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Editorial Note

Welcome to this edition of *The Journal of the International Association of Special Education*. This is the first issue of the journal that is being supported for publication by Northern Arizona University.

My name is Greg Prater and I am currently a professor at Northern Arizona University in the College of Education. It was a great honor to have been selected as Editor of this Journal in the fall of 2004.

I would like to thank the Editorial Board and our Consulting Editors for making this issue possible. Also, I would like to thank the Associate Editor, Malgorzata (Gosia) Sekulowicz for her editorial contributions. In addition Kitty Angel, Jennifer Hargrave and Robert Hagstrom of Northern Arizona University have made valuable contributions to this publication by assisting me.

The previous editors, Roger Fazzone and Jennifer Scully, of this journal deserve much recognition; without their commitment to this work our organization would not have a journal.

You will notice with this issue a new format and size; this was done to make room for additional articles as we hope to increase the number of articles in future editions. A PRAXIS section is being introduced with this issue. Please take a moment to look at the example article and guidelines for submission.

I look forward to working with all of the members of IASE and I encourage you to submit your manuscripts to the journal. I look forward to seeing old friends and meeting new ones in Halifax this summer.

Greg Prater

Editor

Effects of Metacognitive Strategies on Reading Comprehension of Children with Physical and Multiple Disabilities in Hong Kong

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Abstract

This study investigated the effectiveness of metacognitive strategies in teaching reading comprehension to five Chinese children with physical and multiple disabilities. Results suggested that metacognitive instructional strategies might be effective. Further research using various methods/designs on children of different ages and academic levels are recommended for further generalization of the results.

In Hong Kong, seven special schools have been established for children with physical and multiple disabilities. The main challenging conditions these children face include not only motor delay and/or dysfunction, but also non-motor areas of functioning such as speech and language, hearing, vision, and perceptual-cognitive abilities (Bowe, 2000; Curriculum Development Council, 1999; Eckersley, 1990; Poon-McBrayer & Lian, 2002). Thus, individuals with physical and multiple disabilities have many challenging areas that impact their academic performance, as indicated by Bigge, Sherwood, and Heller (2000). Investigations in this area are particularly important in that reading is one of the most important activities in school life. It is the basic tool children must master to learn successfully in school (Education Service Division, 2001).

Higher-order cognitive processes, such as inference making and reasoning are essential to reading skills (Berk, 1997; van den Broek & Kremer, 2000) because reading is a complex cognitive task that draws many of our mental resources to work at the same time (Garner, 1987). The ultimate aim of reading is to enhance self-learning and learning in school. To do so, early and intensive intervention is vital to the success of school life of children with physical and multiple disabilities. There are a number of recommended approaches in helping children enhance reading comprehension (Education Service Division, 2001); however, teachers in Hong Kong traditionally tend to not teach reading comprehension (Psychological Services Section 2002). Those teachers who do generally use the traditional process of guided reading, wherein teachers activate students' prior knowledge, promote their interest and engagement, ask them questions about the text, and ask students to reflect on what has been read (Dole, 2000; Poon-McBrayer, 2002).

Uses of alternative instructional strategies have begun to receive teachers' attention only in the last decade. Among different methods to teach reading comprehension the whole language approach may be more widely used in primary schools but has gained its importance in junior secondary schools in recent years (Ho, 2004). The whole language approach emphasizes immersion in language experiences such as a rich context for language learning, adequate time to read and write, and reading for a meaningful reason (Coote & Stevens, 1990; Dole, 2000; Pressley, 2000).

Many metacognitive strategies, such as visual imagery and self-questioning, have been reported as effective in enhancing the reading comprehension performance of students with special educational needs. These strategies have been found to be effective in improving reading comprehension of adolescents with learning disabilities (Wong, 2004). Other successful examples include self-instructional training, self-monitoring strategy, self-questioning instruction and reciprocal teaching (Poon-McBrayer & Lian, 2002). Palincsar and Brown (1987), for example, found that these strategies were effective in improving reading performance of 5th- and 6th-graders with learning disabilities. However, these researchers excluded children with physical and multiple disabilities in their studies.

The purpose of this study was to investigate the effectiveness of metacognitive strategies in teaching reading comprehension to children with multiple disabilities. Based on previous findings in metacognition and reading comprehension (Psychological Services Section, 2002; Wong, 2004), the research question that guided the study was: Does the training of metacognitive strategies improve the reading comprehension skills of children with multiple disabilities?

Method

Design

The study utilized a multiple-case, single-subject, A-B (baseline phase-treatment phase) experimental design (Barlow & Hersen, 1984; Tawney & Gast, 1984). The independent variable was the metacognitive strategy while the dependent variable was the children's reading comprehension performance.

Subjects

The study was conducted in a school in Kowloon, Hong Kong. The subjects who participated in the study were five children ages 11 to 13. All were diagnosed with physical and multiple disabilities and mild mental retardation. The latter was diagnosed through the Hong Kong version of the Wechsler Intelligence Scales for Children. One of the children (S1) was a wheelchair user. One child (S5) walked with the aid of a walker. Another child (S4) walked with 2 canes. Two of the children (S2, S3) were independent walkers. The academic level of these children in Chinese language approximated Primary 2 (i.e., second grade in elementary school) children in typical schools in Hong Kong. Table 1 provides demographic data of these children.

Table 1 - *Participants' Demographic Characteristics*

Student	Gender	Age	Disabilities
S1	F	13-04	Spastic quadriplegic cerebral palsy, squinted eyes, weak in the perception of spatial relationships, writing very slowly due to weak hand function.
S2	F	12-06	Cerebral palsy, congenital hydrocephalus, squinted eyes with astigmatism, visual-perception problem, speech moderately intelligible with hypernasality and nasal emission.
S3	M	12-00	Ataxic cerebral palsy, speech disorder-dysarthria, speech moderately intelligible, writing very slowly due to weak hand function.
S4	M	11-09	Spastic diplegic cerebral palsy, articulation problem, writing difficulty due to poor visual-motor dexterity, poor visual-spatial analysis and synthesis.
S5	F	11-03	Spastic quadriplegic cerebral palsy, microcephalus, speech disorder-dysarthria, low intelligible speech, divergent squint, not able to write due to jerky movement of hand.

Procedure

The metacognitive training program designed by Cole and Chan (1990) was modified to match the academic level of the children. The modification was conducted by first testing a

control group of pupils at a Primary 2 Chinese level of functioning with average intelligence levels.

Eight baseline-phase assessment passages and eight treatment-phase assessment passages were used in this study. The passages were short stories, mainly Aesop's fables and Chinese fables ranging in length from 100 to 150 words each selected from the supplementary exercise books of Primary 2 level. Six comprehension questions classified suing Pearson and Johnson's (1978) classification followed each passage: (a) text explicit: the answer could be found explicitly in the text; (b) text implicit: the answer could be inferred by combining information given in various parts of the text; (c) script implicit: the answer could not be found explicitly from the text, it must be inferred by considering the passage as a whole and relating one's prior knowledge to the topic of the passage. The format of the passages and the questions was designed similar to that of the comprehension exercises the children normally did in class.

During the baseline phase the assessment passages were administered to the five children as regular class work each Friday. No training on the passages occurred; only routine daily activities were undertaken. The teacher would pronounce a word if a child asked for the pronunciation, but the teacher would not explain the meaning of the word. The teacher would remind children to stop and think for some time and reread the answers to the questions they had written down.

The treatment phase also lasted for eight weeks. Two 30-minute training sessions occurred each week and one assessment session took place every Friday. The program consisted of 16 sessions on the following topics, two sessions per topic:

1. Deleting redundant information.
2. Deleting trivial information.
3. Locating the topic sentence in a paragraph.
4. Locating the topic sentence in a passage.
5. Rating sentences in order of importance.
6. Identifying the implicit main idea in a paragraph.
7. Identifying the implicit main ideas in a passage.
8. Review (Cole & Chan, 1990, p. 270).

During the training sessions the teacher taught the children to ask themselves three questions about each of the eight topics above. The questions were modified for easy understanding and memorization for children of academic level that approximated Primary 2 in Hong Kong. For example, questions children asked themselves for Topic 1 were:

1. What does this sentence say?
2. Does this sentence repeat what has already been said?
3. Shall I leave it out?

The teacher wrote the topics and the questions on the blackboard and explicitly demonstrated the self-questioning strategy. Next, overt external guidance was given to the children for more practice. At a later stage, teaching emphasized children's overt self-guidance. That is, children would rehearse the questions aloud to guide their own progress. Finally, overt self-guidance was gradually faded so that children could use covert self-guidance when reading through the passages. The assessment sessions during the training phase resembled that of the baseline phase.

Collection and Analysis of Data

A data-collection sheet was designed to document children's performance during the baseline and treatment phases. Children's answers to the comprehension questions following each assessment passage were scored. A correct answer was worth 2 points, an answer that included both correct and irrelevant information would score 1 point, and an incorrect answer would score zero. The possible score for each passage was 12 points. In order to prevent scoring bias all of the answers were rescored by another teacher teaching Chinese in the same school. Any discrepancies in scoring were discussed until agreement was reached.

Data were then plotted on a graph. Both visual analytic and statistical methods were used in order to attain reliable information about the children's performance (Gibson & Ottenbacher, 1988; Huitema, 1986). These methods examined the tendency of the scores, the slope of the trend line, the change across level and slope, and the statistical significance of change (Kazdin, 1984; White, 1972).

A trend line, or celeration line, for each phase computed by the "split middle method" was drawn (Richards, Taylor, & Fichards, 1999). This line predicts the direction and the rate of change in each phase. In this study the direction of the trend line was examined. When it went upwards from left to right it was an acceleration line that indicated improvement. When it went downwards (from left to right) it was a deceleration line that indicated deterioration in performance. The slope refers to the angle or "steepness" of the trend line (Gibson & Ottenbacher, 1988). In this study, it was presented by a number showing the ratio of positive or negative change from the first day to the last day of a phase (Shinn, Good, & Stein, 1989).

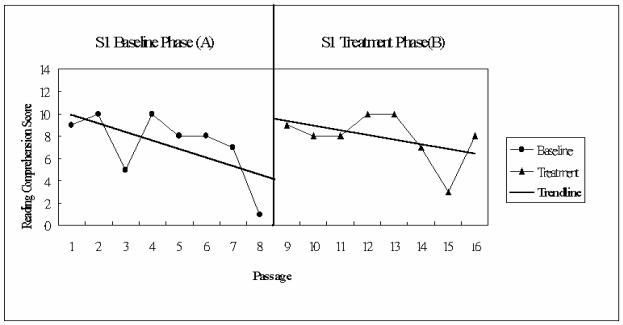
Change of level across phases is a comparison between the values of the ending level on the trend line of the baseline phase and the value of the beginning level on the trend line of the treatment phase. In this study, it was presented by a number showing the ratio of how much higher or lower the change was when intervention was first introduced.

Change of slope across phases compares the values of the slopes of the baseline and treatment phases. The number yielded expresses the ratio of the change of "steepness" of the trend lines between the baseline and treatment phases. According to Kazdin (1984) and White (1972), an increase of slope is shown by the number marked with a multiplication sign (x), and a decrease of slope is shown by the number marked with a division sign (÷).

Significance of Change

A statistical test was used to evaluate the significance of change across phases (Kazdin, 1984; White, 1972). This was done by the following formula: The probability of attaining x data points above (or below) the projected slope of baseline trend in the treatment phase where n is the total number of data points in treatment phase.

Figure 1 *- Assessment Results of S1 During Baseline and Treatment Phases.*



Baseline Phase

Mean:	7.3
Level at beginning:	10.0
Level at end:	6.6
Slope =	÷1.51

Treatment Phase

Mean:	7.9
Level at beginning:	8.8
Level at end:	7.1
Slope =	÷1.24

$$\text{Change of level across phases} = \frac{8.8}{6.6} = \times 1.33$$

$$\text{Change of slope across phases} = \frac{1.51}{1.24} = \div 1.22$$

$$\text{Significance of change} = \left(\frac{8}{8}\right) \quad \left(\frac{1}{2}\right)^{8}$$

$$= .0039$$

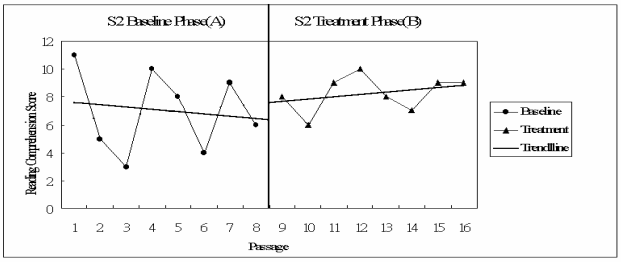
Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Results

Figure 1 provides the results of S1 during the baseline phase (M=7.3) and treatment phase (M=7.9). Data demonstrated a deteriorating tendency in performance in the baseline phase (slope = ÷1.51). There was a positive increase in the performance level when intervention was first introduced (change of level across phases =

x1.33). Performance in the treatment phase also showed a deteriorating tendency in performance (slope = ÷1.24). However, the trend of deterioration appeared to be less "steep" compared to the trend of the baseline phase (change of slope = ÷1.22). Significance of change (p=.0039) indicated that the time series data of the treatment phase were significantly different from the data of the baseline phase. The metacognitive instructional strategy had a positive effect on S1's reading comprehension performance.

Figure 2 *- Assessment Results of S2 During Baseline and Treatment Phases.*



Baseline Phase

Mean:	7.0
Level at beginning:	7.7
Level at end:	6.8
Slope =	÷1.13

Treatment Phase

Mean:	8.3
Level at beginning:	7.3
Level at end:	9.0
Slope =	×1.23

$$\text{Change of level across phases} = \frac{7.3}{6.8} = \times 1.07$$

$$\text{Change of slope across phases} = 1.13 \times 1.23 = \times 1.39$$

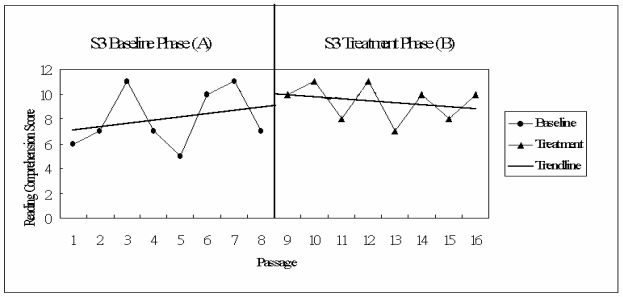
$$\text{Significance of change} = \left(\frac{8}{7}\right)\left(\frac{1}{2}\right)^{8}$$

$$= .0045$$

Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Figure 2 displays the assessment results of S2 during the baseline phase (M= x7.0) and treatment phase (M=8.3). Data indicated a slight deterioration in performance in the baseline phase (slope = ÷1.13). There was a small positive increase in performance level when intervention was first introduced (change of level across phases = x1.07). Performance during the treatment phase showed an improvement in performance (slope = x1.23). Performance changed positively from a deteriorating tendency in the baseline phase to an improvement trend in the treatment phase (change of slope = x1.39). Significance of change (p=.0045) indicates that the time series data of the treatment phase is significantly different from the data of the baseline phase. The metacognitive instructional strategy had a positive effect on S2's reading comprehension performance. S2's scores demonstrated an improvement during the treatment phase.

