CURRENT STATUS OF LEARNING DISABILITIES AND TEACHER TRAINING PROBLEMS IN JAPAN

Satoshi Takizawa
Hokkaido International School

Abstract
The purpose of this paper is to report on the current status of special education of learning disabilities in Japan. The main issue is that the Ministry of Education still has not clearly defined their educational policy for children with learning disabilities. Although the Ministry of Education has promoted for a better understanding of learning disabilities among various schools, many classroom teachers in compulsory education experience difficulties when they have children with special needs in their own class. These difficulties are primarily due to not having the appropriate teaching skills can be attributed to a lack of appropriate teaching training. These are two factors to consider when addressing this problem with teacher training. First, on an international level, the Salamanca Statement and Framework for Action on Special Needs Education was published after the international conference in 1994 organized by UNESCO and the Spanish Ministry of Education. This statement emphasizes the importance of the initial teacher training as an educational policy. Second, at a local level, Japan now has a great number of study groups researching learning disabilities and support groups for children with learning disabilities and their parents (e.g., hospitals, volunteer agencies). The development of these groups emphasizes both the needs of this particular population and the unavailability of previous support for children with learning disabilities. A need for further reformation of initial teacher training is suggested.

Key Words: Learning disabilities, initial teacher training, Salamanca Statement

CURRENT STATUS OF SPECIAL EDUCATION IN JAPAN

As Anderson (1981) points out, traditionally, disabled people in Japan have had a low status in society. For example, it was difficult for disabled people to get suitable jobs; if they used wheelchairs, it was difficult to move along the side of roads because of the many obstacles in the road. The community itself did not welcome them and as a result, their families tended to hide them in shame and to support them by themselves. To ensure equal opportunities for education under the School Educational Law, every prefecture in Japan had to build a school for deaf and blind students; children with other disabilities were not taken into account in the public school system (Anderson 1981).
However, in 1973, the situation of this group started to change in a delightful way. Anderson (1981) describes these changes concisely in the following text:

“the ministry of education, recognizing the right of every child to have an education, no matter how severe he is handicapped, decreed that the Compulsory Education Laws shall cover the handicapped as well, and that all prefectures must provide special schools for them by 1979.”

“Parents and guardians of the handicapped are to be responsible for seeing to it that their children attend.” (p. 255)

Following the new legislation there were now three types of special education provisions, namely, special schools, special classes, and the visiting teacher program. Special schools now included schools for children with multiple, intermediate and physical handicaps, for the blind, and for the deaf. Special classes within mainstream schools were established for mentally retarded children, children with visual impairments, children with hearing handicaps, children with emotional disorders, children with physical handicaps, and children with language disorders. The visiting teacher program was set up for children with multiple, severe and physical handicaps. Special schools now provided education across the age range for students to attend from pre-school through to high school, and, in addition, special classes were attached to ordinary elementary and junior high schools. The size of these special classes was limited, while an ordinary class in elementary and junior high school had forty students, the special class legally could have only eight students per teacher.

CHILDREN WITH LEARNING DISABILITIES IN JAPAN

The special needs group that has been left out of the move to more equal provisions and to having their special educational needs met is this group of children who, in the United Kingdom are referred to as children with specific learning difficulties and in the U. S.A. as children with learning disabilities. In the earlier legislation, the needs of these children were not considered to be ‘disabling’, and, thus, they were not included in decisions about additional provisions.

Although children with learning disabilities do not have status, teachers know there are certainly a number of children who have difficulties with learning in the basic subjects within their schools. So, where do these children with learning disabilities get support?

Children with severe sensory or intellectual disabilities receive education in special schools or special classes. The total percentage of students attending such special schools is 1.1% in Japan, 1.7% in the U. K. and 2.4% in the USA. (Yamaguchi, 1992).

Yamaguchi (1992) makes the point that the percentage of children who are educated in schools for the blind, the deaf and in other types of special schools in the United States and in Japan are almost the same but that the percentage of students with these same disabilities who receive support in special classes within regular schools in Japan is only 0.5%. In the United States this percentage is 2.3%, that is, five times higher than Japan.
There are two major differences between the United States and Japan where the special class is concerned (Yamaguchi, 1992). Special class provision in the United States includes provision for gifted children as well as for children with learning disabilities. The other difference is that the U.S.A. offers some expert support for the special educational needs of children with learning disabilities who can help the regular class teacher.

