

## 資料

## Mode of communication on physical education: In teaching deaf and hard of hearing students

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The aim of this research is to determine the mode of communication preferred by Japanese teachers in teaching Physical Education to deaf and hard of hearing students. Survey-questionnaires were disseminated in 43 Deaf schools in Japan. Out of 43, 30 survey-questionnaires were retrieved. The results indicated that all teachers were using sign language as primary mode of communication, 28 teachers were using finger spelling, 24 teachers were using speech, and 23 teachers were using gestures in Physical Education class. Though the teachers used different modes of communication in teaching Physical Education, sign language was still the primary preference mode of communication for educating the deaf and hard of hearing students in Physical Education class. Concerning original sign, 9 teachers were using their original signs in teaching Physical Education. The most difficult part in teaching deaf and hard of hearing students was giving instructions. 12 teachers had this difficulty. 10 teachers had difficulty in teaching sports skills and 3 teachers were concerned about safety in Physical Education classes. The teachers allowed the use of hearing aid most of the time in exceptions of some activities such as swimming, marathon, basketball, soccer, judo. Physical Education teachers also used acoustic and visual materials in teaching Physical Education.

**Key words:** Deaf and Hard of Hearing, Physical Education, Mode of Communication

### I. Introduction

Teaching the deaf and hard of hearing students can be difficult if the instructor does not plan appropriately and become proactive about instruction. Individuals who are classified as hard of hearing typically share the same characteristics as the general population. Their hearing impairments are mild and may not present major obstacles to speech. But most people who are postlingual profoundly deaf or

prelingual severely or profoundly deaf might have unique characteristics caused by the need to communicate through a means other than spoken language (Lieberman, 2005). Children and adolescents with disabilities seldom participate in organized sports or physical activities (Kristen L., et al., 2002).

Mode of communication is considered the most controversial issue in the education of the deaf and hard of hearing students. This controversy includes a number of related elements (Nakano, 1993; Kusanagi, 1997). Mode of communication are speech, sings and finger spelling etc. Mode of communication can be combined and integrated to produce a

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variety of approaches (Park, 2007). Research into communication in the deaf and hard of hearing students indicates practices in teaching and teaching aid or materials on physical education (Kobayashi, 2010; Sumi, 2010). However little is known about the mode of communication on physical education in teaching deaf and hard of hearing students. The focus here is on the mode of communication that should be used in the deaf and hard of hearing students on physical education.

Although movement is an area that does not heavily depend on auditory cues, receiving feedback about movement can be problematic in case of deaf and hard of hearing students. Usually, visual cues can be substituted for auditory cues that are distorted or absent. According to Lieberman (2005), teaching conceptual aspects of physical education to the deaf in hearing class with a teacher who is not fluent in sign language can be problematic. It is recommended that the deaf students demonstrate learned skill in order to increase involvement and understanding. Their participation in these activities is dependent on the numbers of factors, including the accessibility of the facilities and the attitude of the service providers. Students who are more proficient in sign communication may respond more to interpreting services (Stinson, M. et al., 2008). This study is a probe of the communication preference of the Japanese teachers in teaching Physical Education to the deaf and hard of hearing students.

The purposes of this study are the following: to determine the mode of communication preferred by Japanese teachers in Physical Education classes with deaf and hard of hearing students, to figure out the difficulties encountered by teachers in Physical Education classes with deaf and hard of hearing students, to indicate the teaching materials used in Physical Education class with deaf and hard of hearing students.

## II. Method

### 1. Participants and Procedure

In this study, the researcher employed the use of survey-questionnaire. It was also used to safeguard the privacy of the respondents. The researcher wanted to make confidentiality an utmost priority to guarantee honesty with the participants on the privacy of students and teachers in relation to research.

The survey-questionnaire was designed in September 2009 originally in English and later translated to Japanese for the convenience of the respondents. After revising several editions, the survey-questionnaire was sent to a Deaf school on October 5 to October 15 of the same year for validation. After validation, the survey-questionnaire was concluded to be composed of 12-item questions.

