

DEVELOPMENT AND EVALUATION OF LESSONS IN ADAPTED PHYSICAL EDUCATION FOR HEARING IMPAIRED CHILDREN

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Abstract: *This study was conducted to develop and evaluate lessons in adapted physical education designed for the hearing impaired children in Paaralang Pag-ibig at Pag-asa. To identify the physical skills; prepare lessons on adapted physical education; to conduct an evaluation of the lessons through, a review of the lessons by a pool of experts, a try-out of the lessons; to revise the adapted physical education lessons based on the results of the evaluation. The study centered on the development and evaluation of lessons in teaching adapted physical education. It followed four stages of development, namely: Stage I – Planning; Stage II – Writing; Stage III – Evaluation and Stage IV – Try out. The physical education skills for hearing impaired children are creative movements, rhythm and sports. These skills were grouped as: locomotor and non locomotor. Ten lessons which included suggested supplementary activities were prepared for eight weeks. The evaluators found the materials appropriate and suited to abilities and interests of the clientele. The developed lessons are suited to the needs of the clientele and their teachers found the materials interesting, varied and provided clear instructions. The lessons give ample skills in their daily living. Based in the findings it was concluded that the lessons in the adapted physical education developing skills of hearing impaired children written and found appropriate and suitable to the target clientele. The following recommendations are made wherein the lessons in teaching physical education be used for hearing impaired children; it can be used with other children with disabilities; teachers may create more supplementary activities for the different physical educations skills; assistive devices and equipment; procedure and rules be made readily available to aid the pupils in performing skills; extensive research be made to determine the effectiveness of the developed lessons. All developed lessons should be tried-out.*

Keywords: Adapted physics education, hearing impaired children

the regular school by the Department of Education, Culture and Sports.”

INTRODUCTION

Adapted Physical Education is that part of the educational program that contributes to the total growth and development of students with disabilities. It incorporates movement experience, leadership skills, cooperation, self-worth, and allows the students to get a well-rounded form of education. Physical Educators can only reach out to every students if a variety of entry levels are available that allow for every students to be successful (Linda J. Giebel).

The curriculum for the hearing impaired has always been patterned after that of the normally hearing, because it is believed that the goals of special education are basically the same as those in general education. Section 1 of article V (Policies and Guidelines for Special Education) states that “The curriculum for special education shall be based on the curriculum prescribed for

Hearing loss or deafness does not affect a person’s intellectual capacity or ability to learn. However, children who are either hard of hearing or deaf generally require some form of special education services in order to receive an adequate education. Batas Pambansa Bilang 232 (Education Act 1982) states that “The state shall promote the right of every individual to relevant quality education regardless of sex, age, breed, socio-economic status, physical and mental conditions, social and ethnic origin, political and affiliation. The state shall therefore promote and maintain equality of access to education as well as enjoyment of the benefits of education by all its citizens. Both hearing and deaf students have a desire to explore, and play. Deaf need more opportunities to explore and play to improve their physical fitness. Deaf physical fitness lower

(AAHERD 1952). In games played, the same rules and procedure are applied for the hearing impaired even though the means by which his/her needs can be met are somewhat different. The ability to communicate effectively is important, instructional settings as well as while participating in sporting events. There may be little need to modify the demands of physical activity. However, when communication impairments are present, physical educators must do everything possible to ensure effective communications. To meet the needs of hearing impaired children in physical education, it is often necessary to modify or adapt the specific behaviour of the teacher. The ability to adapt or modify methods of instruction with careful selection of the techniques will prove to be a valuable asset. Physical education teacher should focus on ability not disability; provide challenges for the handicapped; ensure safety but do not over protect the handicapped. Communications and balance are two areas of concern for hearing impaired individuals. Only few modifications of activities and equipment will be necessary. Demonstrations and visual aids are also appropriate for use with the deaf. Physical education teachers can make a major contribution to child's education, it is by being sensitive to the child's individual needs and providing an appropriate and acceptable adapted physical education program.