Concerning children with learning disabilities in the mainstream school, the focus of this paper, Fujimoto (1992) undertook research to identify where these children were and what facilities they were provided with. They used as their sample 1500 members of the Parents Association for Learning Disabilities in Japan in December 1990. One thousand twenty parents responded (68% of the sample, high for a postal return). The data reveals that of the 211 children in Junior High School in their sample, 81.70% of them were receiving their education within the regular class, while of the 554 children in Elementary education, 73.30% were in the regular class. It is clear that, by far, the greatest majority of learning disability children remain in the regular class and that the range of provision for additional support is far greater at the elementary school level than it is at Junior High where 13.10% of learning disabled children find themselves in a separate special class. According to Fujimoto, children with learning disabilities in regular classes find it difficult to get support from their teachers to help them overcome their difficulties. Geshi (1992) suggests that this might be because many teachers in Japan still have little understanding of children with learning disabilities and, thus, might teach them using inappropriate methods or fail to deal with the problem at all. In general, in Japanese schools, a teacher has the maximum 40 students and, unlike the United States, Japan does not require every school to have a resource room with support services which a teacher might rely on. Geshi (1992) suggests that there is a good deal of responsibility placed on Japanese teachers to make sure that the majority of students are successful in their studies, and that, as a result of this, it is unlikely that a student with a learning disability will get the most out of their studies. The teacher has to focus on the majority and does not have the time, or the skills, to attend to specific problems.

In Japan, some parents are very aware of the problems which exist for their children and complain about governmental policies lagging behind where children with learning disabilities are concerned. They have run by hiring experts to teach their children and by creating free schools for children with learning disabilities, for example, the "Mihara-shidai-Gakuen" school in Nagoya, or the "Free School Hishou" in Kanagawa.

**SOME PROBLEMS IN RELATION TO PROVISION FOR CHILDREN WITH LEARNING DISABILITIES**

In 1992, the writer had the opportunity to talk to the Parents Association for Children with Learning Disabilities in Chiba prefecture. The main problem for them, as they described it, was a lack of understanding on the part of regular class room teachers toward learning disabilities and the small number of teachers especially trained to work with this group of children. According to that group of parents, most of the children spend half of the day in the regular classroom without any additional help whatsoever. As the children move up through the grades, the subject content becomes more difficult for children with learning disabilities. Generally speaking, it is not easy for them to study...
well in a large class and most do not have a chance to study in smaller groups or to have individual lessons. As the writer described before, with 40 students per class, the teacher is limited in time to help each individual child no matter how skilled that teacher may be. Most teachers, however, have little knowledge about learning disabilities, and the problems for the children get worse as they move up in school.

Many educators and researchers in Japan appeal for the government and the educational system to hurry up and deal with the problem. In particular, they point to the need for some specialists or trained teachers for learning disabilities (Geshi, 1992; Ueno, 1992). Basically, educators believe that it is possible to re-educate regular class teachers. To solve this problem, however, two points at least need to be considered: a) the necessity for all teachers to understand learning disabilities; b) the necessity for more trained teachers.

The problem, however, is not at all straightforward. Some fundamental problems are evident. One such problem is that there seems to be a lack of consensus in Japanese society about what learning disabilities are and how they might be provided for. Parents of children with learning disabilities often understand what is meant by the term, "learning disabilities", as a result of the problems their own children have, but teachers do not seem at all clear about its meaning. Two things are apparent here: first is the government of Japan does not have a definition of learning disabilities; and second is learning disabilities are not featured as a part of initial teacher training.

The Ministry of Education has stated that the definition of learning disabilities is still unclear and that methodology is divided in regard to teaching. However, they have positively acknowledged continuing basic research into learning disabilities although the status of children with learning disabilities is not yet considered as "special education".

In Japan, many researchers tend to follow the concept of learning disabilities which guides the United States although, according to Tongesen (1991), even the United States has not yet achieved a clear definition of learning disabilities. However, in this paper, we will define learning disabilities in the following terms, as adopted from the National Joint Committee on Learning Disabilities (NJCLD) and considered the most representative concept of learning disabilities in the United States.

“Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematics abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behavior, social perception, and social interaction may exist but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions for example, sensory impairment, mental retardation, serious emotional disturbance or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences.” (NJCLD Memorandum, 1988).
AN OUTLINE OF TEACHER TRAINING IN JAPAN

Basically, according to Iwanami Concise Educational Dictionary (1984), the content of subjects for a student teacher is divided into four main areas - liberal arts, professional subjects at any level, curriculum for teacher and practice in teaching. Students, as part of their basic course work in teacher training, are not offered courses or studies about special educational needs. For example, the writer graduated in 1988 from a university teacher training program with mostly elementary school teacher course work, but had not received formal education about the curriculum related to special education.

The Warnock Report (1978) shows that at least one in five children in the U.K. might be expected to have some kind of special educational need during their school life and that most of these children would have those needs met within the regular class. We can certainly assume that a comparable percentage of Japanese children experience some difficulties with school work, and also Fjimoto (1992) states that most of these children are to be found in the regular classroom. It is not surprising therefore that teachers are faced with the problems of children with learning disabilities in the regular classroom that they have little idea of how to proceed. Can this situation be improved?

THE SALAMANCA STATEMENT AND FRAMEWORK FOR ACTION ON SPECIAL NEEDS EDUCATION

In 1992 UNESCO (United Nations Educational, Scientific and Cultural Organization) held a world conference on special needs education in Salamanca, Spain. The writer intends to refer to the agreement that resulted from the conference to get some thoughts about resolving some of the problems for learning difficulties for children in Japan. According to the Facts on File Dictionary of Education (1988), UNESCO is defined as an agency of the United Nations, formed in 1946, that has focused on general educational issues including, particularly, illiteracy and teacher preparation in the underdeveloped countries of the third world. Japan is a member of this organization and has some role in it. The range of their interest was surprising, in particular, its work to enhance the right of disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or groups (UNESCO, 1994).” While UNESCO tries to solve many difficult problems at a world level, the problem that seems most evident is that their ideas are not getting down to the level of actual teachers.

In 1990, UNESCO was central to the organization of a conference in Jomtien, Thailand. The agreement which came out of that conference was for those countries that signed the agreement to work to make ‘education for all’ their goal for the year 2000. The Jomtien Agreement (UNESCO, 1990) stated:

Every person - child, youth and adult - shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs comprise both essential learning tools (such as literacy, oral expressions, numeracy and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development,
to improve the quality of their lives, to make informed decisions, and to continue learning (p. 3).

Disabled persons were identified as part of those groups whose needs had been overlooked in the past and that should be included in movements to improve both the access and quality of education, but it was the Salamanca Agreement which adapted disability as its single issue.

*The Salamanca Statement (UNESCO, 1994) proclaims that:

1) every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning.
2) every child has unique characteristics, interests, abilities and learning needs.
3) educational systems should be designed and educational programs implemented to take into account the wide diversity of these characteristics and needs.
4) those with special educational needs must have access to regular schools which should accommodate them within a child centered pedagogy capable of meeting these needs.
5) regular schools within this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system (p. 8-9).

It goes on to argue that all governments with international co-operation programs and international funding agencies, including the World Bank, should “endorse the approach of inclusive schooling and to support the development of special needs education as an integral part of all education programs” (UNESCO, 1994/p. 10).

The Salamanca Statement (UNESCO, 1994), in regards to the issue of inclusive schooling, recognized that the possibility of having separate special school provision for children with disabilities was not a sensible one in many developing countries. In many developed countries, this view of a more integrated educational system is now getting a lot of support, not just for financial reasons but because professionals, parents and disabled people themselves see the importance of disabled children being educated alongside those who do not have a disability. The issue for Japan, however, is that teachers are not prepared by receiving appropriate to support children with disabilities in the mainstream classroom.

A priority in planning to provide for more inclusive schools would need to be a comprehensive policy of teacher training. The Salamanca Statement (UNESCO, 1994) itself emphasizes that “pre-service training programs should provide to all student teachers, primary and secondary alike positive orientation toward disabilities” (p. 22).