There are 108 Deaf schools all over Japan. Out of 108 Deaf schools, 43 Deaf schools were randomly selected as respondents for the research. The survey-questionnaires were disseminated on October 20 from Hokkaido to Kyushu region. The time frame given to retrieve the survey-questionnaire was up to November 20 of the same year. Out of 43 survey-questionnaires, 30 (70%) survey-questionnaires were retrieved after the time frame given. The data were then translated into English after starting analysis of data.

### 2. Scope and Delimitations

This study is constrained to 30 Physical Education teachers of the deaf and hard of hearing students in Senior High School from Hokkaido to Kyushu region of Japan. The primary target of this survey-questionnaire is to determine the mode of communication preferred by Japanese teachers in Physical Education class.

## III. Results

### Q1. Respondents by Gender

There were more male teachers than female teachers who teach Physical Education. Based on the data gathered, 22 (73%) of the respondents were

male and 8 (27%) were female.

### **Q2. Age of the Respondents**

Most teachers who teach Physical Education in Deaf School were in their 40's. It comprised 10 (33%) of the total number of respondents. Teachers in 30's and 50's comprised 8 (27%) of the total numbers of respondents while 3 (10%) were in their 20's. Only 1 (3%) of the total number of respondents was in 60's age bracket.

### **Q3. Years of Teaching Experience**

Among the respondents, the longest teaching experience was 38 years. The shortest with teaching experience was 2 years. The participants had an average of 19 years of teaching experience with a standard deviation of 9.58 respectively.

### **Q4. Years of Experience in Deaf School**

The longest teaching experience was 34 years in deaf school. The shortest was only a year of teaching experience in deaf school. The participants had an average of 8 years teaching experience in deaf school and 7.87 standard deviation.

### **Q5. Number of Students per Year Level**

The first year senior high school had the most number with an average of 11 (39%) students. Followed by the second year senior high school with 9 (32%) students and the third year senior high school with an average of 8 (29%) students respectively.

### **Q6. Length of Teaching Hours per Week**

13 respondents (45%) falls to 6 - 10 teaching hour bracket followed by teachers who were in 1 - 5 teaching hour bracket with 12 (41%) responses, 11 - 15 teaching hour bracket had 3 (10%), and 1 (3%) was in 16 - 20 teaching hour bracket respectively. One of the respondents did not indicate the number of teaching hour per week. The length of teaching hours also varied with 18 hours as the highest and 3 hours as the lowest teaching hours per week. The average teaching hours was 7 hours with 3.89 standard deviation.

### **Q7. Mode of Communication Commonly Used in Physical Education**

All physical education teachers were using sign language as main mode of communication in physical education classes. Finger spelling had 28 (93%) responses followed by speech with 24 (80%) responses and 23 (77%) responses for gestures. No teachers used cued speech in physical education classes. It was important to underscore that teachers may use all modes of communication at the same time in teaching physical education.

### **Q8. Mode of Communication Preferred in Physical Education Classes**

Sign language was the most preferred mode of communication in teaching physical education. Out of 30 teachers, 25 (83%) teachers preferred sign language as the mode of communication. Speech had 4 (13%) responses; finger spelling had 3 (10%) responses; gesture had 1 (3%) response respectively. None of the teachers used cued speech in teaching physical education. Though they can use all modalities of communication at once, the teachers still preferred sign language as the main mode of communication in teaching physical education to deaf and hard of hearing students.

### **Q9. Use of Original Sign in Physical Education Classes**

Teachers were asked whether they used their original sign language in Physical Education classes. Out of 30 teachers, 20 (67%) teachers were not using their original signs, 9 (30%) teachers were using their original signs and 1 (3%) of the teachers had no response.

### **Q10. Difficulties in Teaching Physical Education with Deaf and Hard of Hearing Students.**

The most difficult part in teaching physical education was giving instructions. Based on the responses, 12 (40%) of the teachers experience this difficulty. Communication was also difficult for teachers. For example, when students were playing softball, it was hard for them to ask for instructions because gloves cover their hands. When the teachers

were asking for verification from students, the students speak unclearly. It had 10 (33%) responses from the teachers. Teaching sports skills also had 10 (33%) responses. When students were moving, it was hard to teach basic skills in any modes of communication. When teacher demonstrates the skills, it was hard for the students to lipread while the teacher was in motion. Safety was another concern of the teachers. It had 3 (10%) responses. When the teachers had an outdoor activity, it was hard to avoid accident since the students cannot receive warning from afar. Among the respondents, 2 (7%) teachers had no difficulty in teaching Physical Education.

