so on until the game is over. Assessment is based through the evaluation from the questionnaire form. Motion, form, and human analysis are natural and the students can learn this by themselves (Irawan, Chuang, & Peng, 2017). This study also supported by Borg and Gall in Sugiyono, (2010) that teaching on students in special needed should include research and development methods such as MFG as it could adjust the circumstances and needs of students.
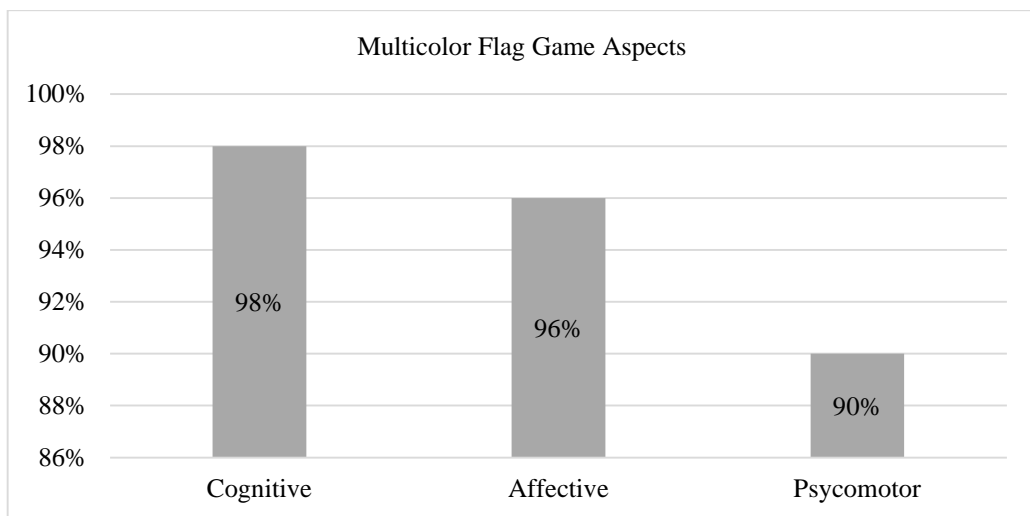

Figure 3: The Results of Multicolor Flag Game Aspects.

Based on the results above, the average of all aspects were Very Good. The percentage for cognitive, affective, and psychomotor was 98%, 96%, and 90%, respectively. The results noted that the students could receive and understand the instructions, rules, and how to play multicolour flag game as well, suggesting the applicability of the MFG to be applied to physical education learning for challenged students (Amung & Saputra, 2000; Harahap & Bustanuddin, 2015, Bahagia & Suherman, 2000).

Conclusion

This study investigated the effect of using the Multicolor Flag Game (MFG) as an alternative method to allow challenged students to be adaptive, particularly deaf students. It was shown that through this method, the cognitive, affective, as well as psychomotor assessment, demonstrated significant improvement. Therefore, it could be concluded that the method could be extended to teaching other forms of physical activity education.

References

Amung, M., & Saputra, Y. M. (2000). *Perkembangan Gerak dan Belajar Gerak*. Jakarta: Depdiknas.

Arikunto, S. (2010). *Prosedur Penelitian*. Jakarta: Rineka Cipta.

Bahagia, Y., & Suherman, A. (2000). *Prinsip-prinsip Pengembangan dan Modivikasi Cabang Olahraga*. Jakarta: Depdikbud.

Diono, A., Mujaddid, & Prasetyo, F. A. (2014). *Situasi Penyandang Disabilitas*. Kementerian Kesehatan RI.

Harahap, R. R., & Bustanuddin. (2015). Perlindungan Terhadap Penyandang Disabilitas Menurut Convention on The Right of Persons With Dissabilities (CRPD). *Jurnal Inovativ*, *VIII*(1), 17–29.

Irawan, F. A. (2011). Pengembangan Permainan Kasbols untuk Pembelajaran Pendidikan Jasmani Olahraga dan Kesehatan bagi Siswa MTs NU Ungaran Tahun 2010. *Jurnal Media Ilmu Keolahragaan Indonesia*, *1*(1), 48–51. Retrieved from http//journal.unnes.ac.id

Irawan, F. A., Chuang, L.-R., & Peng, H. (2017). Kinematic Comparison of Upper Extremity Among Fastball , Curveball , and Slider in Taiwan College Pitchers. *Chinese Journal of Sport Biomechanics*, *14*(1), 1–8.

Irawan, F. A., & Sandiyudha, T. B. (2018). Pengembangan Alat Bantu Push-Up (Push-Up Counting) Sebagai Alternatif Perangkat Kebugaran Jasmani. *Jurnal Media Ilmu Keolahragaan Indonesia*, *8*(1), 26–30.

Sudrajat, A., Nasuka, & Irawan, F. A. (2019). Development of ANS PONG as a Tool for Block Training and Smash in Table Tennis Games. *Journal of Physical Education and Sport Science*, *8*(1), 19–25.

Sugiyono. (2010). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Penerbit Alfabeta Bandung.

Wijayanti, D. G. S., Soegiyanto, & Nasuka. (2016). Pembinaan Olahraga Untuk Penyandang Disabilitas di Nasional Paralympic Committee Salatiga. *Journal of Physical Education and Sport*, *5*(1), 17–23.