It underlines the point that all student teachers need to attend pre-service training programs and to develop their understanding about inclusive schooling. In addition, they point out what student teachers need concretely “the knowledge and skills required are mainly those of good teaching and include assessing special needs, adapting curriculum content, utilizing assertive technology, individualizing teaching procedures to suit a larger range of abilities” (UNESCO, 1994/p. 27).
This is an ambitious and positive program for training. If this goal is achieved, then a lot of talented people would be working at all levels of the education system.

DEVELOPING TEACHER TRAINING IN JAPAN

The writer is unusual in that he has attended a specialist course in Japan after his initial teacher training. After working as a kindergarten teacher, he enrolled in a one year program A Provisional Training Course for Teachers of Children with Speech Disorders, offered by the Faculty of Education, Chiba University in Japan. The number of students in this course was seventeen, including five full-time teachers who took sabbaticals from their schools in order to study. Chiba prefecture gives opportunities for full-time teachers in Chiba who wish to study Special Educational Needs to apply for local educational authority leave. The local educational authority then selects applicants by interview and exam and selected applicants then apply for scholarships. After completing their studies, the teachers can get new positions in which they will have opportunities to use their new skills. However, Chiba prefecture is unusual; not every prefecture in Japan gives full-time teachers scholarships like Chiba prefecture. The Ministry of Education does not require local authorities to do this, so there are no provisions nation wide.

There should be broader training in Japan, and the writer will now consider some aspects of this. In doing so, he will use the format devised by Hegarty (1992) in Professional Development: Educating Children and Young People with Disabilities. Hegarty (1992) asks seven questions in relation to issues of professional development and the writer would like to consider these in relation to Japan.

1. Where initial teacher training is the standard route into teaching, is there some coverage of disability issues in the basic training offered? How extensive is it? Is it related to teaching pupils with disabilities? Where available, is it part of the training curriculum followed by all students or is it optional, followed by some students only? (Hegarty, p. 56)

The answer to the first part of this question is 'no, there is not.' As we see from the curriculum presented earlier, the writer could not take a course related to disability issues and did not receive any exposure to training related to special educational needs in his initial training course. In Japan, we still have a segregated curriculum for initial teacher training, which sees children with disabilities as very different. We should move towards a curriculum that is more integrated and helps us to support more children in the mainstream class. As Hegarty (1992) points out, not all students need separate individual from specialists help but "a very great number of pupils with disabilities could be helped in ordinary school by relatively minor adjustments to the teaching provided in ordinary school" (p.58).

2. Are training opportunities available for teachers specializing in educating pupils with disabilities? (Hegarty, p.56)

In Japan there are six types of teacher training for special educational needs in
different areas of disability and the more general special educational needs for those who wish to specialize in this area. (Iwanami Concise Educational Dictionary, 1984; The Concise Dictionary for Special Education, 1986). These six types are

1) a short course of special education in the Faculty of Education in a University;
2) a one year special study course offered by the Faculty of Education;
3) a provisional training course for teachers of special educational needs on a year program offered by the Faculty of Education;
4) education by correspondence offered by the Faculty of Education;
5) a University course with a graduate school curriculum for full-time teachers;
6) a course where a teacher can get a certificate for special educational needs, offered by the Ministry of Education, a local educational authority or a university summer course.

3. How does specialist training in this area relate to the general training provided to all teachers? (Hegarty, p. 57)

Those wishing to specialize in teaching pupils with disabilities need to have basic teacher training first. Normally, in order to get a diploma in special education, a student teacher must have at least a diploma for teaching in a kindergarten, primary or secondary school (Concise Dictionary for Special Education, 1986). We can see that specialist training for teachers in Japan is based on the view that specialist teachers must have a good understanding of how to teach children without disabilities before undertaking specialist courses. This viewpoint is similar to that of the U.K.