A well designed program of physical education, that is, lessons in teaching physical education for hearing impaired children can contribute to their lives. Development of physical and motor skills necessary for the activities of daily living and participation with peers, family and friends; the development of more positive self-image and self-worth; the development of skills and abilities that will enable them to participate in an enjoyable leisure time activities and recreational pursuits. It should no longer be assumed that all deaf persons should, or want to fit into and function in the hearing world. Adapted physical education—the physical education of children with special needs – is a diversified program that incorporates a variety of individual programs suited to the interests, capacities and limitations of these children. Adapted physical education of people with disabilities has the same goal and objectives as the regular physical education program but make modification and “adapts” when necessary to effectively meet the needs of the individual. The Education of the Handicapped Act (Rehabilitation Act, 1973) provide equal opportunity for the individuals with disabilities. Equity of services for individuals with disabilities when compared with those without. Accessibility to environments so there is equal opportunity to derive benefits from services

(IDEA, 1990) Physical education, intramurals, and interscholastic athletics stating that “where services are provided for non-handicapped individuals, the handicapped must also be afforded opportunity to participate without discrimination on the basis of handicap” (RA Section 504, 1973)

Physical education is often times misconstrued and neglected part of the general education program yet, its implication to humans everyday living is beyond question. It develops the individual's cognitive, affective, and psychomotor capacities. Physical education played an important role in the development of the handicapped individuals (Lavay and Fichstaedt, 1992). Concerning the education of the deaf, S.R. Silverman (1990) states that, “rational attitude points to the recognition that deafness impose certain unavoidable limitation that must be accepted.” One unavoidable limitation is the fact that instructional programs created for regular school classes do not completely satisfy the needs of the deaf students. Therefore, there is a need for more specialized instructional materials for use in schools for the deaf to provide teachers with focus and guideline (Cunningham, 1970). Education Act of 1982 states that the education of persons who are physically, emotionally, mentally, socially or cultural different from the so called “normal” individuals that they require modification of school practices/services to develop from their maximum capacity.

Few changes are required in the physical education program of hearing impaired children. The objectives are the same as those for non-hearing impaired children. At the primary school level, the focus should be on developing a) basic motor skills through games and rhythm activities; b) physical and motor fitness; c) skills in aquatics, dance, individual and group games and sports (including intramurals and lifetime sports) (Federal Register 1977).

To develop the skills of hearing impaired children, the physical education teacher must a) allow the child to move freely in the gymnasium in order to be within hearing and sight range; b) the games should be presented with straight forward rules and strategies; c) familiarize the hearing impaired children with rules and strategies of a game before introducing the activity; d) avoid verbal cues during the game or activity. It is important the deaf child fully understand his or her role before the beginning of the game or activity and that role does not change; e) demonstrate or have another child demonstrate often. It may help the child form a mental picture of how to perform a particular skill correctly.; f) keep instruction simple and direct; g) emphasize action rather than verbal instruction.

This study was an attempt to develop and evaluate lessons in teaching adapted physical

education, designed for Paaralang Pag-ibig at Pag-asa hearing impaired children. Every lessons aimed to provide the children with the knowledge, skills and appropriate activities for developing or improving skill/fitness performance; and build on children with hearing impairment strengths and not exploit their weaknesses.

Specifically, the study intended to:

- i. identify the physical skills among primary hearing impaired children.
- ii. prepare lessons on adapted physical education of hearing impaired children.
- iii. to conduct an evaluation of the lesson through:
 - a. a review of the lessons by a pool of experts.
 - b. a try-out of the lessons by hearing impaired children.
- iv. to revise the adapted physical education lessons based on the results of the evaluation.

The study was an attempt to provide hearing impaired children lessons in adapted physical education that will enhance their knowledge and skills so that they can be successful and can fully participate in physical education. Thus, this chapter contains the researches in teaching/learning adapted physical education. A survey available literature had given enlightenment in the preparation of this research. It seemed that no studies has been conducted on the teaching of adapted physical education for hearing impaired children. The individuals with Disabilities Education Act (IDEA), formerly the Education of the Handicapped Act (P.L. 94-142), includes "hearing impairment" and deafness as two of the categories under which children with disabilities may be eligible for special and related services programming.

Hearing impaired children find it much more difficult than children who have normal hearing to learn vocabulary, grammar, word order. Their physical fitness is lower (Fait and Dunn, 1984). Even though they are deprived of their hearing, still they continue to ask questions, seek answers and to make sense out of the blooming buzzing confusions of the world into which they lived.

Physical Education Approach: Considerable differences about the ways individuals respond to stimuli exist among persons who are deaf or hard of hearing (Reagan, 1990). Instruction should be directed toward motor and social skills that will enable the student to participate in leisure, recreation, and sport activity in the community.