Figure 3 *- Assessment Results of S3 During Baseline and Treatment Phases.*



Baseline Phase

Mean:	8.0
Level at beginning:	6.5
Level at end:	8.2
Slope =	×1.26

Treatment Phase

Mean:	9.4
Level at beginning:	10.9
Level at end:	9.1
Slope =	÷1.20

$$\text{Change of level across phases} = \frac{10.9}{8.2} = \times 1.33$$

$$\text{Change of slope across phases} = 1.26 \times 1.20 = \div 1.51$$

$$\text{Significance of change} = 1-\left(\frac{8}{5}\right)\left(\frac{1}{2}\right)^{8}$$

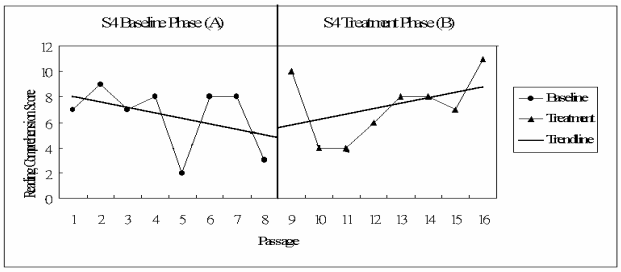
$$= 1 - .0062$$

$$= .9938$$

Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Figure 3 shows the assessment results of S3 during the baseline phase (M=8.0) and treatment phase (M=9.4). Data indicated an automatic improvement in performance in the baseline phase (slope = ×1.26). There was a positive increase in the performance level when intervention was first introduced (change of level across phases = ×1.33). When treatment continued, however, the child showed slight deterioration of performance (slope = ÷1.20, change of slope across phase = ÷1.51). The test on significance of change (p=.9938) indicated that the treatment for S3 did not improve their scores from the baseline phase.

Figure 4 *- Assessment Results of S4 During Baseline and Treatment Phases.*



Baseline Phase

Mean:	6.5
Level at beginning:	8.2
Level at end:	4.7
Slope =	÷1.74

Treatment Phase

Mean:	7.3
Level at beginning:	4.0
Level at end:	8.9
Slope =	×2.23

$$\text{Change of level across phases} = \frac{4.7}{4.0} = \div 1.18$$

$$\text{Change of slope across phases} = 1.74 \times 2.23 = \times 3.88$$

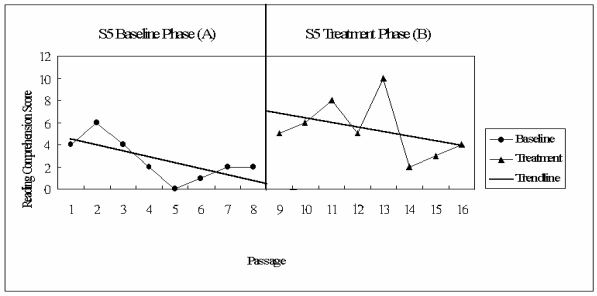
$$\text{Significance of change} = \left(\frac{8}{8}\right)\left(\frac{1}{2}\right)^{8} = .0039$$

Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Figure 4 demonstrates the assessment results of S4 during the baseline phase (M=6.5) and treatment phase (M=7.3). Data indicated a deterioration of performance in the baseline phase (slope = ÷1.74). There was a positive increase in the performance level when intervention was first introduced (change of level across phases = ×1.18). The performance during the treatment phase showed an improvement (slope = ×2.23). S4's performance changed positively from a deterioration in the baseline phase to an improvement trend in treatment phase (change of slope = ×3.88). Significance of change (p=.0039) indicate that the time series data of the treatment phase was significantly different from the data of the baseline phase. The metacognitive instructional strategy had a positive effect on the child's reading comprehension performance. S4's scores demonstrated improvement during the treatment phase.

Figure 5 shows the assessment results of S5 during the baseline phase (M=2.6) and treatment phase (M=5.4). Data indicate a deteriorating tendency of performance in the baseline phase (slope = ÷8.17). There was a positive increase in the performance level when intervention was first introduced (change of level across phases = ×10.83). Performance in the treatment phase also showed a deterioration of performance (slope = ÷2.17). However, the trend of deterioration appeared to be less "steep" as compared to the trend in baseline phase (change of slope = ÷3.75). Significance of change (p=.0039) indicates that the time series data of the treatment phase was significantly different from the data of the baseline phase. The metacognition method seemed to have a positive effect on the child's reading comprehension performance.

Figure 5 *- Assessment Results of S5 During Baseline and Treatment Phases.*



Baseline Phase

Mean:	2.6
Level at beginning:	4.9
Level at end:	0.6
Slope =	÷8.17

Treatment Phase

Mean:	5.4
Level at beginning:	6.5
Level at end:	3.0
Slope =	÷2.17

$$\text{Change of level across phases} = \frac{6.5}{0.6} = \times 10.83$$

$$\text{Change of slope across phases} = \frac{8.17}{2.17} = \div 3.75$$

$$\text{Significance of change} = \left(\frac{8}{8}\right) \left(\frac{1}{2}\right)^{8}$$

$$= .0039$$

Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Table 2 shows a summary of the assessment results of the 5 children during the baseline and treatment phases. Data results suggest that metacognitive strategies had positive effects on reading comprehension scores for S1, S2, S4 and S5 ($p<.01$). S3 was an exception; his performance did not improve with intervention.

Table 2 - *Changes of Levels and Slopes of the Reading Comprehension Scores of S1-S5 between Baseline and Treatment Phases and the Significance of Change*

	S1	**S2**	**S3**	**S4**	**S5**
Slope (baseline)	÷1.51	÷1.13	×1.26	÷1.74	÷8.17
Slope (treatment)	÷1.24	×1.23	÷1.20	×2.23	÷2.17
Changes of Levels	×1.33	×1.07	×1.33	÷1.18	×10.83
Changes of Slopes	÷1.22	×1.39	÷1.51	×3.88	÷ 3.75
Significance of Change	.0039	.0045	.9938	.0039	.0039

Note: × = acceleration, increase in level, increase in slope
÷ = deceleration, decrease in level, decrease in slope

Discussion

Results from the baseline phase may suggest that with traditional teaching practice children with physical and multiple disabilities might not learn efficiently from their reading experiences and thus attain comprehension strategies automatically the way their non-disabled peers do. This result is in accordance with the findings of other researchers who suggested potential reasons for reading failure (i.e., Cole & Chan, 1990; Luftig, 1987; Palincsar & Brown, 1984; Tingle, 1990). Other probable explanations to this decelerating trend may include: (a) the increase in the level of difficulty or abstraction of the reading materials, (b) the decrease of interest on the part of the children because of the teacher's teaching or because doing one passage a week was too much for them, (c) environmental factors such as distractions resulting from the yearly student dental check-ups and school picnic during the last few weeks, and (d) personal factors of the children such as physical conditions and/or family problems.

As the training program was first introduced S1, S2, S4, and S5 had a marked increase in their performance level. This indicated that the training program may potentially have the desired effect (Richards et al., 1999) of improving reading comprehension. It may also imply that the students had learned the comprehension strategies and could gradually apply and monitor them, thus contributing to the accelerating trend of the treatment phase. It may also imply that the learning and applying of the newly learned strategies could compensate for some of the negative factors mentioned earlier as possible explanations to the deceleration trend during the baseline phase.

Among the 5 children involved, S3 was an exception in this study. Results showed that he improved automatically during baseline phase. Though he measured an increase in his performance level when the training program was first introduced and his overall scores gain was higher than those of the baseline phase; statistical analysis suggested that this child did not significantly gain improved scores with the implementation of the training program. His regressing performance might be explained by factors mentioned in the previous paragraph. Other factors contributing to such a result may

include: (a) he did not work hard, (b) the training program was too short for him to demonstrate an improvement tendency, (c) he got confused by the new skills taught and the strategies he automatically attained in the baseline phase, and/or (d) the metacognitive approach was not effective for him.

Routine in-class observations performed by the classroom teacher further found that this child was enthusiastic about learning. He was reported by the classroom teacher a diligent student and he actively participated in learning activities. His reading comprehension scores were the highest in the group. Therefore, the most probable explanation might be the resulting ceiling effect. As the child had already achieved rather high scores at the beginning of the treatment phase there might be more chances for a down-going trend (Parsonson & Baer, 1986). In this case some suggestions could be drawn. First, more days might be needed for this child to show an increase tendency and statistically significant effects. Second, another kind of research method might be used to gather more accurate information on the effects of metacognitive instructional strategies on the child's performance. For example, qualitative methods to investigate the quality of his answers and the type of questions he answered correctly might be beneficial.

When comparing the results of this study with that of Cole and Chan's (1990), data indicate that self-instructional training was effective for 5th- and 6th-grade students whose reading level approximated that of general 3rd-graders. The results of the present study demonstrate that metacognitive instructional strategies could also be effective for children with physical and multiple disabilities whose reading level approximate primary 2 pupils in Hong Kong. The data obtained support other researchers' beliefs that with proper instruction metcognition can be taught and is especially beneficial to poor readers (Crealock & Bachor, 1995; Paris, Cross, & Lipson, 1984; Pressley, 2000; Wong, 1999).

Limitations

There were several limitations to this study. First, problems with the experimental design render the interpretation of results debatable. Extraneous variables, (e.g., maturation) might affect the treatment (Poling & Grossett, 1986). The small number of subjects involved makes generalization difficult.

Second, time constraints are another limitation. Only eight data points from the baseline phase and eight data points from the treatment phase were collected. White and Liberty (1976) suggested that nine to eleven data points would be better in providing an accurate estimate of slope. Although Shinn, Good, and Stein (1989) questioned this suggestion because it lacked empirical support, other researchers (Gibson & Ottenbacher, 1988; Kazdin, 1984; Tawney and Gast, 1984) all agree that a larger number of data points are necessary to achieve statistical power. This presents a dilemma to teachers working in schools especially concerning the length of the baseline phase. If the baseline phase happens to be too short an unstable data path may result in inappropriate interpretation. If the baseline phase appears to be too long ethical concerns for the student and potential boredom caused by no new teaching and learning activities might arise (Tawney & Gast, 1984).

For practical reasons Gibson and Ottenbacher (1988) stated that it was common for a single-subject study to have a short experimental period. Therefore, they suggested that other experimental methods such as multiple baseline experiment might be more appropriate. As revealed from the research by Palincsar and Brown (1984) maintenance and follow up tests might better reflect instructional effectiveness. Pressley (2000) also suggested that qualitative investigations, intensive case studying and long term observations could provide more detailed understanding of strategy instruction in the classroom.

All studies have limitations (Marlow, 1998). The imperfectness simply reflects the complex context of education for children with physical and multiple disabilities. More evidence and research studies using different designs and/or methods as suggested above are needed. Further

investigations on effectiveness of metacognitive strategies in teaching students of different ages are needed for further generalization of the research findings.

Implications

Because of the limitations of this study generalization of results needs to be cautious. Nevertheless, the present study is valuable in providing information which could help improve the future teaching and learning of reading comprehension of this particular group of children. The study provided an opportunity to draw many insights into the implementation of a metacognitive instructional strategies program.

With careful inspection of the training program and children's performance during the training sessions the following episode was inspiring. Two children, S2 and S4, both with improved performance results seemed to become more active in the teaching sessions as evinced by their voluntary rehearsal of the techniques during the assessment sessions. In the last two assessment sessions S2 silently did her work and she finished early. S4 still used overt self-instructions to guide himself through the reading passage. He still could not covertly verbalize self-instructions procedures. Both of their scores, however, were encouraging.

Based on the results of this study, it is recommended that teachers of students with physical and multiple disabilities consider the following:

1. Metacognition strategies can be taught to children with multiple disabilities with academic levels as low as primary two.
2. Language plays an important role in controlling one's cognitive operations (Bender, 1996; Whitman, 1990). Thus oral language proficiency is fundamental to learning reading comprehension (Luftig, 1987).
3. Students' active engagement in learning is important. The teacher should try to enhance students' active involvement no matter which instructional strategies are used. Dole (2000) stressed the importance of students' motivation to read; the amount and quality of books in classrooms could raise students' motivation.
4. Students learn at different rates and in different styles. This study was adopted and modified from that of Cole and Chan (1990). Whereas they used eight training sessions, 16 sessions were used in our study. Pressley (2000) suggested that 20 training sessions was a "fairly short period" of time. Space and the length of training sessions therefore, should be carefully examined according to children's individual differences.

To plan a successful program using metacognitive instructional strategies, teachers should be aware of the following:

1. The teacher's technique is vital to the success of a training program. The teacher should maintain students' interest and monitor students' performance so that they can gradually attain and monitor by themselves.
2. Careful selection of materials and control of the level of difficulty or abstraction of the reading materials are important contributions to program success (Bender, 1996).
3. Individual differences and difficulties should be taken into consideration. There is no one instructional strategy that suits every child.
4. Strategies should be introduced slowly, one or a few at a time so that a repertoire of strategies can be built up over an academic year or more (Pressley, 2000).
5. Explicit teaching and modeling of strategies used are effective (Dole, 2000). Providing students with extensive practice of strategies with teacher guidance and feedback can enhance strategy learning (Pressley, 2000).
6. The teacher should specifically pinpoint to students when and where to apply the strategies and provide them with information about the learning benefits (Palincsar & Brown, 1984; Pressley, 2000).

Conclusions

The results of this experimental study suggested that metacognitive strategies may be effective in enhancing reading comprehension of Chinese children with physical and multiple disabilities. Though some of the interpretations cannot be extensively generalized because of the design and practical limitations, this study is particularly important for classroom learning. The small number of successful cases sheds light on the future teaching and learning of reading comprehension for this particular group of children.

Hill and Larsen (2000) have stated that, if children lack reading skills they will be "unable to function effectively in a modern society" (p. 3). Therefore, because of the importance of reading in a child's life it is recommended that teachers make continuous efforts in looking for effective instructional strategies that suit their students. Cole and Chan (1990) have pointed out that there is no one best method in special education. They state, "methods are usually developed to cater for a particular type of student with problems in an area of learning. Rarely does one method suit all occasions or situations" (p. 15).