#### **Q11. Hearing Aid in Physical Education Classes**

23 (77%) responses said that the students wear their hearing aid most of the time in exceptions of some activities such as swimming, gymnastics, marathon, basketball, soccer, judo, and during rainy days. The teachers also advised the students to remove it during strenuous activity that will make the students sweaty. Use of hearing aid frequently at student's discretion had 6 (20%) responses. Out of 30 respondents, 2 (7%) state that the students wear hearing aid always without exceptions. All students were allowed to wear hearing aid in physical education classes.

#### **Q12. Materials Used in Physical Education Classes**

15 teachers (50%) were using drums in teaching physical education, 10 teachers (33%) were using flag, 8 teachers (27%) were using whistle, 4 teachers (13%) were using whiteboard and 3 teachers (10%) were using timer. Other materials were also used such as pistol, siren light and personal computers. It had 3 (10%) responses. Buzzer had 2 (7%) responses. Out of 30 teachers, 2 (7%) said that they do not use any materials in teaching physical education.

## **IV. Discussions**

In this study, the purposes of this study are the following: to determine the mode of communication preferred by Japanese teachers in Physical Education classes with Deaf and hard of hearing students, to figure out the difficulties encountered by teachers in Physical Education classes with Deaf and hard of hearing students, to indicate the teaching materials used in Physical Education class with Deaf and hard of hearing students. The researcher employed the use of survey-questionnaire. The survey-questionnaire was designed originally in English and later translated to Japanese for the convenience of the respondents.

Nakano (1993) theorized that there are differentiated mode and communication is enhanced through cognitive development. Kobayashi (2010) reported the use of signing, speech and scratch paper on physical education in teaching deaf and hard of hearing students. Sumi (2010) found effective materials on physical education in teaching deaf and hard of hearing students. He used the note book with photograph. However little is known about the mode of communication on physical education in teaching Deaf and hard of hearing students.

Kusanagi (1997) conducted a nationwide research on communication methods used in schools for the deaf. Questionnaires were sent to 108 schools for the deaf. The results of their research were as follows: (1)The speech was used exclusively by 18 (16.7%) schools. (2)The speech was used as the "main" teaching method and signs were used as "supplementary mode" by 68 (63%) schools. (3)The speech together with other manual methods were used by 12 (11.1%) schools. (4)Sign language was used mainly by 1 (1.1%) school. Despite the fact that this research focuses only in the mode of communication preferred by physical education teacher in teaching deaf and hard of hearing students, in some points, it will conform to the previous research of Kusanagi.

Since Physical Education is strenuous and draining subject to teach, it is apparent that most of the teachers are male. Moreover, most of them are in their 40's which irrefutably means that they are seasoned in teaching profession, not necessarily teaching deaf and hard of hearing students. Majority of them did not start teaching in deaf school. In fact, among 30 respondents, only 6 teachers started in deaf school. The longest experience among the respondents has 38 years in the field of teaching but has 4 years in teaching deaf and hard of hearing students. The reasons of career shift of teaching regular school to deaf school is beyond the gamut of this research. On the other hand, the most experienced in teaching deaf and hard of hearing has 34 years in the field, in his 50's, started and expanded his career in deaf school. Having been teaching for such a period of time, his knowledge and skills in this area is undoubtedly par excellence. The average teaching hours of the teachers is 7 hours with different class size per week level and depending on the prefecture and school they belong to. The average number of students also varies with the first year having the most number of students and the third year having the least. As declared by one of the respondents, teaching 34 deaf and hard of hearing in a class requires an extra effort from the teachers. In Physical Education, teachers use all modalities of teaching such sign language, finger spelling, oral method, and gestures. In this particular survey, no teachers use cued speech in Physical Education class. The teachers were asked whether they used original signs in teaching physical education. Some of them use their original signs such as hand waving to catch the attention of the students. They also have original signs for "Right face, about face" and for warm up activities. For instance, at the start of warm-up exercise, the teachers hold the index finger pointing upward in front of the chest and do an upward and downward motion at the same time saying "up". In running, they move their hands down to signal "get

ready", then hold it for a moment then raise the hand to signal "go and run". Since it is difficult for the teachers to gather students in oral instructions especially in outdoor activities or inside the gymnasium, they need to spread their arms and move the hands towards the direction of the teachers to signal "Come closer to me". The teachers had to clap their hands strongly in case that some students were not paying attention.