4. Do all serving teachers have appropriate access to in-service training in relation to teaching pupils with disabilities? Are they encouraged to take up the opportunities? What proportion of teachers actually receive in-service training and how regularly? (Hegarty, p. 57)

According to the Facts on File Dictionary of Education (1988), “in-service training” is defined as

"1) Term used mainly in the public sector to refer to job-related instruction educational experiences made available to employees. In-service training programs are usually offered during normal working hours. However, some programs, especially, those offering college credit, are available to the employee only on his or her own time. 2.) Activities designed to improve the knowledge and skills of employees and consequently, the quality of services, specifically instructional practices, provided. In-service training is directed at those individuals who are already basically qualified and employed by school systems. In-service training can be presented in a variety of courses. Some teachers continue their education by enrolling in university courses, local school districts and state education agencies may sponsor workshops, courses, or other continuing education activities. Profes-
sional organizations offer conferences and workshops. Teachers may travel and visit other programs to expand their professional growth” (p. 245).

As described in the above definition, Japan has a variety of programs for teachers, mainly during summer vacations. However, basically, Japan does not have a part-time system of study at a university for further professional development, as seen operating in the U.K. If a teacher wants to study at a university, s/he must quit her/his job because the university requests all students to enroll as full-time students. Some teachers can get scholarships from their prefectures or a sponsorship. However, they are limited, and only a few teachers are selected. Another problem is that if a teacher wants to study at a university, then s/he must receive permission from the local educational authority. In Japan, as long as the local educational authority controls the opportunity of the teacher to learn, it will not be easy for teachers to improve their professional skills at the graduate level. Therefore Japan should create a part-time system for study at university.

5. Are classroom assistants given training for the important work they do? Do they have on-the-job opportunities to develop their skills? (Hegarty, P. 58)

According to the Concise Dictionary for Special Education (1986), a classroom assistant might serve deaf, blind or physically handicapped children at the school for the deaf, the blind and the more general special school. Each school is entitled to employ classroom assistants - one person for schools for deaf children and blind children and three to five assistants for general special needs schools. Classroom assistants in Japan are available only to these specialist schools. There are no classroom assistants in ordinary schools. Classroom assistants do not need to get a qualified certification like teachers. As a result, they are not given training for this important work.

6. Is there any joint training for the different professionals involved in educating pupils with disabilities? Are there opportunities for them to share perspectives and build up common understanding about their respective contributions? (Hegarty, p. 58)

Some training does exist but only for very special purposes. According to Kamimura (1992), some hospitals have their own treatment programs for children with autism or children with learning disabilities. In such kind of programs, there are many professionals who can co-operate with each other - medical doctors, psychologists, social workers and teachers. However, these are the exception in Japan. From the writer’s own experience, for example, as a post graduate student he was able to attend some treatment programs in special classes of some elementary schools for four weeks. In this case, if a pupil with a language disorder, emotional disorder and so forth have a diagnosis made by a medical doctor, normally, the child might start a treatment with a special teacher at a special class of an elementary school. However, only the special teacher might be in a charge of treatment. Other professionals do not join in with this treatment program. This style is the most common in Japan. We do not have a team of staff that works with children who are placed in these special classes. Japanese professionals who
Takizawa

visit other countries, the United States for example, to see the advanced program in the area of learning disabilities are surprised at the treatment programs which involve so many professionals at all levels of the treatment program (Morinaga, 1992). Seeing this situation, it is clear that we lag a long way behind on joint training programs for professionals.

7. Is there a national plan for training staff concerned with educating pupils with disabilities? (Hegarty, p. 59)

The writer cannot really answer this question confidently because he does not have any information about a national plan for training staff at hand. However, in the area of learning disabilities, the Parents Association for Children with Learning Disabilities has strongly requested the Ministry of Education to increase the number of special teachers and to train other professionals who might work in this area. (Fujimoto, 1992). The Ministry of Education has just started to research learning disabilities; perhaps this is an indication that some consideration at a national level is being taken.

Even now the Ministry of Education still did not clearly state the definition of learning disabilities. However, they have continued studying learning disabilities and gradually have made some suggestions for schools in Japan. For example, in July 1998, they presented some of their suggestions in a report entitled, “Educating children with learning disabilities” (Masuda, 1998). In this report, they mainly addressed two points. One is that the Ministry of Education themselves needs to promote the understanding of learning disabilities to each school in Japan. Second is that each school needs to establish a curriculum with appropriate methods of teaching children with learning disabilities, working together with specialists in this area. Since the Ministry of Education started to study learning disabilities in 1994, they have not stopped. Step by step, they continue their studies. However, they have not yet announced their educational policy for children with learning disabilities. So, even though we know of their suggestions to us, we do not yet know of their concrete ideas related to teacher training in this field.