Teachers should be aware that their teaching competency is a main factor contributing to the success of a reading program (Ekwall & Shanker, 1983). Crealock and Bachor (1995) emphasized the role of a teacher stating, "there is no obvious benefit in selecting one commonly used programme over another, assuming that programme is taught well" (p. 288). At the same time we should not deny the fact that. although taught well, some students still fail. Because of the important role of reading in educational practices and in children's lives, instructional strategies on reading comprehension for children with physical and multiple disabilities deserve further systematic investigation.

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Development and Current Status of Special Education in Korea

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Abstract

This paper deals with the developmental history and the current situation of special education in Korea. Special Education began in the late 1800s by the commitment of missionaries from the West. Special Education in Korea is well defined by the related laws and regulations; however, Special Education still needs lots of innovative efforts to proceed and realize what it originally aims. Special Education has developed a lot in quantity during the last few decades. In 2003, the Ministry of Education and Human Resources Development established a comprehensive plan about development of special education. Korea is entering a new phase of balanced social welfare. Current administration is very much concerned with the social integration. They are particularly interested in the welfare of the disadvantaged people. Most citizens in Korea believe that a society of equal opportunity, where no discrimination exists, might come.

Introduction

As the 21st century arrived, a new global community evolved. In today's global society, knowledge and information are the most powerful driving forces of social development and prosperity. A nation's level of creativity in the fields of science, technology, education and cultural enrichment is one of the critical determinants of its fate. Astonishing development in transportation and communication, along with the collapse of ideological barriers among states, have allowed the world to become a more neighborly community. We are introducing a totally new era where our ideas, institutions and systems can no longer be protected solely by national boundaries.

According to one of the early pioneers in the field of special education, it refers only to those aspects of education that are unique and in addition to the regular program for all children (Kirk, 1962). Special education is not a program that is entirely different from the education for the ordinary children. For instance, a regular classroom teacher carries out teaching general education programs in all phases to a child who has a speech impairment. The only special part of his or her education is the correction of the child's speech defects, which may be done by a speech therapist.

This kind of specialized education occurred only for a certain period of time in a week, out of a possible twenty-five to thirty hours of class scheduled in the regular classroom. Ordinary children do not receive this additional special help, which we call special education, because it is not needed. At times, special education should be a very different program from what we all know about education, however, this would not necessarily be the case all the time.

Today educational opportunities are open to the public, while previously education was considered as a kind of privilege accessible only to a few noble people. However, today special education is being made available to children in Korea and throughout much of the world.

Explanation of Education System in Korea

Education is one of the most important issues for most of the citizens in Korea. It has received continuous attention of Korean people for hundreds of years. The current Korean school ladder system is six-three-three-four, which was stipulated in the Education Law promulgated in 1949. Korea has a single track school system that maintains a single line of school levels to insure every citizen be equal in receiving elementary, secondary, and tertiary education regardless of their sex, religion, race, socioeconomic status, and ability. Article 31 of the constitutional provision related to education in Korea (Constitution of the Republic of Korea, 1987) states that:

(1) All citizens shall have an equal right to receive an education corresponding to their abilities.

(2) All citizens who have children to support shall be responsible at least for their elementary education and other education as provided by law.

(3) Compulsory education shall be free of charge.

(4) Independence, professionalism and political impartiality of education and the autonomy of university shall be guaranteed under the conditions as prescribed by law.

(5) The State shall promote lifelong education.

(6) Fundamental matters pertaining to the educational system, including in-school and lifelong education, administration, educational finance, and status of teachers shall be determined by law.

The Korean education law mandates minimum standards of school days that are required for completion of each academic year. Elementary school, middle and high schools require a minimum attendance of 220 school days for completion of each school year. On the other hand, colleges, universities, national universities of education, and junior colleges require a minimum of 30 weeks of attendance for completion of a school year.

In Korea every school is run on a two-semester system in an academic year. The first semester of a new school year usually starts in March and ends in August. The second semester begins in September and ends the end of February. Special schools and special classes in the regular schools are also managed by this two-semester system.

Article 81 of the Education Law (1997) says it is the responsibility of the government to establish the following types of schools in order to ensure all citizens have equal opportunity for education, regardless of their gender, religion, or socioeconomic status:

(1) Elementary schools, middle schools, high schools, colleges, and universities

(2) Colleges and universities of education

(3) Junior vocational colleges, open universities, and polytechnic colleges

(4) Technology schools and technology high schools

(5) Civic schools and civic high schools

(6) Special schools

(7) Kindergartens

(8) Miscellaneous schools

History of Special Education in Korea

In our tradition people with disabilities are generally provided with protection, to an extent, from poverty and abuse. In Korea's history of almost 5,000 years, people in the disadvantaged classes including the aged and the disabled, have been taken care of largely in accordance with the national policies prepared by the merciful kings, government officials, or even by ordinary people in the neighborhood. It might be analyzed that this tradition, which was inherited from the basic values of Confucianism, Buddhism, and Taoism, can be interpreted as selflessness, charity, and courtesy (Lee, 2000).

Unique family traditions in our country, which can be summarized as strong family ties

between families and generations, are also derived from these values of selflessness, charity and courtesy. As a consequence, these values contributed to the protection for the disabled people within the family. However, the systematic concerns for the disabled people in Korea grew very rapidly since the introduction of Christianity, which emphasizes God's love as its most important value, in the late 1800s from the West (Kim, 1985).

Special education in Korea has a long history of over 100 years. The special education and welfare services for disabled persons in Korea, which were established on several principles, have been developed noticeably in quantity and quality since 1981, the International Year of Disabled Persons proclaimed by the United Nations (Kim & Lee, 1993).

The Beginning of Special Education

When that the time of reforming and opening our country arrived in the late 1800s, a lot of changes occurred and affected almost every aspect of people's daily lives in Korea. Before the change, the contemporary imperial regime was strict in protecting its' governing, so they were very much reluctant to communicate with the outer world. However, the social tendency of opening and reforming the Cho-Son Dynasty was so strong in the last few decades of the dynasty, no one could oppose it. However, in the meantime, many missionaries were able to gain unauthorized access into the Korean peninsula and propagated the Gospel.

The missionaries wished to evangelize the country while providing the people with new educational services at the same time. So they became the pioneers in education development including Special Education. On the other hand, the missionaries at that time dedicated a great deal to the development of medical and welfare services in Korea; they established hospitals, orphanages, asylums and schools.

Many protestant missionaries, mainly from the United Kingdom and North America, tried to develop special education in Korea at the end of the 19th century. Even though the motives of serving children with disabilities came from their religious beliefs, they were very eager to contribute to the development of special education in Korea through their knowledge and enthusiasm they acquired from advanced education in Europe and North America.

For example, Rosetta Sherwood Hall, an American missionary and doctor is known as the one who initiated special education service in Korea. In 1894, she started teaching a blind girl to read and write Braille in Pyongyang (Kim, 1985). She adapted it from the New York Point System. Hall established a special class for the blind students at Pyongyang Jung-Jin Elementary School in 1900. This class was the first effort of formal special education for children with disabilities in Korea. In this school, curriculum for blind girls consisted of a Bible, geography, music, calculation, knitting, and physical massage classes as practical subjects for their living.

Hall dispatched Ik-Min Lee to China and requested him to learn the methodology of teaching students at schools for the deaf. As soon as Lee returned to Korea, he devoted himself to helping Hall establish the first special school for the deaf in Korea.

According to Underwood (1926), an American missionary and physician, and Alice Fish Moffet, another American missionary, established a special class for blind boys in Pyongyang in 1903. In later years, two ladies from the United Kingdom, Pash and Perry established more special classes for blind boys in Seoul. From the beginning of formal special education in Korea, many foreign missionaries and physicians contributed to the development of special education.

Special Education in an Unstable Era

When the Japanese colonized Korea in 1910, the society became very unstable. However, there was remarkable progress in caring and educating children with special needs at that time. The Cho-Son Government-General, who had been dispatched by the Japanese government, established a national welfare institution called Jea-Saeng-Won in 1912. In the next year, two distinct divisions, Yang-Yook

and Maeng-Ah, were created within the institution. The former was responsible for taking care of the orphans and the latter was responsible for the education and welfare of the blind and the deaf. The total number of students enrolled in Maeng-Ah department was 62 in 1916. Among the 62 students, however, only 8 children were Korean natives.

Korean teachers and scholars demonstrated a remarkable achievement in special education during the Japanese occupancy. Doo-Seong Park, a teacher at the Maeng-Ah department of Je-Saeng-Won, was very disappointed with the reality that he had to teach the Korean blind students with Japanese Braille, so he secretly organized the Cho-Son Braille Study Committee in 1923. Seven years later, he invented the Korean Braille system, which consisted of six points, or so-called Hun-Maeng-Jeong-Eum (teaching the blind people the right word).

In spite of the pressure from the Japanese government, Park had published several texts in Korean Braille and this effort became an important moment that instilled patriotism into the hearts of blind people in Korean. The invention of Korean Braille created an opportunity for social participation of individuals that were blind. He dedicated himself to educating the blind and published the Bible and 76 pieces of educational materials in Korean Braille.

Liberation and Development of Special Education

After the liberation of Korea from Japanese colonial ruling in 1945, special education has gradually developed in a more democratized society. The new government of the Republic of Korea was formed in 1948. In the following year, the Education Law was legislated and it was possible to secure a legal basis for special education services. The law states very clearly regarding special education benefits, educational purpose, and quality of education. Article 144 of the Education Law mandated to establish at least one or more special schools in each province. Article 145 of the same law mandated the establishment of special classes within the regular elementary and middle schools in order to provide citizens with equal education opportunities regardless of their religion, sex, social position, or economic status (Education Law, 1949).

In the years following the liberation, more schools and institutions were established throughout the country. Two special schools were founded in the 1940s, 13 schools in the 1950s, 13 schools in the 1960s, and 8 more schools were founded in the 1970s. In the 1980s and 1990s, the establishment of special schools accelerated.

Education for students with disabilities in Korea has been implemented largely in private institutions rather than in public ones. Charitable citizens and foundations established special schools in Seoul and throughout the country, and these private institutions played the key role in the process of developing special education in Korea.

In 1946, for example, a Presbyterian minister, Young-Shik Rhee established the first private special school, Daegu Institute for the Blind. Daegu, one of the major cities, is located in the southern part of Korea. Later, Minister Rhee established several more special schools in the same region for blind, deaf, mentally retarded, and physically disabled children. He founded the Korea Social Welfare School in 1956 to cultivate special education professionals in Korea. In 1982, the college renamed as Daegu University became one of the most famous schools in special education in Korea.

Public Awareness and Growing Responsibility for the Children with Disabilities

Along with the rapid economic growth during the 1970s, the Korean government was very concerned with the education and welfare of people with disabilities. As a result, the Ministry of Education (MOE) prepared a five-year plan (1967-1971) for the advancement of special education. It changed the work attitudes of government officials and their role in special education. The focal points of the five-year plan were to establish more special schools and special classes all over the country (Kim & Lee, 1993

The Ministry of Education had emphasized the importance of training, securing special education teachers, providing financial aid to private institutions, and making elementary special education as compulsory education. As the public responsibilities and awareness dramatically increased during the 1970s, the 'Act for the Promotion of Special Education', a major milestone in the development of special education in Korea was legislated and its regulations were publicly announced in 1978. This act mandates free education in both public and private schools.

The Act has been amended a few times since the proclamation. Its contents were revised with a great deal of augmentation in 1994. According to the revision, integrative education was adopted as a major policy in special education in Korea. In a recent study, Park (2004) suggested five tasks to secure successful inclusion for children with disabilities. First, training on special education for general education teachers should be enlarged. Second, training on general education for special education teachers needs to be introduced. Third, it is necessary to change the curricular contents and teaching methods in general education. Fourth, sufficient supports in both administration and finance should be guaranteed. Lastly, it is also an important and necessary step to strengthen the family support system.

Current Situation of Special Education in Korea

The Statistical Figures of Special Education

At present, special education in Korea is provided in two major paths; through separated special schools and through special classes in the regular schools. In this section, data on special education will be analyzed to examine the current situation of special education in Korea. The number of children with disabilities can be estimated by using prevalence rates. In general, prevalence is a kind of percentage or proportion of the population who have disabilities in a given category.

In this study, the current prevalence of children who need special education is quoted from the most recent data announced by the Korea Institute for Special Education (KISE). The prevalence of children with special needs was reported as 2.71% among school-aged children, which was obtained through a survey by the Ministry of Education and Human Resources Development (MOE & HRD) and KISE in 2001. Adapting this prevalence, the number of children who have special education needs was estimated to be 216,312 within the age range of 6 to 17 (KISE, 2002).

As of April 1, 2003, the number of special schools in Korea was 137, whereas only 10 existed in 1962. It tells us that the number of special schools has increased almost 14 times during the past four decades. At the moment, there are 2,887 classes within those 137 special schools. And a total of 5,234 special education teachers are serving the 24,192 students who have disabilities in special schools. The number of special schools has gradually increased each year since the 1970s. Statistical figures about the number of total special schools in each year are shown below (MOE & HRD, 2004).

Table 1- *Increment of special schools by year*

Year	**62**	**67**	**72**	**77**	**81**	**85**	**88**
Number of Special Schools	10	22	38	51	61	87	97
Year	**90**	**92**	**93**	**94**	**95**	**96**	**97**
Number of Special Schools	102	103	106	106	108	109	114
Year	**98**	**99**	**00**	**01**	**02**	**03**	
Number of Special Schools	118	123	129	134	136	137	

Table 2 - *Number of special schools, classes, students, and teachers*

	Number of schools	Number of classes	Number of students	Number of teachers
National	5	156	1,214	311
Public	45	1,177	9,550	2,156
Private	87	1,554	13,428	2,767
Total	137	2,887	24,192	5,234

The current statistical figures on special schools according to the types of disabilities are shown in the following. A total of 50 special schools are being run by the state. On the other hand, 87 schools are private. Special education in Korea as well as general education relies very much on private foundations.

Table 3 *- Number of special schools by disabilities*

	Visual	Auditory	Mental
National	1	1	1
Public	2	4	32
Private	9	11	50
Total	12	16	83
	Physical	**Emotional**	**Sub Total**
National	1	1	5
Public	6	1	45
Private	12	5	87
Total	19	7	137

Statistical figures in special education in Korea have shown a sign of increased public awareness and responsibilities since the 1970s. As a result, a special class was established at Chil-Sung Elementary School in Daegu in 1971. This was the first special class in the regular school system within the country since the Korean government was established (Kim, 1985). MOE advised that every city or district would establish at least one special class in the regular school by 1974, so that a total of 177 special classes were installed in the same year.

Establishment of special classes within the regular schools was an important factor toward increasing public awareness and responsibility for special education in Korea. Since the first special class was installed in a regular elementary school in Daegu, a total of 208 special classes were established during the next two years. Now a total of 26,868 children with disabilities are getting special education services in 4,102 special classes within 3,217 regular schools in Korea. The following table shows statistical figures about special classes established in the regular schools in Korea as of April 2003 (MOE & HRD, 2004).