Few changes are required in the adapted physical education program. Athletic opportunities should be provided for pupils who are deaf or hard of hearing so that they have the opportunity to participate in activities that will provide enjoyment and help maintain a healthy lifestyle after their school years (Stewart and Ammons, 1994). For those deaf and hard of hearing children who choose to interact with a hearing population in leisure, recreation, sport, and physical education activities, communicating whether verbal or non-verbal promotes unity and stability (Crowe and Horak, 1998). The ability to communicate effectively is important in instructional setting, as well as while participating in sporting events. When there is effective communication and the learning environment is properly managed there may be little need to modify the demands of physical activity (Butterfield and Ersing, 1986).

The implementation of physical education is based on two philosophies, namely humanism and behaviourism. Humanism is a philosophical approach which emphatically stressed the development of self-concepts, positive interpersonal relationship, intrinsic motivation and personal responsibilities (Sherill, 1993). This humanistic approach to adapted physical education utilizes physical activities which develop the individuals of self-image, good concept of himself and good relationship with other people. Humanistic approach eventually affords the individual ultimate potential and competencies for learning, living and work. Behaviouristic Philosophy is strongly a systematic way of organizing the necessary environment to facilitate learning process for the improvement of the individual's social competencies. This approach stressed a well-structured learning situations and employed behaviour modification in physical education to assist students with disabilities learn inappropriate behaviour.

Physical education teachers can make a major contribution to a deaf child's education it is by being sensitive to the child's individual needs and providing an appropriate and acceptable physical education program – that is adapted physical education. Adapted physical education for people with disabilities is developmentally appropriate physical education at its finest. It is adapting, modifying, and/or changing a physical activity so it is as appropriate for the person with disability as it is for a person without disability (PE Central, 2001). The goal is to have an activity where all students can be successful. According to Ewisemen (1994), adapted physical education is a specialty area within the field of physical education which has developed to provide programs for individuals with special needs. David Auvter (1992) stated that the broad curriculum and

everyday activities of the physical education which has developed to provide program meet the needs of students with varying levels of development.

Hattin (1986) reported that deafness does not stimulate hyperactivity and that children could profit from more endurance. Exercises to gain their level of fitness. Care should be taken to ensure that hearing impaired children develop skills that will enable them to participate in physical fitness and leisure time activities available in their community. The program should meet the needs and interests of the participants and should reflect the needs and interest of community in which they will participate in leisure, recreation and sport activities (Reagan, 1990). The major focus of physical education programming for the deaf or hard hearing should be placed on middle and upper levels of activities (Seaman and De Pauw, 1990). When programming for handicapped individuals in physical education, the full range of physical activities can and should be utilized (De Pauw, 1997). Learning can and does take place through the medium of movement. Thus, while learning in the motor domain must not exclude other learning experiences (Mosston, 1996).

Movement provides a natural medium through which children discover and explore their environment and learn about the world. Movement allows the opportunity for physical growth and social interaction, it is enjoyable and it provides for release of tension (Cratty and Humprey, 1998). Learning through movement is not a new idea to the physical educator. Through the movement exploration method, children can experience making their bodies as "big" as possible and as "little" as possible (Jessie Fohring Williams, 1995). Physical education teachers should incorporate creativity into their programs.

The key to encourage creativity is to involve the child in the learning process (De Pauw, 1997). The teacher should encourage the child to find a new way of moving, or to do something different or unique. Encouraging creativity often requires initial guidance or structure by the teacher through environmental manipulation and class discussions.

Movement must be, inherently, an integral part of learning in all centers, and an important part of every special activity (Shephard L., 1994). Movement is an end in itself. Children need to move, and they must be given every opportunity to do so. The opportunities for learning that are inherent in the active learning center are endless, meet the needs of young children to use their bodies and to participate in play, all the while reinforcing other learning (Crais E., 1991). One of the greatest results of physical education programming is the handicapped students who wants to, can and will actively participate in physical activity, who seeks out and accepts challenges, and who feels confident and worthwhile as an individual (Seaman A., De Pauw K., 1990).