Although the Ministry of Education has been slowly considering learning disabilities, in Japan, a lot of study groups on learning disabilities or support groups for children with learning disabilities and their parents, such as hospitals and voluntary agencies, have been studying and helping them in their own ways. We can see their activities through the journals.

One of these study groups, Fukui-LD-Study Group in Fukui prefecture has developed a collaborative system of education and medical care for learning disabilities since 1989 (Hiratani et al, 1994). Members of this group are teachers, psychologists, medical doctors and parents. They have regular case conferences, treatment programs, annual summer camp, biweekly sports club and so on. Basically they are working together as volunteers. Their studies have revealed there to be five problems in working with learning disabilities - the improvement of a diagnosis system, the approach to learning disabilities from a neurological science perspective, the longitudinal study of learning disabilities, the collaboration of Fukui parents association for learning disabilities, and the staff training. The problem of staff training for them is that compulsory educational teachers (elemen-
Current Status of Learning Disabilities

Tertiary and junior high schools) seldom become members of this group. After teachers attend the study once, most stop coming again. This might show that many teachers do not concern themselves with the issue of about learning disabilities. According to a research of Fujimoto (1992), over 50 percent of parents who have children with learning disabilities say that school teachers of compulsory education do not understand children with learning disabilities well. The points by Hiratani et al (1994) and Fujimoto (1992) could be connected with the suggestion made by the Ministry of Education. Perhaps, they acknowledge that most schools in Japan do not have enough of an understanding about learning disabilities.

As the writer stated before, the initial teacher training in Japan is divided into two systems. Most of the ordinary school teachers have not taken courses offered on special education. So, they do not have the teaching skills to work with children with special needs. However, if they have a student with special needs in their class, how do they educate them? Shitara and Itoh (1997) studied trials and conflicts of the 22 ordinary class teachers in compulsory education who experienced teaching children with learning disabilities. From their study, we can clearly see that most of the teachers cannot concretely support their children and have difficulty for them to understanding learning disabilities. This might not be an unusual situation in Japan now. Many teachers may experience difficulties, as in the study above, when they have children with special needs in their own class.

Since many reports say that most of children with learning disabilities are in the ordinary classes of the compulsory education, the Ministry of Education or Schools should develop not only the in-service teacher training but also the initial teacher training in order to meet the needs of the children. During the initial teacher training, the Ministry of Education should develop a course in which student can learn teaching skills for working with children with special needs including learning disabilities. Actually, the Japanese parents association for children with learning disabilities requested the Ministry of Education to develop such a course for the initial teacher training (Fujimoto, 1992). The students at the teacher training college and the university do not need to experience the difficulties of teaching and not being able to support children with special needs.

References


執筆者紹介（掲載順）
戸田 須恵子（教授・北海道教育大学銚別校）
草薙 忠美子（北海道大学大学院博士課程後期）
星 信子（北海道大学大学院博士課程後期）
陳 省仁（教授・北海道大学）
デーヴィド・ビームラー（講師・ニュージーランド、マッセー大学）
ジョン・カークランド（教授・ニュージーランド、マッセー大学）
澁澤 聡（講師・北海道インターナショナルスクール）

乳幼児発達臨床センター年報
第21号（1997－1998）

乳幼児発達臨床センター年報
第21号（1997－1998）
平成11年3月25日印刷 3月31日発行
編集者
陳 省仁
（英文校閲 Yumiko Sekino）
センター長
澁澤 聡

ANNUAL REPORT
RESEARCH AND CLINICAL CENTER
FOR CHILD DEVELOPMENT
No. 21 (1997－1998)

Date of Printing: March 25, 1999
Date of Publication: March 31, 1999
Editors: Shing-Jen Chen, Takashi Furutsuka,
Yukari Shirotani
(With Assistance of Yumiko Sekino)
Director: Takashi Morotomi
Printer: Kokoku Printing Co., Sapporo
Publisher: Takashi Morotomi, Director
Research and Clinical Center for
Child Development, Faculty of
Education, Hokkaido University
Nishi 7, Kita 11, Kita ku,
Sapporo 060-0811 Japan
Phone: 011-706-3106