Table 4 *- Number of special classes, students, teachers in regular schools*

	Number of schools	Number of classes	Number of students	Number of teachers
Kinder-garten	72	84	339	85
Elementary School	2,430	3,119	20,288	3,217
Middle School	601	712	4,630	723
High School	114	187	1,611	187
Total	3,217	4,102	26,868	4,212

Criteria of Identifying Disabled Students for Special Education

The criteria on which a child needs special education varies according to the definition of the disability of the child. The Korean government provides special education and related activities with eligibility criteria, and has developed special education and related services with appropriate financial support. Special education-related associations as well as special schools in Korea have carried out screening and placement tests for the children who need special education according to the identification criteria.

To substantiate this support, the identification criteria in the enforcement regulations of the Promotion of Special Education Act were formulated in 1978 (Enforcement Regulations of the Promotion of Special Education Act, 1978). To be eligible for this each child needs proper identification and then necessary support would be provided.

Table 5 *- Criteria of identifying students for special education*

Type of Disability	Criteria for Identification
Visual Impairments	– A person's visual acuity is below 0.04 in both eyes after correction. – A person has possibility of being educated not by vision but only Braille or listening because of severe visual impairments – A person's corrective visual acuity is over 0.04 but cannot perform visual tasks with specific learning materials or modification of tasks. – A Person who can perform visual tasks only with specific materials and equipment.
Hearing Impairments	– A Person's hearing loss is 90dB or over in both ears. – A Person who is incapable of or severe deficient in language comprehension with a hearing aid due to severe hearing loss. – A Person who has limits in hearing in daily language use, and thereby having difficulty in normal schooling.
Mental Retardation	– A person who is below 75 of IQ with deficiency in adaptive behaviors.
Physical Impairments	– A person who has disability in functioning and forms of body and has difficulty in supporting body or movement of limbs, and thereby has difficulty in normal schooling.
Emotional Disturbance	– A person who has an inability to learn which can not be explained by intellectual, sensory, or health factors. – A person who has an inability to build or maintain satisfactory interpersonal relationships with peers and teachers. – Inappropriate types of behaviors or feelings under normal circumstances. – A general pervasive mood of unhappiness or depression. – A tendency to develop physical symptoms or fears associated with personal or school problems. – A person who has difficulty in response toward sensory stimulus, language, cognitive ability, or interpersonal relationship.
Speech Impairments	– A person who has problems in articulation, fluency, voice, or verbalization, and thereby has difficulty in communication and learning.
Learning Disabilities	– A person who has specific learning problems such as math, speaking, reading, or writing.

A Plan for the 21st Century

Korea is now at the turning point of developing special education. The government has already signed up to be a member country of the Organization for Economic Cooperation and Development (OECD) and struggled to get into the group of developed countries. The government appears to be paying more attention to the development of welfare and education for people with disabilities. At the end of 1996, the MOE in Korea prepared the 'Special Education Promotion Plan (1997-2001)' for the realization of welfare society (MOE, December 1996).

According to the 1997 plan, the basic direction of the development of special education was establishing a new model of special education for the welfare society. The government tried to convert the special education policy from enlarging the number of special education recipients into full enrollment. The government tried to provide special education to all disabled students by the year of 2001, but it has not been very successful in achieving this plan.

The promotion plan of 1997 clearly stated that severely disabled students would have been educated either in a special school or at home. For the homebound students, itinerant teachers would visit the individual student according to the prescribed schedule. And the mildly disabled students would be served either in a special class or in a resource room within the regular schools. The resource room teachers would meet special needs students that were originally enrolled in the regular classes on a regular basis.

For effective implementation of the new promotion plan, the Ministry of Education and Human Resources Development, the Ministry of Labor, and the Ministry of Health and Welfare should have cooperated with each other to their full potential. Then the systematic support of education, medical treatment, employment and care for disabled people might have been possible. In the implementation of the schedule for the new special education promotion plan, several specific contents were presented as follows:

(1) Constructing a support system for life-long education and welfare of the disabled persons

(2) Enlarging the number of special education recipients for the disabled

(3) Establishing an exclusive education system for the disabled

(4) Reinforcing the vocational education for the disabled

(5) Improving teacher education system

(6) Developing the special education facilities

(7) Reinforcing the administrative and financial support system

(8) Reforming the laws and regulations related to special education, etc.

New Comprehensive Plan of Development in Special Education

In 2003, the MOE and HRD prepared a new and more advanced comprehensive plan to improve the situation of special education. According to the most recent development plan, which is entitled with "A Comprehensive Plan of Special Education Development (2003-2007)", it aims to provide completely free education for all special needs students. In order to make it work, several innovative tasks were suggested (MOE & HRD, 2003).

According to the plan of 2003, free education is guaranteed for all students with disabilities from kindergarten to high school. For this plan to be successful, the government is going to establish 11 more special schools and 705 special classes during the 5-year period. The government also plans to reduce the number of students per classroom in the special schools and special classes. The minimum standard of students per classroom are categorized by school level, i.e., 4 in kindergarten, 6 in elementary school, 7 in middle school, and 8 in high school.

In the plan of 2003, several innovative tasks were chosen that should be accomplished within the 5-year period. For example, the governmental authorities plan to improve facilities for students with disabilities in the general education system and recruit special education assistants. They also want to establish special education support centers, increase the special education budget, and enlarge the Korea Institute for Special Education. The government set a goal of recruiting a total of 4,000 special education assistants and securing a minimum of 3% of the total education budget by 2007 (MOE & HRD, 2003).

Through the amendment of the Special Education Promotion Act in 1994, special education for three to five year old children has been provided free of charge. However, every child with disabilities could not benefit from such services due to the lack in the number of special education facilities. A strong demand for integrative education in recent years also stimulated many children with disabilities to attend kindergartens outside the special education setting. Therefore, since 2003, MOE & HRD has been trying to offer financial assistance for free education to children with disabilities who are attending private kindergartens.

For active participation in school activities of children with disabilities, it is essential to provide necessary staffing including teachers and special education assistants. For students with disabilities attending school along with their non-disabled peers, in particular, it is very important to provide support for hiring special education teachers' aides to expand the level of involvement of special needs students in learning activities. Difficulties also lie in securing a sufficient number of special education teachers' aides in special education institutions and classrooms.

In 2003, the MOE and HRD conducted a pilot operation of the special education assistant system to alleviate the burden on parents of students with disabilities and to guarantee the students' right to learn. Most special education assistants at special education facilities or classrooms are parents of students with disabilities and/or volunteers, leading to an unstable supply of personnel and an undue burden on the parents. In 2004, support was

being provided to hire a total of 1,000 aides nationwide.

All students with disabilities across the nation will benefit from the support at any school they choose to attend. As a result, an inclusive education system will become a major backbone in special education in Korea, with a school culture that fosters harmony between children with or without a disability and free of prejudice.

In addition to the financial support for children with disabilities attending kindergartens, and for hiring special education teacher assistants, the MOE and HRD has expanded the scope of its projects beginning in 2004. They want to upgrade dilapidated facilities at public and private special education schools, and to establish and operate special education support centers at metropolitan/provincial education offices based on the Comprehensive Plans for Special Education Development.

Through such efforts, the MOE and HRD aims to realize an education system that embodies the philosophy of a welfare state, where all children including the disabled are guaranteed an adequate education that meets their needs. Inclusive education for children with special needs is now a major policy in educating special needs children in Korea (Park, 2001).

Conclusive Remarks

It is our duty to provide all disabled children with better appropriate education. As suggested earlier in this paper, no single country or region can prosper without exchanging knowledge and thoughts with other counterparts in a global and knowledge-information society. We can affect each other in the direction of constructive ways by sharing our ideas and beliefs. In order to achieve the goals we are seeking today, we should share our experiences and we should remove the diverse barriers in front of us.

When positive contact occurs over time, the non-disabled children begin to see the other children first and the disability second. It was our history of failure in education, partly due to academic competition, to provide such opportunities for contacts among those children (Park, 2001). However, when integration occurs the positive results of attitude change related to disabilities is documented (Donaldson, 1980; Keogh, 1976; and Cook & Wollersheim, 1978).

There are many ways to improve services to individual with disabilities. These are not necessarily practiced in the classroom. Children with disabilities could be served through after-school programs (Park, 2003). For example, according to Schwendiman and Fager (1999), after-school programs give benefits to all children including those who have difficulties in learning, health, social, and psychological development. There are many other sources that support the positive outcomes of after-school programs (Halpern, 2000; Montague & Warger, 2002; Hollister, 2003).

Korea is entering a new era of securing balanced social welfare for all citizens regardless of their abilities, gender, age, religion, and economic status, etc. The present administrative body of the country is very much concerned with the realization of social integration, economic justice and harmony among people in the country. The government is particularly interested in the welfare of disadvantaged people. Most people in Korea believe that a society with equal opportunity, where no discrimination exists, might eventually become a reality.

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The Perceptions of Learning Disabilities by General Education and Special Classroom Teachers in Korea

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Abstract

This study investigated the perceptions of learning disabilities (LD) by 65 general and 52 special educators in Korea and their opinions about including students with LD in general education classrooms. Results indicated that general educators were aware of the characteristics of LD but not enough to identify them in individual students. In addition, both groups of teachers showed negative attitudes towards integrating students with LD into general education classrooms. The majority of the respondents recognized that students with LD were not underachievers; however, overall general educators lacked an in-depth understanding of this disability. Conclusions were drawn from the results and suggestions for addressing the results were proposed.

Learning Disabilities in Korea

The 1994 Amendments to the Special Education Promotion Act (SEPA) were a milestone in the education of students with learning disabilities (LD) in Korea. Since 1994 the law has guaranteed that all eligible school-aged children and youth with LD are entitled to receive special education and related services by including LD as a new disability category. The 1994 SEPA defines students with LD as follows: "Students with learning disabilities are those who have a disorder in specific areas involved in reading, writing, speaking, or doing mathematical calculations" (Lee, 1999, p. 1). This definition does not delineate specific criteria for identifying students with LD (Byun, 2002; Lee, 1999).

The SEPA definition is less detailed than the one outlined in the Individuals with Disabilities Education Act Amendments of 1997. Specifically, it excludes the discrepancy component (e.g., a marked difference between intelligence and achievement) and pre-referral conditions for the identification of children and youths with LD. According to Lee (1999) this lack of specificity makes it difficult to identify and serve children with LD. This concern was supported in the Annual Report to Congress on the Implementation of Special Education Promotion Act (Lee, 1999; Lee, 2001). This report suggested that the prevalence of school-aged students with disabilities was approximately 2.44% (Korea Department of Education, 1998). This figure was identical to the figure that appeared in the 1977 Special Education Promotion Act that did not include LD as a disability category. It can be deduced by this lack of change in the number of children served that a significant number of students with LD are rarely identified and served by special education and related services programs (Yun, 1999).

Problems regarding the definition of LD as well as the assessment process have been presented by many researchers; especially regarding the validity of standardized tests required by the 1994 SEPA and the lack of specific requirements for evaluating children suspected of having LD (Back, 1993; Kang, 1992; Hwang, 1995). The Korea Department of Education (1998) reported the need for more valid and reliable standardized tests to accurately determine whether a child has LD and is eligible for special education and related services. However, this report did not include a specific plan on how to develop tests and other evaluation materials to assess school-aged

children with LD (Lee, 1999). Therefore, although special education and related services for students with LD have been guaranteed by the 1994 SEPA, many children and youths with this exceptionality do not practically benefit from this mandate (Byun, 2002; Lee, 1999; Yun, 1999).

In most cases, many students with LD are first recognized by general education teachers who may initiate the referral process as well as provide instruction to them in inclusive classrooms (Drame, 2002; White & Calhoun, 1987). In spite of the importance of classroom teachers as the agents primarily responsible for referring students to special education programs (Kim, 1998; Byun, 2002), only one study (Lee, 2001) has investigated how general education teachers perceive the characteristics of students that are indicative of a learning disability. Therefore, more empirical research is needed in this area. In this study the investigator examined the perceptions of learning disabilities from 65 general and 52 special educators in Korea and their opinions about including students with LD in general education classrooms.

Method

Participants

Participants in this study were 65 general and 52 special educators in Seoul, Korea. The general educators were from four elementary schools, whereas the special education teachers were randomly selected from all of the elementary schools. The respondents all work in elementary schools that have a special classroom in which students with LD are served most of their day. The majority of the respondents were female; 84% of the general educators and 92% of the special educators. The age ranges of the respondents varied. The largest numbers of the general educators ranged in age from more than age 41 (37%), followed by ages 31 to 40 (31%), and 21 to 30 (15.5%). The largest numbers of the special educators ranged from 21 to 30 (44%), followed by ages 31 to 40 (40%), and more than 41 (12%). The majority of the respondents indicated that their highest degree was a bachelor's degree. Specifically, among the general education teachers, 81% had obtained a bachelor's degree, while 12% had obtained a master's degree. Almost 70% of the special education teachers indicated they had completed a bachelor's degree, while 29% had completed a master's degree. The respondents also varied across the number of years taught. Approximately 30% of the general educators indicated they had taught less than five years, while 15% had 11 to 15 and 21 to 25 years of teaching experience respectively. One-half of the special educators had taught less than five years and 23% had 11 to 15 years of teaching experience. Both groups of the responding teachers were asked to indicate the pre-service courses they had completed and in-service workshops they had received. Specifically, the general educators were asked about any special education courses and trainings attended and the special educators were asked to indicate the type of LD courses and trainings completed. The general educators reported that only 28% had taken a special education course and 12% had attended workshops dealing with children and youth with disabilities. Among the special educators, 81% had completed a course on the characteristics of LD, 71% a course on teaching methods for children and youth with LD, and 63% an assessment course related to this disability. Less than one-half had received a workshop associated with LD.

Instrument

All respondents were administered a demographic survey and a perception survey designed by the researcher to determine whether differences exist between general education and special classroom teachers' perceptions of LD. The perception survey consisted of four sections including: (a) characteristics of LD, (b) identification of LD, (c) differences between underachievers and students with LD, and (d) inclusion of students with LD.

The first section contained 20 items that consisted of academic, behavioral, and social characteristics frequently associated with students with LD. A Likert type scale from 1 (strongly disagree) to 4 (strongly agree) was

used to indicate their levels of agreement on each item. This portion of the survey was derived from a survey conducted by DeLoach, Earl, Brown, Poplin, and Warner (1981).

The section that addressed identification of LD included ten items that also utilized a 4-point Likert scale. The vignettes in the section were excerpted from textbooks (Haring & McCormick, 1990; Kirk & Chalfant, 1984) used in college level courses on LD and other exceptionalities. Reading disorders, arithmetic disorders, nonverbal LD, and perceptual disorders were chosen as the most representative of problem areas for students with LD. Additional situations were created to describe fictitious students who were identified as being gifted, having visual impairments, mental retardation, or emotional disturbance.