Hearing is an important avenue as far as learning is concerned; absence of it will contribute to teachers' effort to deliver idea, which is typically conveyed in aural-oral way. When students are at work and distant, it is hard for the teachers to get their attention. In case of emergency situation, even when the teachers try to get student's attention, the students cannot notice the effort of the teachers for warning. In some cases, when the teachers give instructions and ask for verification from students, the students speak unintelligibly and they talk to teachers with totally unrelated topics. Teaching sports rules and skills are also difficult in case of deaf and hard of hearing students. It is hard for the students to get the details of teachers' explanation. For example, in volleyball, students cannot communicate clearly, as a result, they were not good at receiving the ball because they cannot watch instructions in signs while moving. It is also hard to prevent accident due to miscommunications. Though teachers are always on guard, sometimes they cannot avoid it. Teaching basketball and softball is difficult but swimming is one of the most difficult to teach according to some teachers. Explaining imitative words and echoic words are difficult too. Teaching technical terms with finger spelling is also difficult for physical education teachers. For example offside (in soccer), intentional foul (in basketball). Sometimes the teachers are not sure whether the students understand or not what they are teaching.

Hearing aids are technological materials used to amplify the residual hearing of the deaf and hard of

hearing students. Typically, students wear it all the time. In physical education classes, teachers recommend wearing it off especially in swimming class or during strenuous activity that will make the students sweaty.

Physical education teachers also use additional teaching materials for better communication with the students. The teachers use whistle, drums, timer, flag, buzzer and pistol. They also use whiteboards, siren light and PC in teaching deaf and hard of hearing students.

## V. Conclusion

It indicated that all teachers were using sign language as primary mode of communication in Physical Education class. It clearly showed that the mode of communication preferred by Physical Education teacher was sign language. Though the teachers used different modes of communication in teaching Physical Education such as speech, finger spelling and gestures, sign language was still the primary preference mode of communication for educating the deaf and hard of hearing students in Physical Education class.

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## Acknowledgment

I would like to express my utmost appreciation to those who in one way or another have made this research possible:

To the Ministry of Education, Culture, Sports, Science and Technology of Japan, for giving me the opportunity to engage in the program,

To Reggy Capacio Figer for sharing his expertise in the field of research and for editing my paper,

To Dr. Rogel Mari Dionisio Sese and Dr. Leah Raquel Columbretis Lopido- Sese, the supportive and warm couple, for the technical support extended to me.

— 2010.9.1 受稿、2011.3.5 受理 —

## 聴覚特別支援学校の体育授業におけるコミュニケーション方法に関する研究

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本研究の目的は、日本の聴覚特別支援学校体育教師を対象として、体育の授業におけるコミュニケーションモードについて検討することである。調査用紙は日本の43校の聴覚特別支援学校に送付された。30校からの回答を得た。その結果、すべての教師が体育の授業において、手話を第一のコミュニケーションモードとして使用していた。指文字使用は28名、音声使用は24名、ジェスチャーは23名であった。体育教師は体育の授業において、様々なコミュニケーションモードを使用しているが、もっとも重要なコミュニケーションモードとしていたのが手話であった。オリジナルサインについては、9名の教師が体育の授業で使用していた。体育の授業での教示について、12名の教師が困難を感じると回答した。スポーツスキルの教示については10名、安全面への配慮については3名の教師が困難を感じていた。体育授業中の補聴器の装用については、水泳、マラソン、バスケットボール、サッカー、柔道を除いて常時装用させていた。体育の授業では視聴覚機器の使用も報告された。

キー・ワード：聴覚障害 体育 コミュニケーションモード

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