DATA ANALYSIS

The study employed the descriptive method for the survey of needs and development of materials for adapted physical education of hearing impaired children. In planning related literature in physical education for regular school children were reviewed and examined, through this the table of specifications were prepared and the course outline was designed. Construction of lessons was designed in Stage II. Pupils' and teachers' evaluation and the final copy of the paper were prepared on Stage III. Try-out of the lessons were designed on Stage IV.

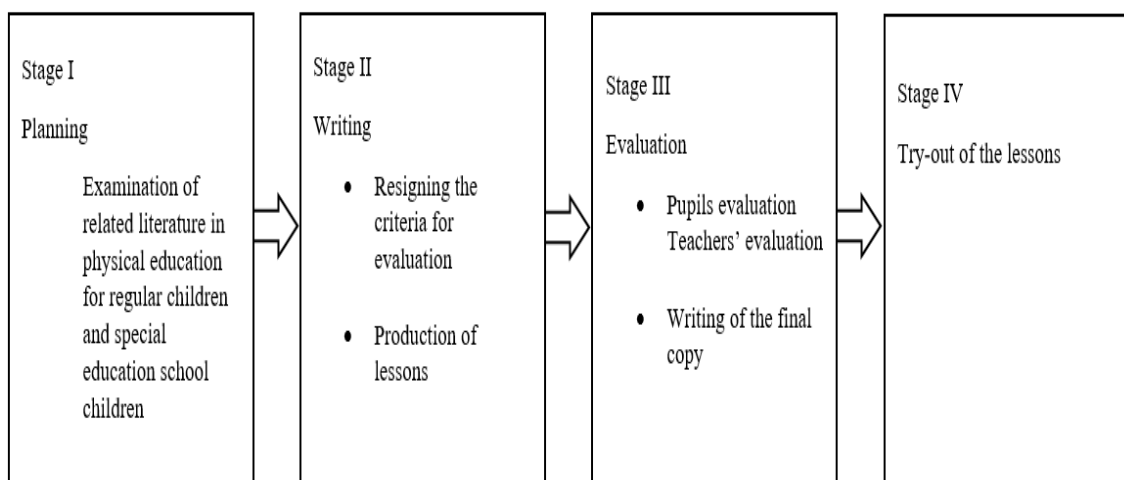


Figure 1 – The procedure in the Development and Evaluation of Lessons in Technology Physical Education for Hearing Impaired Children

Four (4) teachers in physical education were involved in the evaluation of the lessons and eighteen (18) hearing impaired pupils in Grades II and III participated in the try-out lessons.

Both teachers and pupils are in Paaralang Pag-ibig at Pag-asa in San Pablo City.

A materials evaluation form consisted of two (2) parts: Part I is on personal data of respondents and Part II is on the evaluation of the materials on the following aspects:

Practical considerations	2 items
Activities/Sports	7 items
Skills developed	2 items
Vocabulary	2 items
Subject and content	2 items
Guidance needed	2 items
Total	17 items

These seventeen (17) items are in 5-point scale. The two (2) final questions are open-ended questions regarding comments and suggestions which the respondents may want to incorporate in the study. A numerical value was assigned for each answer for easy computation. 5 strongly agree, 4 agree, 3 neither agree nor disagree, 2 disagree and 1 strongly disagree. After a quarter, the participants were asked to evaluate the materials. They were given permission to watch the video tape showing how the materials were used in class. After every lesson, they needed to stop watching the video recording for them to

evaluate. The same procedure was used when physical education teachers evaluated the materials. The answered forms were collected and compiled. Responses were recorded and tallied. The mean of the responses for every statement in the rating scale in terms of practical considerations, activities/sports, skills developed, vocabulary subject and content, and guidance needed were computed. In determining the consistency of the responses of the participants of Paaralang Pag-ibig at Pag-asa and the physical education teachers, the independent t-test was used.