Regarding the question on inclusion of students with LD, respondents were asked to report their perceptions by using a 4-point Likert scale. Finally respondents were asked to differentiate an underachiever from a student with LD, this was presented as an open-ended question.

To provide a measure of validity, two faculty members having an expertise in LD area and a special education doctoral student who had been a special education teacher in Korea were asked to review the survey written in English. All of them were from a mid-western university in the United States. In addition, the special education doctoral student and a master's student majoring in teaching English as a second language (TESL) from the same university as above, who had been an elementary teacher in Korea, were asked to review the questionnaire translated from English into Korean to determine whether it contained any problem of clarity in the directions and items as well as whether the translation was accurate.

Data Analysis

Three hundred questionnaires were distributed to elementary school teachers in Seoul, Korea; 150 copies were forwarded to general education teachers and 150 were disseminated to special classroom teachers. The general educators were conveniently selected from four elementary schools, whereas the special education teachers were randomly selected from all of the elementary schools located in Seoul, Korea. Sixty-five general educators completed the questionnaire, whereas 52 special educators were surveyed. The overall return rate was 39%.

Descriptive statistics and an independent t-test were used to analyze the data collected from the survey. Specifically, descriptive statistics (e.g., frequency, percentage) were used to summarize the responses concerning all five research questions. An independent t-test was conducted to identify whether there was a significant difference in the perceptions of learning disabilities between general education and special classroom teachers.

The answers to the open-ended question in the third section were analyzed using the definition of the National Joint Committee on Learning Disabilities (NJCLD, 1997) regarding students with LD and the criteria derived from McCall, Evahn, and Kratzer (1992) regarding underachievers. Specifically, for definitions of students with LD the two groups' responses were inspected to determine whether each of the following targeted distinct characteristics were included: (a) attribution of the problem to central nervous system dysfunction or psychological process deficits, (b) exclusion of other disabilities as the primary reason for the learning problem, (c) discrepancy between potential and achievement and the necessity for special intervention beyond what is provided in the general classroom, and (d) different types of problems in learning. For definitions of underachievers, surveys were examined to ascertain whether each of the following classified characteristics were included in these teachers' responses: (a) discrepancy between performance and ability and the necessity for intensive intervention provided in the regular classroom, (b) non-deliberate screening out of students identified as having LD, and (c) focus on personality, motivational, parental, or classroom factors as causes of the problem. The frequency of teachers including each of the

targeted responses in their definitions of students with LD and underachievers was calculated and tabulated.

Results

The purpose of this study was to investigate the current perceptions of learning disabilities (LD) from general education and special classroom teachers in Korea. In addition, the two groups' opinions about the inclusion of students with LD were also examined. Each research question is stated and the results of the analyses of data obtained from the questionnaire are presented.

Research Question 1: *Are there significant differences between general education and special classroom teachers' perceptions of the characteristics of learning disabilities?* The results of an independent t-test indicated that there was no significant difference between general and special educators' perceptions of the characteristics of LD (t = - 0.78; p > .05; see Table 1).

Table 1 - *Results of an Independent t- Test Analysis of General Education and Special Classroom Teachers' Perceptions of the Characteristics of Learning Disabilities*

Groups (N = 117)	M	SD	t	p
General Educators (n = 65)	2.96	.41	-.78	.44
Special Educators (n = 52)	3.01	.31		

Note. p > .05

As shown in Table 2, 76% of the general education teachers indicated positive recognition of the characteristics frequently associated with this disability (i.e., selected ratings of 3 and 4 on the Likert scale), while 77% of the special education teachers had similar positive recognition.

Table 2 - *Frequency of General Education and Special Classroom Teachers' Responses on Their Perceptions of the Characteristics of Learning Disabilities*

	Response Scale			
Groups (N = 117)	**4**	**3**	**2**	**1**
General Educators (n = 65)[a]	15 (23)	34 (53)	14 (22)	1 (1)
Special Educators (n = 52)	14 (27)	26 (50)	11 (22)	1 (2)

Note. 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1= Strongly Disagree. [a] Missing = 1 (1). Percentages are in parentheses.

Research Question 2: *Are there significant differences between general education and special classroom teachers' perceptions of the identification of learning disabilities?* An independent t-test indicated that the two groups were significantly different in their perceptions of the identification of LD (t = - 6.29; p < .001; see Table 3).

Table 3 - *Results of an Independent t-Test Analysis of General Education and Special Classroom Teachers' Perceptions of the Identification of Learning Disabilities*

Groups (N = 117)	M	SD	t	p
General Educators (n = 65)	2.44	.32	-6.29	.00**
Special Educators (n = 52)	2.80	.29		

Note. **p < .001

The survey item related to Research Question 2 posed scenarios of students showing a variety of characteristics. Respondents were asked to indicate which students could/should be classified as having a learning disability. As can be seen in Table 4, 49% of the general education teachers showed a positive sense of the identification of that exceptionality (i.e., selected 3 and 4 on the Likert scale), whereas 69% of the special classroom teachers indicated a similar response.

Table 4 - *Frequency of General Education and Special Classroom Teachers' Responses on Their Perceptions of the Identification of Learning Disabilities*

	Response Scale			
Groups (N = 117)	**4**	**3**	**2**	**1**
General Educators (n = 65)	5 (7)	27 (42)	26 (39)	7 (11)
Special Educators (n = 52)	9 (18)	27 (51)	13 (25)	3 (6)

Note. 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1= Strongly Disagree. Percentages are in parentheses.

Table 5 - *Frequency of General Education and Special Classroom Teachers' Responses on Their Perceptions of the Differences between an Underachiever and a Student with Learning Disabilities*

Groups (N = 117)	Yes	No
General Educators (n = 65)[a]	4 (6)	59 (91)
Special Educators (n = 52)[b]	2 (4)	47 (90)

Note. [a] Missing = 2 (3). [b] Missing = 3 (6). Percentages are in parentheses.

Research Question 3: *Do general education and special classroom teachers think that an underachiever is merely a student with learning disabilities?*

Table 5 displays the frequencies of general and special education teachers' responses to this issue. Ninety-one percent of the general education teacher respondents perceived that a student with LD was not just an underachiever, while 6% indicated that a student with this disability was merely an underachiever. Among the special education teachers, 97% indicated that a student with LD was not just an underachiever, while 4% reported that a student with that exceptionality was primarily an underachiever.

Table 6 presents the frequencies of the two teacher groups' qualitative responses regarding the differences between underachieving students and students with LD. When asked which characteristics were most readily identifiable in students with LD the academic areas were identified most often. Special educators reported that reading and math were the most apparent areas impacted (general educators = 9%: special educators = 25%). Central nervous system involvement was evident to 6% and 15% of the general and special educators, respectively. The discrepancy between the potential and actual achievement and the necessity for special intervention beyond what is provided in the general education classroom was mentioned by 9% of the general education teachers and 21% of the special educators. Only 2% of the special education teachers referred to the exclusion of other disability conditions as the primary cause of the disability. On the other hand, the general education teachers erred in defining LD by stating that it is the result of physical (9%), emotional (9%), behavioral (3%), mental (2%), personality (3%), or environmental (5%) problems. Six percent of the general education teachers mentioned low intelligence as the characteristic that is indicative of this disability. Approximately one-third of both teacher groups mentioned that the major causation ingredients of their definitions of an underachiever were personality, motivational, parental or classroom factors. The discrepancy between performance and ability and the necessity for intensive intervention provided in the general classroom was reported by 19% of the general education teachers and 31% of the special education teachers. One-quarter of the respondents did not answer this question.

Table 6 - *Frequency of General Education and Special Classroom Teachers' Definitions of an Underachiever and a Student with Learning Disabilities*

Features	Group 1[a]	Group 2[b]
Students with Learning Disabilities		
- Attribution of the problem to central nervous system dysfunction or psychological process deficits	4 (6)	8 (15)
- Exclusion of other disabilities as the primary reason for the learning problem	0 (0)	1 (2)
- Discrepancy between potential and achievement and the necessity for special intervention beyond what is provided in the general classroom	6 (9)	11 (21)
- Different types of problems in learning	6 (9)	13 (25)
Underachievers		
- Discrepancy between performance and ability and the necessity for intensive intervention provided in the regular classroom	12 (19)	16 (31)
- Non deliberate screening out of students identified as having LD	0 (0)	0 (0)
- Focus on personality, motivational, parental, or classroom factors as causes of the problem	25 (39)	19 (37)
No response	17 (26)	14 (27)

Table 6 Note. [a] Group 1=General Education Teachers (n=65), [b] Group 2=Special Classroom Teachers (n=52). One response could be classed into several features so it did not add to 100%. Percentages are in parentheses. Table does not display other responses that could not be classed into the targeted features. The other responses that were not displayed in this table were detailed as follows.

	Group 1	Group 2
- Inclusion of other disabilities as the primary reason for the learning problem	20 (31)	0 (0)
physical	6 (9)	
emotional	6 (9)	
behavioral	2 (3)	
mental	1 (2)	
personality	2 (3)	
environmental	3 (5)	
-Low intelligence	4 (6)	0 (0)

Research Question 4: *Do general education and special classroom teachers have significantly different perceptions of inclusion of students with learning disabilities?* The results of an independent t-test indicated that there was no significant difference in the opinions of these two groups on full inclusion of students with LD (t = - 0.50; p >. 05; see Table 7).

Table 7 - *Results of an Independent t- Test Analysis of General Education and Special Classroom Teachers' Perceptions of Inclusion of Students with Learning Disabilities*

Groups (N = 117)	M	SD	t	p
General Educators (n = 65)	2.28	.70	-.50	.62
Special Educators (n = 52)	2.35	.81		

Note. p > .05

As revealed by Table 8, 38% of the general education teachers were supportive of including students with LD into general education classrooms (i.e. selected 3 and 4 on the Likert scale), while 31% of the special educators reported this opinion.

Table 8 - *Frequency of General Education and Special Classroom Teachers' Responses on Their Perceptions of Inclusion of Students with Learning Disabilities*

	Response Scale			
Groups (N = 117)	**4**	**3**	**2**	**1**
General Educators (n = 65)	1	24	32	8
	(2)	(37)	(49)	(12)
Special Educators (n = 52)[a]	6	10	33	2
	(12)	(19)	(64)	(4)

Note. 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1= Strongly Disagree. [a] Missing = 1 (1). Percentages are in parentheses.

Research Question 5: *Does a significant difference exist in the perceptions of the inclusion of students with learning disabilities between general education teachers who have and those who have not taken a college level of special education course?* The two groups of educators did not hold significantly different perceptions about this issue (t = 1.91; p > .05; see Table 9).

One half of the general education teachers who had attended a special education course or workshop supported including students with LD into their classrooms (i.e., selected 3 and 4 on the Likert Scale); whereas approximately one fourth of the general education teachers who had not taken such a course or workshop held the same response (see Table 10).

Table 9 - *Results of the Independent T-Test Analyses of General Education Teachers' Perceptions of Inclusion of Students with Learning Disabilities*

Groups (N = 65)[a]	M	SD	t	p
Group 1 (n = 24)[b]	2.46	.59	1.91	.061
Group 2 (n = 36)[c]	2.11	.75		

Note. [a] No response n = 5. [b] Group 1 = general education teachers who have received a college level of special education course or inservice training. [c] Group 2 = general education teachers who have not received. p > .05

Table 10 - *Frequency of General Education Teachers' Responses on Their Perceptions of Inclusion of Students with Learning Disabilities*

	Response Scale			
Groups (N = 65)[a]	**4**	**3**	**2**	**1**
Group 1 (n = 24)[b]	0	12	11	1
	(0)	(50)	(46)	(4)
Group 2 (n = 36)[c]	1	9	19	7
	(3)	(25)	(53)	(19)

Note. 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1= Strongly Disagree. [a] No response n = 5. [b] Group 1 = general education teachers who have received a college level of special education course or inservice training. [c] Group 2 = general education teachers who have not received. Percentages are in parentheses.

Limitations of the Study

Several factors limit the interpretation of this study. First random selection was not used to identify general education teachers. As mentioned previously they were drawn from four elementary schools from different districts located in Seoul, Korea. The second limitation is related to the use of vignettes for identifying students with LD. These descriptions may not have portrayed students in the manner in which teachers' perceived real students in the general education classroom. Finally the lack of demonstrated validity and reliability of the research questionnaire is the third limitation.

Discussion

The four sections of the questionnaire addressed the five research questions stated in this document. Each question's results drawn from statistical analyses of the data are discussed.

Perceptions of the Characteristics of Learning Disabilities

The results of this study indicated no significant differences existed between general and special education teachers' recognition of the characteristics of LD. That is, both groups of the teachers were aware of the characteristics frequently associated with students who had that exceptionality. This finding is consistent with earlier findings (Lee, 2001) indicating that general education teachers do recognize academic, behavioral, and social features related to students with LD. Many classroom teachers have difficulty dealing with one or more characteristics presented by the students in their classes (Drame, 2002; Pullis, 1985; White & Calhoun, 1987). Such a challenge may affect these teachers' referral of the students with LD to special education teachers (Logan, Hansen, Nieminen, & Wright, 2001; Soodak & Podell, 1993). In most cases classroom teachers refer students to special education programs when they fail to deal with such academic, behavioral, and social problems manifested by the students regardless of their suspicion of the student having a learning disability.

Perceptions of the Identification of Learning Disabilities

There was a significant difference between general education and special education teachers' perceptions of the identification of LD. Specifically, special educators showed a significantly greater ability to identify students with LD than their general education counterparts. In other words, special educators were better able to discriminate LD from other disability conditions than were general educators. General educators may noticeably discern the academic, behavioral, and social characteristics of an exceptionality that emerges in their classrooms; however, they may lack specific knowledge pertaining to the definition of LD, such as discrepancy components and/or pre-referral conditions (Anderson & Coleman, 1985; Lee, 2001; Thompson, 1992). Thus such unspecific knowledge might engender their confusion with other disabilities - (e.g., mental retardation and behavioral disorders) (Anderson & Coleman, 1985; Lee, 2001; Thompson, 1992).

Perceptions of the Differences Between an Underachiever and a Student with Learning Disabilities

The majority of the respondents expressed that a student with LD was not just an underachiever. However, general education teachers' qualitative responses regarding differentiating between an underachiever and a student with LD showed weaknesses in the understanding of LD. In particular they were unable to identify students with this disability. The considerable numbers of the general education teacher respondents failed to distinguish students with LD from those with physical, behavioral, emotional, mental disabilities or environmental problems. Some general education teachers defined students with LD as having low intelligence as well as having ineffective academic achievement even after sufficient practice. Some general educators perceived LD as "a disease to be cured." Those who indicated this opinion identified psychologists as those who were able to cure children of their LD. This opinion, however, was not held by the majority of general education respondents. The majority of statements from these teachers reflected that a student with LD is a child who experiences problems with learning.

Perceptions of Inclusion of Students with Learning Disabilities

Both general and special education teachers indicated negative opinions about the inclusion of students with LD. Interestingly a high percentage (68%) of special classroom teachers disagreed that students with LD should receive their education in general education classrooms. In addition, pre-service or in-service courses did not impact general educators' opinions on inclusion. Specifically, the considerable numbers of the general educators who have received pre-service or in-service courses showed unfavorable attitudes for integrating students with LD into their classroom. One

interpretation of these results may be explained issue; that is, the respondents were asked to consider including students with LD into their classes without any support or fundamental changes. According to the previous study by Hudson and colleagues (1979), general education teachers showed an unwillingness to teach students with special needs in their classes without adequate support services. They also reported that they lacked sufficient time for planning or instruction for meeting special needs of their students and addressed the needs for additional training to effectively teach students with disabilities in their classrooms. Perhaps the above-mentioned conditions may help to explain these findings.

Conclusions and Recommendations

This study represents a beginning in ascertaining the perceptions or misperceptions of general education teachers in Korea concerning the field of LD. The results of this study showed that the general education teachers were aware of the characteristics of LD, but not enough to identify students with this exceptionality. Because of the emphasis placed on early screening and identification of LD it is critical that general education teachers have an in-depth understanding of the characteristics of LD. They need to understand that many children and youths do not manifest learning problems until the early phases of beginning academic instruction and begin to fail to achieve through traditional instruction. Thus, it is recommended that efforts be employed to inform these teachers about the nature and characteristics of not only LD but also other disabilities. Pre-service and in-service trainings could be useful vehicles for improving teachers' knowledge of disability conditions as well as developing their instructional skills to serve students with disabilities. Since this study revealed that few general education teachers had received pre-service courses and in-service workshops, conscious efforts are required to encourage them to participate in such trainings.

The results of this study reflect the current status of the field of LD in Korea. Considering this situation, the implications for further by the way the questionnaire addressed this research are also presented. As this study focused on teachers' perceptions of the characteristics and identification of LD, additional research concerning teachers' self-perceptions regarding their ability to teach students with LD is needed. As this study indicated, pre-service and in-service trainings rarely affected teachers' attitudes regarding the inclusion of students with LD in their classes. Additional research regarding intensity of pre-service and in-service trainings, as well as types of trainings, should be conducted. Finally, research using different qualitative methods is needed to obtain more precise and rich details about the perceptions of LD from general education and special classroom teachers in Korea.

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Facilitating the Academic Achievement of Students with Disabilities in China and the United States through Inclusive Instructional Strategies

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Abstract

In both China and the United States, educators are committed to the provision of rigorous academic instruction in inclusive environments to students with disabilities. This paper presents the reflections of the authors from the 2004 U.S. - China Conference on Educating Students with Special Needs held in Beijing, China in June 2004. The authors provide a brief status regarding the movement to include students with disabilities in regular schools in integrated classroom settings. In China, this instructional arrangement is termed "Learning in Regular Classes" (LRC). The authors compare this movement with the legislative initiatives of the United States to provide access to the general education environment for students with disabilities. The authors also provide a brief review of the status of teacher training initiatives in both China and the United States to address adaptations and accommodations for students with disabilities. Finally, the authors propose a framework for assisting teachers with providing instructional adaptations to support the inclusion of students with disabilities and the academic achievement of these students within LRCs in China and general education environments in the United States.

One of the many challenges facing teachers, administrators, and teacher educators throughout the world is ensuring that teachers provide specially designed instruction to all students, including students with disabilities, to enable these students to meet high academic standards. In the United States, the two primary pieces of legislation that require accountability for all students are P.L. 107-110, the No Child Left Behind Act of 2001 (NCLB), and P.L. 105-17, the Individuals with Disabilities Education Act of 1997 (IDEA).

The goal of these two accountability measures is for students to be successful in post-secondary activities including further education, employment, and independent living.

In China, companion legislation does not currently exist. However, according to information presented at the 2004 China-U.S. Conference on Educating Students with Disabilities held in Beijing in June 2004, educators in China are also grappling with how to provide quality instruction to students, including those with disabilities, who are enrolled in special education schools and regular schools. According to the Ministry of Education of the People's Republic of China (2004), there were 1551 special education special schools in

2003, an increase of 11 special schools from 2002. In 2003, there were 364,700 students with disabilities enrolled in both special education schools and regular schools. In China, special classes are often attached to regular schools. This instructional structure for the students is termed "Learning in Regular Class" (LRCs). China also provides instruction to students with disabilities in resource rooms, which are patterned after those in the United States. Students with disabilities who receive instruction in regular classes in most of their academic subjects also receive instructional and support services in resource rooms. The instruction in resource rooms supports the academic instruction provided in the regular classes.

In China, students with disabilities are those with visual impairments, mental retardation, or those who are deaf. China does not currently provide services to students with other disabilities, such as those with learning disabilities, speech and language disabilities, autism, traumatic brain injury, or emotional disturbance. Data from the Ministry of Education (2004) indicates that 38,300 students were those with visual impairments, 109,800 were those who are deaf, and 216,600 were those with mental retardation. The Ministry of Education (2004) reports that 63.64% of students with disabilities are enrolled in LRCs and in the special classes attached to regular schools.

In China, as in the United States, inclusive education remains a goal for all students. Students with disabilities in China, just as those without disabilities, are required to master academic content. For example, students, beginning no later than first grade, must learn the Chinese alphabet, and all students are required to master a certain number of letters per grade level, beginning with first grade. Adequate teacher training in China, as in the United States, has been identified as key to eliminating barriers for students with disabilities to succeed in learning regular classes or general education classes (Wang, 2004). As Deng (2004) offered, one way to address the barriers to accessing LRCs for students with disabilities is by teaching strategies to teacher candidates for "adapting curriculum." In other words, according to Deng, "curricular modification is one of the most critical factors influencing inclusive practices." He emphasized this point by noting "the most urgent job [of teacher preparation institutions in China] is to train [their] in-service/practicing teachers" (Deng, 2004). Lan (2004) added support to this critical need in China by stating that there is need to reform teacher preparation programs to prepare regular teachers with the skills to teach students with disabilities.

This perspective is important as one considers the history of teacher preparation for those who would work with students with disabilities in China. Teacher preparation of special education teachers began formally in 1986 when Beijing Normal University established undergraduate courses for prospective special education teachers (Yan & Dingquian, 2004). Prior to that time, teachers in special schools learned to work with students with disabilities through the process of "master to prentice" (Yan & Dingquian, 2004, p. 55). In other words, teachers in special schools started in the common or regular schools, and learned through experience. According to these authors, at present, there is a concern in China regarding the preparation of special educators because they lack the comprehensive knowledge of subjects such as Chinese, math, and computers, and administrators of special schools prefer graduates from other majors, such as Chinese or English, because of this lack of competence (Yan & Dingquian, 2004). Therefore, there is a shift occurring within the teacher preparations programs to prepare their teachers to be the master of both special educational theory and specific content knowledge.

China also provides continuous professional development to its special educators, similar to that provided in the United States, though there are issues regarding this professional development within the educational community according to several authors (Yong, 2004, Jinglong, 2004, Yuexin, 2004). First,

administrators do not regard the training of special educators as being as important as the training offered to the common, or regular, school teachers. This perspective is due to the current, somewhat low, status of special education in China. Although the Chinese government has done much to improve the situation, there is much to do, including legal assurance of education for students with disabilities, time management for special educators to ensure all the tasks are completed, and provision of adequate financial support. Secondly, a system is not currently in place to assess the competence of special educators, as there is in the United States, prior to entering the teaching field. Third, the content of the formal teacher preparation focuses more on educational theory, rather than on ensuring the special educator possesses the requisite skills of instruction and the ability to work with students with special needs in classroom settings.

Legislation in the United States Requiring Instructional Supports to Students with Disabilities in General Education Settings

The Individuals with Disabilities Education Act of 1997 (IDEA) mandates that students with disabilities participate in standards-based education initiatives by requiring the development of performance goals and indicators consistent with the goals and standards developed for all students (34 C.F.R. 300.137). Moreover, both IDEA and NCLB require that students with disabilities participate in state and district-wide assessments and attain the same standards as all students (34 C.F.R. 300.138). Current data shows that, at present, approximately 90% of states in the United States have established the same content standards in math, science, reading, and writing for students with disabilities as for students without disabilities, and these states permit accommodations for students with disabilities who are taking state assessments (Abt Associates, 2003).

IDEA clarified the responsibility of educators for providing instruction to students with disabilities within the general education setting by defining specially designed instruction as "adapting … the content, methodology, or delivery of instruction … to ensure access of the child to the general curriculum so that he or she can meet the educational standards … that apply to all children" (34 CFR 300.26(b)(3)(ii)). This definition of specially designed instruction was added to IDEA in 1997 and supports the federal definition of "supplementary aids and services" as "aids, services, and supports provided in regular classes or other settings to allow disabled children to be educated with their nondisabled peers to the maximum extent appropriate consistent with the requirements that they receive services in the least restrictive environment" (34 C.F.R. 300.28). The definition of supplementary aids and services supports the requirements of IDEA that permit the "removal of children with disabilities from the regular educational environment … only if the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (34 C.F.R. 300.550(b)). Current federal regulations also prohibit removal of students with disabilities from age-appropriate regular classrooms solely because needed modifications to the general curriculum are not provided (34 C.F.R. 300.552(e)). Further, the student's Individualized Education Program (IEP) must include "a statement of the special education and related services and supplementary aids and services to be provided to the child, or on behalf of the child, a statement of the program modifications or supports for school personnel that will be provided for the child to … be involved and progress in the general curriculum" (34 C.F.R. 300.347(a) (3) (ii)).

Current federal regulations do not define the terms adaptations, accommodations, or modifications, and the terms are often used interchangeably. One state, however, that does define the terms is Arizona (Arizona Department of Education, 1998). The Arizona Department of Education defines each of the three terms as follows: (a) adaptations are changes made to the environment, curriculum, and instruction and/or assessment practices in order for a student to be a successful learner.

Adaptations include accommodations and modifications and are based on an individual student's strengths and needs. (b) accommodations are provisions made in how a student accesses and demonstrates learning. These changes do not substantially change the instructional level, the content, or the performance criteria of a specific activity, and the changes are made in order to provide the student with equal access to learning and with an equal opportunity to demonstrate what s/he knows. (c) modifications are substantial changes in what a student is expected to learn and to demonstrate. Changes may be made in the instructional level, the content, or the performance criteria of a specific activity. Such changes are made to provide a student with meaningful and productive learning experiences, environments, and assessments based on individual needs and abilities. Other authors, such as Eshilian & Hibbard (1998), define the three terms as follows: (a) adaptations are making appropriate changes to information, activities, and opportunities depending on individual needs. Examples include reducing the reading load, substituting a vocabulary list rather than a chapter, skeletal outlines, highlighted books, alternative assignments, partial participation, picture representations, manipulative materials, and alternative objectives. (b) accommodations are appropriate arrangements that allow for access to the same information, activities, and opportunities. Examples include providing the student with books on tape, computer writing programs, tape recorders, or calculators, providing more time to complete an activity, and having the student dictate answers rather than writing answers on a test. (c) Modifications are different standards for student performance and/or alternative ways to demonstrate learning. Examples include using individualized authentic, performance-based assessments such as an oral report rather than a written report, making a collage rather than writing an essay, creating a list rather than a paragraph, and selecting a correct spelling word rather than writing it. Many resources are available to assist the teacher in selecting, providing, and evaluating the effectiveness of a particular adaptation, accommodation, or modification that will provide the specially designed instruction to a student to assist him/her in attaining the specific content required (Williams, 2001, 2002).

Professional Development as a Tool for Meeting the Demands of Providing Standards-Based Education

Despite the collaborative call for standards-based education and increased academic achievement of students, research conducted in the United States indicates that neither general nor special educators are implementing modifications or accommodations needed by students during instruction (Daily & Zantal-Weiner, 2000; McLaughlin, 1999; McLaughlin, 2000). These researchers found that general educators lacked an understanding of instructional modifications and accommodations for students with disabilities, and special educators did not possess the skills needed to align goals and objectives on a student's IEP with the state's standards. Olson (2004), in a national survey conducted for *Quality Counts 2004: Count me in: Special education in an era of standards,* found that only 7 states require alignment of IEPs with state academic content standards. In addition, contrary to previous data, 40% of teachers reported that the IEPs of their students reflect state standards "very much" (Olson, 2004). A more recent study indicates that fewer than half of general educators who had been teaching 6 years or fewer received any course work in instructional adaptations and accommodations for students with disabilities during their pre-service preparation (U.S. Department of Education, 2002). Similarly, the findings of a study conducted by Public Agenda reported that many teachers currently lack the skills to "adapt to a variety of learning styles in the classroom" and "to find alternative approaches when a child fails to grasp the material" (Farkas, Johnson, & Duffett, 2003, p. 30). Cameto (2003) reinforces these findings for students and teachers at the secondary level.

As indicated previously, one of the major barriers to including students with disabilities in LRCs in China is that teachers have not been

trained to adapt curriculum for students with disabilities (Deng, 2004). The reasons for this lack are varied and complex, including the relative newness of the inclusive movement in China for students with disabilities, time needed to train teacher educators in these techniques, and lack of financial resources in schools and institutions of higher education. As indicated, the format of the resource room originated in the United States, with students receiving instruction on content in regular classes and receiving tutorial support for this instruction in the resource room. As pointed out by Xijie and Meizhen (2004), one of the major purposes of the resource rooms in China is to teach students with disabilities the "adaptability skills" needed to be successful within the LRCs in China. However, at present, there are issues with this instructional pattern (L. Li, personal communication, January 24, 2005). These issues include (1) lack of professional trained teachers to work in resource rooms; (2) lack of support from administrators who do not understand the needs of students with disabilities and the purpose of resource rooms; and (3) lack of adequate materials to support the instruction being provided within the regular classes.

A Framework for Meeting the Instructional Needs of Students with Disabilities in China and the United States

One of the possible solutions to assist educators facilitate the mastery of required academic content, with appropriate specially designed instruction, is the use of a five-part framework: (a) Setting or environment; (b) Selection/Identification of materials to be used in the lesson; (c) Presentation of materials or lesson; (d) Response mode of students; and (e) Assessment/ Evaluation of student knowledge. The authors suggest that this framework will assist teachers with determining the most appropriate and effective adaptations, accommodations, or modifications to make to their teaching within general education and learning regular classes. The authors also suggest that this rubric, or model, is universal and applicable to students with all types of disabilities, at all ages, and at all grades. For many teachers in the United States who are skilled at identifying, providing, and evaluating the wide array of adaptations and accommodations available for students with disabilities, this rubric may be used as an organizing framework. For teachers in China for whom adaptations and accommodations may represent a new concept, this model may be used as an organizer, as well as a tool for helping teachers teach the "adaptability skills" needed for achieving academic success with the LRCs.