Table 1 – Summary of the means in the evaluation of materials by item

ITEM	TEACHER'S MEAN	INTERPRETATION	PUPIL'S MEAN	INTERPRETATION
1	4.65	Strongly agree	4.43	Agree
2	4.58	Strongly agree	4.48	Agree
3	4.48	Agree	4.57	Strongly agree
4	4.43	Agree	4.5	Strongly agree
5	4.66	Strongly agree	4.55	Strongly agree
6	NA		1.54	Disagree
7	1.88	Disagree	1.53	Disagree
8	4.6	Strongly agree	4.67	Strongly agree
9	4.53	Strongly agree	4.66	Strongly agree
10	4.43	Agree	4.69	Strongly agree
11	1.85	Strongly disagree	1.81	Disagree
12	4.7	Strongly agree	4.65	Strongly agree
13	4.55	Strongly agree	4.71	Strongly agree
14	4.53	Strongly agree	4.65	Strongly agree
15	4.68	Strongly agree	4.71	Strongly agree
16	4.6	Strongly agree	4.68	Strongly agree
17	1.7	Disagree	1.49	Strongly disagree
Overall	4.05	Agree	3.9	Agree

Table 2 – Summary of the evaluation of the materials by the teachers' and the pupils

Lesson	Teachers \bar{X}_1	Pupils \bar{X}_2	Difference	SD (t)	SD (s)	t-test	Interpretation
1	4.03	3.83	0.2	.41	.49	2.31	Not Significant
2	3.98	3.93	0.05	.27	.42	2.24	Not Significant

3	4.14	4.01	0.13	.4	.48	2.28	Not Significant
4	4.11	3.98	0.13	.36	.42	2.29	Not Significant
5	4.09	3.88	0.21	.38	.52	2.36	Not Significant
6	4.06	3.91	0.15	.15	.52	1.87	Significant
7	4.02	3.65	0.37	.42	.51	2.33	Not Significant
8	4.03	3.94	0.09	.23	.46	2.34	Not Significant
9	4.03	3.92	0.11	.23	.42	2.32	Not Significant
10	4.04	3.94	0.1	.31	.36	2.18	Not Significant

CONCLUSION

Based on the results of the evaluation done by physical education teachers and the participants (Table 1), it was found out that if the mean (\bar{X}) were interpreted, the teachers' rating were higher than that of the participants. Like when the materials are "strongly agreeable" to the teachers ($\bar{X} = 4.65$), they were only "agreeable" ($\bar{X} = 4.43$) to the pupils, when the materials are "disagreeable" ($\bar{X} = 1.88$) to the teachers, they more "strongly disagreeable" ($\bar{X} = 1.53$) to the pupils. But when the mean (\bar{X}) was calculated through independent t-test (Table 2) to find out if the difference was significant or not, it was found out that there was no significant difference between the responses of the teachers and the participants with critical value at 0.05 level of significance at 20 df in all lessons except for lesson 6 : Hand in Hand where the difference was significant. Thus, the decision of physical education teachers and that of the participants were similar, where both the teachers and the participants got high ratings.

The evaluators recommended the use of materials as supplement to the pupils because the developed lessons truly contributed and provided opportunities for the pupils to participate and gain knowledge and skills. The materials were flexible and help in better understanding of the lesson. They were functional, challenging, interesting, fun and educative indeed. They further said that the materials were also useful at home, in school and other places, and can be used in a regular physical education class. However, based on the comments given by the evaluators, it was suggested that the materials be made with more variations to be able to be used by other children with disability, and some changes be made on way of evaluation.

Findings:

- i. The physical education skills for hearing impaired children are more creative movements, rhythm and sports. These skills are grouped as: locomotor and non locomotor, creative movement and rhythm and sports.
- ii. Ten (10) lessons which indeed suggested supplementary activities were prepared for the use of primary

hearing impaired children for eight (8) weeks.

- iii. The evaluators found the materials appropriate and suited to abilities and interests of the hearing impaired children. The developed lessons are suited to the needs of the hearing impaired.
- iv. Paaralang Pag-ibig at Pag-asa hearing impaired children and their teachers found the materials used in the lessons interesting, varied and provided clear instructions/directions. They also found that the lessons give example at home, school, and other places during their leisure time.

Based in the findings it was concluded that the lessons in adapted physical education developing skills of hearing impaired children were written and found appropriate and suitable to the target clientele.

RECOMMENDATIONS

The following recommendations are made:

- i. The lessons in teaching physical education be used for hearing impaired children in special education school.
- ii. Similar lessons be used with other children with disabilities.
- iii. Physical education teachers may create/suggest more supplementary activities for the different physical educations skills.
- iv. Assistive devices and equipment such as hearing aids, films, slides, special lighting systems provided.
- v. Procedure and rules be made readily available to aid the pupils in performing skills.
- vi. Finally, extensive research be made to determine the effectiveness of the developed lessons. All developed lessons should be tried-out.

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