The first step in using this rubric is for the student's teachers, both general and special, along with the student, to determine the student's particular learning and behavioral characteristics, including his or her learning styles and preferences. Second, teachers should identify the academic standard and instructional objectives, or intended outcomes, of the learning activity. Third, teachers should address each of the following five areas to identify any needed supplementary aids and services, supports, adaptations, accommodations, or modifications in the "content, methodology or delivery of instruction" that will maximize the student's learning and behavioral characteristics and assist the student in achieving the intended outcomes of the instructional activity. The five steps of the rubric are as follows: (a) Setting/Environment. What changes will the teacher need to make to the instructional (classroom) setting or environment to enhance the student's focus on the material being presented? For example, will the teacher place the student near the front of the room, away from the door or the pencil sharpener, in a place with more/less light, or in a study carrel? (b) Selection/Identification of Materials**.** What different materials should the teacher select for teaching the lesson that will accommodate the student's particular learning and behavioral characteristics? For example, will the teacher select material for a non-reader, material that matches his/her specific interest area, material that is independent in pace and structure, or material that is presented via an alternate format such as a computer? (c) Presentation of Materials. What changes should the teacher

make in his/her presentation of the instructional material to ensure that the learning and behavior characteristics of each student are met? For example, will the teacher present material in both auditory and visual formats, via highlighted text, using a peer buddy, or through an advanced organizer? (d) Response Mode. How will the teacher vary how the student shows that s/he knows the content of the material? For example, will the teacher rely on the student's verbal recitation of his/her understanding of the content, rather than on paper and pencil tests; through tests in a multiple choice format rather than essay; or having the student pictorially represent his or her understanding of the material, rather than record his understanding in writing? (e) Assessment or Evaluation of Student Knowledge. How will the teacher vary the assessment or evaluation of the lesson to ensure that the learning and behavioral characteristics of every student have been taken into account? For example, will the student participate in a skit, write in a journal, take a written test, provide information to you during a verbal conference, or respond using a tape recorder?

For most teachers and students, using this framework, matched with the student's learning and behavioral characteristics and the intended objectives of the lesson, will result in a very positive teaching and learning experience. Below is an example of the application of the framework. In this example, Kitty is a student whose educational needs require adaptations and accommodations in order for her to achieve satisfactorily in LRCs or within the general education setting.

Kitty

Kitty is a third grader who was born with cerebral palsy. She also has a bilateral hearing loss, resulting in a mild hearing impairment. She has difficulty with reading recognition and written expression. She has a small sight word vocabulary, and she can comprehend written text once she learns new words, but learning new words is extremely difficult for her. She uses a wheelchair for mobility, and wears hearing aids in both ears. Kitty is presently receiving the majority of her academic content instruction (reading/language arts, math, science, and social studies) in LRCs, and goes to the regular classroom for her nonacademic classes. She wants to be more included in the general education setting and is working to achieve that goal by learning strategies to accommodate her difficulties with learning content-related material. Her teachers are also working on identifying and providing the adaptations and accommodations that will help her do so.

Kitty has great difficulty with phonetic analysis, preferring the whole language or whole word approach. She can verbally answer questions and she enjoys composing stories, but has great difficulty getting her thoughts onto paper. She has learned to type on a computer, and this medium is much easier for her than writing**.** She also has great difficulty with spelling. Kitty's Full Scale IQ on the Wechsler Intelligence Scale for Children-III was 80, with her performance IQ higher than her verbal IQ. Her scores on the Woodcock-Johnson Achievement Battery were all in the low average range, with the exception of Letter-Word Identification and Writing Samples. Both scores on those subtests were significantly below average.

Kitty is very social and has several close friends in her class. She is popular with her classmates and knows all the words and melodies of popular songs. She loves to sing and act out songs. She also loves to participate in class plays, and, with her parents, she is involved in a community drama group**.** She also is improving her skills in lip reading, though she has a sign language interpreter when needed. She does not need any adaptations for mobility other than barrier-free access. For Kitty, suggested adaptations include the following:

1. ***Classroom setting or learning environment:***
   - Provide a quiet space in the classroom where she could focus more closely on the teacher's verbal instructions and concentrate with a minimum of distractions on her written work

- Provide an interpreter, assistive technology devices, including amplification devices
- Provide a barrier-free classroom and adaptations to work surfaces
- Provide a study carrel and/or preferential seating
- Reduce noise level of classroom and limit visual and auditory stimuli

2. Selection of material to be used:

- Have Kitty choose her own vocabulary words from the text to compile a personal dictionary, simplify or shorten her vocabulary lists, and pre-teach Kitty her vocabulary words in the context in which they will be used
- Tape record readings from texts; keep her written assignments to a minimum
- Give her an advanced organizer to prepare her for the lesson content
- Highlight important information and/or limit material presented on a single page

3. Presentation of material:

- Provide an interpreter or amplification, as needed; ensure Kitty's hearing aids are working properly
- Use pictures or flash cards to teach new words or concepts instead of giving her verbal or written instructions
- Provide instruction verbally using flash cards for key words; highlight or color code important information
- Present lessons in a variety of ways – lecture/demonstration; whole class discussion; games and simulations; experiential learning
- Provide tape recordings of lectures, readings, etc
- Provide one-on-one help with areas of struggle
- Begin lessons with review/overview of topic to be covered
- Use or ask questions at the end of sentences/paragraphs to focus on important information

4. Kitty's response mode:

- Have Kitty prepare a pictorial story to depict the lesson learned
- Provide Kitty with a word processor, with word prediction software, for written assignments and a calculator for math
- Have Kitty act out or give presentations instead of writing
- When reading independently, have Kitty highlight text/words that she does not understand

5. Assessment or evaluation of Kitty's knowledge:

- Use a tape recorder for test-taking; provide spell-check on word processor so spelling is not an issue in grading
- Provide extended time to complete assignments and tests; have Kitty complete a portion of the assignment – e.g., even or odd math problems
- Decrease amount of material to be read or size of assignments; provide longer time for testing/homework
- Provide authentic assessments - e.g., group projects, cooperative learning activities, verbal reports, verbal review of literature

Summary

As we increase accountability and strive toward inclusion for students with disabilities in China and the United States, we must ensure that we provide the most effective supplementary aids and services, adaptations, accommodations, and modifications. Through a simple five-step process, the authors suggest strategies for teachers to match the required content mastery of the curriculum with the learning and behavioral needs of students. Teachers should record the supplementary aids and services, adaptations, accommodations, and program modifications on each student's IEP or include these strategies as part of his/her lesson plans. The final step of the process requires teachers to implement, evaluate, and revise identified adaptations, accommodations, and modifications. This process will further support access to the general curriculum for all students and increase our international goal of inclusive educational opportunities for students with disabilities.

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Inclusion Education and the Developing Countries: The Case of Bangladesh

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Abstract

Following the trends of 'Inclusion' movement in the USA and some Western countries, a number of Developing countries have been imbued with the philosophy of inclusion education. Some of these countries have enacted laws to safeguard the educational rights and welfare of children with disabilities, and others have been trying to initiate inclusion classrooms in the regular education system. But the main question remains: Are teachers in these countries prepared to meet the challenges of full inclusion education in regular classroom? The pros and cons of the issue concerning inclusion education in the Developing countries have been discussed in the paper based on the scenario presented by Bangladesh. The author of the article, who was a Fulbright Senior Scholar at the Institute of Education and Research, Dhaka University, presents a step by step plan for implementation of inclusion education in Bangladesh, that could be adopted as a model foe other Developing countries.

The 'inclusion education' movement has gained much recognition and emphasis during the past two decades, particularly in the United States of America and other Western countries. Clearly, most of these countries have incorporated inclusion education into the regular education system. The movement has recently influenced a few Third World countries as well. Notably, some of these developing countries have enacted laws to safeguard the educational rights and welfare of children with disabilities, and some of them have been trying to initiate inclusion classrooms. Bangladesh is at the cutting edge by enacting the Bangladesh Disability Welfare Act in 2001. The Government of Bangladesh has drawn up plans (vide: PEDP-II) for educating more children with disabilities in the inclusion classrooms with their normal peers. Some sporadic efforts have also been made by individuals and Non Government Organizations (NGOs) to initiate inclusion education classes. Since inclusion education is critical and vital for making a difference in the life of children with disabilities, it is essential that appropriate steps are taken by all quarters to implement inclusion education in Bangladesh in its true spirit and form. Otherwise it may do more harm than helping individuals with disabilities. The key essence of inclusion education is that education must be individualized to meet the unique needs of each child with disabilities in the regular education setting, which requires among other resources, the specialized training of teachers. The pertinent question that needs to be addressed at this juncture is: Are teachers in Bangladesh prepared to meet the challenges of full inclusion education in the general education classrooms?

The purpose of this paper is to explore the pros and cons of the inclusion education movement in Bangladesh in light of the resources and support systems that are currently available in the country, with a view to facilitating policy making and effective implementation of inclusion education in a planned manner. Since this is a new movement in education and there are not many experts in the country in this field, attempts have been made to clarify some concepts and basic information that may help the policy maker.

What is Inclusion Education?

Inclusion is the policy of placing children with disabilities in general education classrooms for instruction, with appropriate supports to meet their educational needs. Over the years, the

concept of 'inclusive education' has been defined in various ways in different countries. In the United States, the concept of 'inclusion education' has been driven mainly by the underlying principles of Least Restrictive Environment (LRE) of the Individuals with Disabilities Education Act, PL-94-142 (IDEA) (US Government Printing Press, 1977), the intent of which is to educate students with disabilities with their non-disabled peers to the maximum extent appropriate. However, integration is the term most often used to describe inclusion education programs and services in other countries of the world. A few countries, such as Australia, United Kingdom, Italy, and Germany all have taken initiatives promoting the integration of students with disabilities in general education settings (Hardman, Drew, & Egan, 2002). The general education setting is now widely considered as the LRE for most school-aged children, regardless of the nature of disability. It may be noted that the concepts of equalization of opportunities and inclusion education are not the same thing. When we put a child from a remote tribal area into the classroom by establishing a new primary school in that area, we are not changing the system of primary education or teaching strategy for that child. But, when a child with disabilities is placed in the general education classroom, we have to make sure that the environment is least restrictive for that child and the instructions are individualized to meet the unique needs of the child. Necessary accommodations have to be made in the curriculum, as well as in the teaching strategies.

Why Inclusion Education?

The following arguments may be made in support of inclusion education in Bangladesh:

- Nearly 90% of children with disabilities are mild to moderate in nature. They can greatly benefit from the general education system, if it is restructured.

- Economically it is viable to eliminate special education as a "second system", which is very costly to maintain.

- There are legal stipulations that children with special needs should be educated in the least restrictive environment (LRE) with their peers, to the extent possible.

- The goal of inclusion is to help individuals with disabilities to be fully integrated into the greater community in adult life. Inclusion helps develop an accepting attitude in children for their disabled peers.

- Recent research findings indicate that children with special needs (in some categories) perform better academically and socially if placed in inclusive settings.

The Legal Basis of Inclusion Education

The rights of children with disabilities to education and welfare have been recognized by the United Nations Organization (UNO) and several countries of the world, some of these are:

- *The United Nations Convention on the Rights of the Child*:

  Article 23 of the Convention states: A disabled child has the right to special care, education and training to help him/her enjoy a full and decent life in dignity and achieve the greatest degree of self-reliance and social integration possible. (United Nations Committee on the Rights of Children (UNCRC), 1989).

- *The Salamanca Statement and Framework for Action:*

  Part 2 of the Salamanca Statement states that: Those who have special educational needs must have access to regular schools which should accommodate them within a child-centered pedagogy capable of meeting these needs. (United Nations Educational, Scientific, and Cultural Organization (UNESCO), 1994).

- *The Education for all Handicapped Children Act, PL 94-142:*

  This is a unique law enacted in the history of human society in recognition of the rights and welfare of individuals with disabilities. One of the stipulations of the Law is that: Children with disabilities must be educated in the Least Restrictive Environment to the extent possible. (United States Government, 1977)

- *Bangladesh Disability Welfare Act, 2001:*

  Section 'Kha', Education for the disabled, clause number 3 states that, To the extent possible, children with disabilities should be given opportunities to learn in the same class room with their normal peers. Clause number 7 assures transportation facilities for children with disabilities while attending schools.

Barriers to Inclusion Education

There are several road blocks which may slow down the progress of inclusion education in Bangladesh and may be necessary to remove them at an early date. These are:

- Negative Attitudes of People
- Invisibility in the Community
- Cost
- Physical Access
- Class Size
- Lack of Trained Teachers
- Gender Discrimination
- Identification of Children with Disabilities. (Adapted from Save the Children, 2001)

How to Remove the Barriers?

The following steps may facilitate the introduction of inclusion education in Bangladesh:

- Steps to develop positive attitudes in the community
- Inclusive learning environments
- Early intervention
- Positive role models
- Appropriate policy development & implementation
- Change of system in education
- Community participation
- Parental involvement
- Parent support centers
- Preparing qualified teachers
- Developing assessment instruments for identification of children with disabilities

The Bangladesh Scenario

According to an official estimate (vide: PEDP II Macro Plan) there are about 1.6 million children with disabilities in Bangladesh (BDWA 2001). Only a small percentage of these disabled children (less than 15%) belonging to the categories of Visual impairment, Hearing impairment, and Mental Retardation receive some sort of education in special classes or special schools managed by the Ministry of Social Welfare and a few NGOs. The overwhelming majority of children with disabilities belonging to Learning Disabilities (LD), Emotional Disturbance (ED), Behavior Disorders (BD), Physical and Multiple Disabilities, etc. receive neither any education appropriate to maximize their potential nor is there any program in place to identify them.

The special education programs that are currently available at the 64 schools under the Ministry of Social Welfare are purely categorical (i.e., Visual, Hearing, and MR), and the settings are either special classes or special schools. By no means can these be termed as inclusion settings, and the teacher training programs that are currently available at the Institute of Education and Research (IER), Bangladesh Institute of Special Education (BISE), and other places are specifically for these three categories. Thus far, no teacher

education program is available to prepare teachers for working in inclusion settings and for children with disabilities in other categories who would benefit from inclusion education. The main problem lies in identification and assessment of these children. Children with visual and hearing impairment can be identified easily, at least grossly. This is the reason why special education has been in place for individuals with visual and hearing impairments for a long time in most parts of the world.

Steps for Implementing Inclusion Education in Bangladesh:

Phase I – Conscientization of Key People

The introduction of any new program at any institution or department needs the blessings of its head. Therefore, it is necessary that policy makers, principals of Teacher Training Colleges (TTC), Superintendents of Primary Training Institutes (PTI), and headmasters of primary and secondary schools are kept abreast with the positive aspects and some basic knowledge of inclusion education through seminars and workshops.

Phase II – Physical Accessibility

Some children with disabilities may require easy access to classrooms, so schools and classrooms must be accessible to wheelchairs and special transports should be made available for those who would need them.

Phase III – School Curriculum Modifications

The present school curriculum is too rigid. It has to be flexible to accommodate the needs of children with disabilities.

Phase IV – Revision of Teacher Education Curriculum

The first and foremost prerequisite for successful implementation of any program in education is a trained teacher. Presently, due to an acute shortage of special education teachers, it may be the only and best option that the regular teacher education curriculum is revised to incorporate some basic components of inclusion education to prepare teachers who would feel confident and effective in teaching inclusion classrooms.

Phase V – Crash Program for Teachers

Presently, regular education teachers working in the field have no orientation towards inclusion education. The Bachelor of Education (B.Ed.) and the Primary Training Institute (PTI) curricula do not contain the required content about inclusion education. Any plan to introduce inclusion education within the next three to five years must take into consideration a crash program for the orientation of teachers. The Teacher Training College (TTC) principals and superintendents of PTIs may be trained to organize workshops/seminars at their local districts, sub-districts, and 'Thanas' (lowest ladder of administrative unit). The Special Education Department at the IER, the Bangladesh Institute for Special Education, and Bangladesh Rural Advancement Committee (BRAC) may take the lead to organize a short course training program for the principals and superintendents, who will on return organize similar workshops at their respective local areas. The above stated institutions may also offer the Diploma in Special Education program mentioned in the PEDP-II. This course should be designed specifically for the preparation of teachers who would be working in inclusion settings, and obviously it should be non-categorical.

Phase VI – Launching Pilot Projects

A Pilot project may be launched at each Thana when there are sufficient pools of trained teachers coming out of the crash program for teachers. One school may be selected in each Thana for piloting inclusion classes.

Phase VII – Establishment of Resource Centers

The core of inclusion education is individualized education to meet the needs of each child with disabilities by trained teachers. Presently, Bangladesh is not in a position to provide trained teachers as needed. The establishment of a Resource Center at each Thana may serve a useful purpose in this regard. These centers can carry out a variety of tasks, such as: conducting assessments; offering advice, consulting and support to teachers and parents; organizing professional development

courses for teachers, training and awareness-raising to families; and providing demonstration teaching for teachers and parents.

The implementation of the above programs in a phased manner will depend on the priority set by the planners and decision makers. However, it is not necessary to start a new phase until one phase is completed. Several phases could be launched simultaneously to speed up the implementation of the project.

Concluding Remarks

Many parents and professionals have reservations about inclusion of all special needs children in the general education classrooms. Some special educators and parents worry that placement of students with exceptional needs into the general education classrooms will not meet the individual needs of students with disabilities. Many students with special needs will require individualized clinical teaching and explicit instruction, which is extremely difficult to provide in a general education classroom (Learner, 2003). The provision of trained teachers for inclusion classrooms is a sign qua non for effective implementation of inclusion education programs. Additionally, an overall positive attitude of the society towards the education of individuals with disabilities is essential in determining the extent of the budgetary allocation for inclusion education from the national exchequer, which is vital for the implementation of such a huge and costly project. A strong advocacy group of concerned citizens and parents at the national level will help boost up the inclusion education movement in Bangladesh, heralding the will of the people and the legitimate rights of children with disabilities for their education in the Least Restrictive Environment.

Based on the theoretical assumption of normal distribution, it is estimated that the number of disabled population in any given society at a given point in time may range from 10-15 percent of the total population (Kibria, 1998). Of these individuals with disabilities, the vast majority of school-age children – approximately 85% are likely to be mild to moderate in nature (Heward, 2006) who can benefit most from inclusion classrooms. If a country places such a huge chunk of population in the inclusion setting without appropriate environment, resources, and trained teachers, then more harm will be done to these individuals instead of doing any welfare. A planned and concerted effort at the national level is therefore essential for the effective implementation of inclusion education in Bangladesh, as well as in any of the Developing countries of the world.

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Teaching Students to Self-monitor

Sherrie Bettenhausen, Ph.D

Joan Thomas, MA

Teachers are expected to be responsible for managing the social behavior of students in their classroom. Rosenbaum and Drabman (1979) have argued that because of their involvement with managing behavior, the teacher's time that is available for direct instruction is decreased. Also, when adults work with several students simultaneously, a great deal of misbehavior may go unobserved. When a student has learned to manage his own behavior, teachers can spend more time teaching other important skills without worrying about unobserved inappropriate behavior. Teacher responsibility for managing behavior can be delegated to the students after they have been prepared to exercise it.

Self-monitoring is an intervention that helps students become aware of their problem behavior and observe the improvement of the behavior. When students monitor their behavior they observe and record the presence or absence of a behavior. The purpose of self-monitoring is to increase students' awareness of a behavior so they can learn to take responsibility for their own actions and manage what they do. Students can monitor positive behavior, such as work completion, or they can monitor negative behavior they wish to decrease such as out-of-seat behavior. Self-monitoring is a promising behavioral strategy because the act of monitoring one's own behavior often produces desirable changes.

Self-Monitoring Planning Form

The Self-Monitoring Planning Form (see Figure 1) is designed to help the student and teacher plan and organize the self-monitoring intervention. Before this intervention can be successfully implemented, the problem and the goals for improvement with the student must be discussed. Self-monitoring works best with students who have some motivation to change or learn new behaviors.

Step 1 and 2: Select and Define a Target Behavior

Defining the nature and scope of the problem is critical in designing an intervention with the student. The student must recognize that there is a problem and discriminate between acceptable and unacceptable behavior. In order for the student to accurately monitor his behavior, the behavior must be clearly defined in observable terms. With a problem behavior such as work completion, it is either done or is not. However, with a behavior such as disruption to the classroom, what is considered disruptive?

Figure 1. *Self-Monitoring Form*

Student_____
Teacher _____
Date _____
Step 1: *Select a Target Behavior*
a. Identify target (problem) behavior.
b. Identify a replacement behavior.
Step 2: *Define the Target Behavior*
Write an observable description of the target behavior.
Step 3: *Define the Data Recording Procedure*
a. Identify the type of data to be recorded.
b. Identify where and when the data will be recorded.
c. Describe the data recording form.
Step 4: *Train the Student to Use the Recording Form*
Briefly describe the instruction and practice to be provided.
Step 5: *Choose Strategy for Ensuring Accuracy*
Step 6: *Establish a Goal and Contingencies*
a. Determine how the student will be involved in setting the goal.
b. Determine whether and how the goal will be made public.
c. Determine incentive for meeting the goal.
Step 7: *Review Goal and Student Performance*
a. Determine how often performance will be reviewed.
b. Identify when and how the plan will be modified if goal is met or is not met.
Step 8: *Plan for Reducing Self-Recording Procedure*
Step 9: *Plan for Generalization and Maintenance*

Brainstorm several examples with the student to define what is appropriate and what is not appropriate. The appropriate or desired behavior would be the replacement behavior in Step 1.

Step 3: Define the Data Recording Procedures

Once the behavior has been identified and defined, design a recording system to monitor the problem or desired behavior. The recording system should be easy for the student to manage and understand and should involve recording behavior privately. The student may use tally marks, symbols such as a '+' or '-', smiley/sad faces, or a checklist. Figures 2, 3 and 4 show examples of recording forms that could be used to record behavior.

Once a recording system has been designed, determine if the student will monitor his behavior once a day at a specified time, during certain activities, at specific or random intervals, or whenever it occurs.

Figure 2

Name: _____

Date: _____

Did I complete my work?

No 1 2 3 Yes 4

Figure 3

Self-Monitoring form using event sampling

Name: _____

Date: _____

//// //

Total / marks 6
Record a / each time you talk without permission during this class period

Figure 4

Self-Monitoring form using sampling

Name: _____

Date: _____

Intervals (40 five [5] minute intervals)

+	+	-	+	-			

Every time you hear the beep, record a + if you were paying attention on a - if you were not paying attention.

Step 4: Train the Student to Use the Recording Form

During the initial session of the intervention, it takes 20 to 30 minutes to teach the student to use the technique of self-monitoring. Teaching students to use self-monitoring is similar to teaching students any skill. Begin by discussing the purpose and the benefits of monitoring one's own behavior. Direct instruction with modeling, practice, and feedback should be used to teach self-monitoring and recording. If necessary have the student model and verbally rehearse the steps of the self-monitoring procedures after direct instruction. Go over the logistics of where and when the behavior will be monitored.

Step 5: Choose a Strategy for Ensuring Accuracy

In the initial stages of the intervention, the teacher should monitor frequently, with intermittent checks. Compare this with the student's record, you may find a time to discuss this with the student. Research has indicated that the student need not be accurate in his recording for a change in behavior to occur (Kneedler & Hallahan, 1981).

Step 6: Choose a Goal and Contingencies

Make sure that the student can explain his goal in self-monitoring. Then, help the student identify a reward to give himself for small praising oneself, talking to a parent about improvement, making a certificate or writing a letter to a friend about improvement.

Step 7: Review goal and Student Performance

Soon after the intervention has been implemented, meet with the student to see how the monitoring is going and whether there needs to be a revision in the plan. Provide encouragement and allow for errors and adjustment. Make periodic revisions and readjustments to the plan as necessary.

Step 8 and 9: Plan for Reducing Self-Recording and Generalization/Maintenance

When the student demonstrates consistent success, gradually remove the monitoring system. Fading may involve less adult guidance and/or limiting the amount of time that the student monitors his behavior. The student will need continued support and praise for his efforts to maintain appropriate behavior.

Self-monitoring can be very empowering for a student and is minimally disruptive to other students. A body of evidence supports the positive effects of self-monitoring on important academic variables such as on-task behavior and productivity (Reid, 1996). There is also reason to believe that self-monitoring can play a role in increasing learning and improving generalization.

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PRAXIS

Call for Papers and Submission Guidelines

The PRAXIS section of this journal is intended for readers to be able to immediately apply the methods/strategies described in the articles in their classrooms. These methods/strategies may be new and unique ideas or they can be effective methods/strategies that some teachers have been using and believe that by publishing them many more teachers could implement them in their classrooms. Please see the article, *"Teaching Students to Self-monitor"* (reprinted from Volume 3, Number 1, of *The Journal of the International Association of Special Education*) in this issue for an example (Bettenhausen & Thomas, 2002). The articles should be approximately three to six pages and describe in detail a specific teaching strategy or informal assessment method. The articles should include specific instructions on how to develop and implement the methods/strategies. The methods/strategies should require no unique materials for development. These articles are to be submitted following the same submission guidelines and will go through the same review process as all *The Journal of the International Association of Special Education* articles with the exception of including an abstract. *(See submission guidelines)* The format for these articles should include an introduction, step-by-step directions, materials/examples of charts or graphs if needed, conclusions and references.

We encourage you to consider submitting methods/strategies that you have used with students with disabilities and think would be of interest to our readers. Both classroom teachers and university instructors are welcome to submit articles for consideration for publication in the PRAXIS section of the journal.

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Conference Materials: Conference materials may be picked up between 2:00-4:00 PM on Sunday, July 10, 2005 at the IASE registration desk. You can find the registration desk at Mount St. Vincent University.

Accommodations:

Citadel Halifax Hotel 1960 Brunswick Street Halifax, Nova Scotia B3J 2G7 (800) 565-7162	**Special IASE Room Rates: (per night)** Traditional Room—$162.00 CD Deluxe Room—$172.00 CD www.citadelhalifax.com
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Children's' Art: To showcase children's art projects from your home country, please bring them to the conference registration desk.

Conference Proceedings: The proceedings will be available at the conference and can be picked up at the registration desk.

Schedule of Events:

Sunday, July 10: Registration & Opening Reception hosted by the Presidents of Mount St. Vincent University, Acadia University and St. Mary's University

Monday, July 11: Opening Keynote, concurrent workshops, closing plenary session, optional evening trip to Peggy's Cove

Tuesday, July 12: Opening Keynote, concurrent workshops, closing plenary session, Gala Dinner/Auction at Pier 21

Wednesday, July 13: Opening Keynote, concurrent workshops, closing plenary session, optional evening walking pub crawl around historic Halifax

Thursday, July 14: University visits (Acadia University, St. Mary's University) - optional

Conference Highlights

The Conference will provide a unique opportunity for special and general educators, related disciplines and families of youth with special needs to exchange ideas. Eminent speakers from a variety of fields will be featured as well as professionals from throughout the world who will present conference sectionals on a wide spectrum of topics. Cultural and social events supplement the schedule of conference activities.

Mount St. Vincent University is a four-year university dedicated to promoting academic excellence through small classes, a strong liberal arts curriculum and contributions to the community. The vision of MSVU includes excellence in teaching and research not only at home, but around the globe. MSVU boasts a park-like campus located minutes from downtown Halifax.

Dr. David Leitch will be a keynote speaker showcasing Liberated Learning. This is new speech recognition technology created at The Atlantic Centre, St. Mary's University's support center for students with disabilities.

Pier 21 is a national historic site that stands as a testament to the building of the Canadian nation. Millions of people who may have been displaced by war or who were seeking new opportunities entered Canada via Pier 21. Enjoy the displays and museum prior to the Gala Dinner/Auction.

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The views expressed at this IASE 2005 conference are not necessarily those of Mount St. Vincent University.

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The aims of the IASE are to promote professional exchange among special educators all over the world, to develop special education as a discipline and profession, to encourage international cooperation and collaborative international research, to promote continuing education of its members by organizing conferences, and to foster international communication in special education through The Journal of the International Association of Special Education.

Style

Total length of the manuscript is not to exceed 20 pages and should include all references, charts, figures, and tables. Articles submitted should follow the guidelines of the Publication Manual of the American Psychological Association, fifth addition.

Word Processing

Using American English, manuscripts are to be typed in Microsoft Word using 12 point Times regular face (no bold or italics). The entire document should be doubled spaced with .75 margins all around. *(top, bottom, left, and right)*. However, only put one space in between sentences. Tables, charts, figures, and or illustrations should fit in a 3 ¼ width column and are to be on separate pages at the end of the manuscript. Additionally, a copy of any photos, illustrations or other graphics must be attached electronically in jpeg format. This aids in the printing process for compatibility with the Macintosh computers that printers use. References are to be in APA style with hanging indents. *(If you do not have access to Microsoft Word please contact us)*

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