RUNNING HEAD: GENERAL EDUCATION TEACHERS

General Education Teachers and Students with Physical Disabilities: A Revisit

Delar K. Singh, Ph.D.

Associate Professor

Eastern Connecticut State University

Willimantic, CT 06226

E-mail: singhd@easternct.edu

Phone: Office 860-465-455

Phone: Home 860- 450-0253

Mitchell Sakofs, Ph. D.

Interim Dean, School of Education and Professional Studies

Central Connecticut State University

New Britain, CT 06050

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Abstract

This article reports the findings of a research study that investigated the knowledge base and the perceptions of professional competence of 115 general education teachers as they relate to the inclusion of students with physical disabilities. Members of the sample represented elementary and secondary teachers who were teaching in rural, urban, and suburban schools of Eastern Connecticut. Findings indicate that the general education teachers do not appear to have adequate knowledge and skills to educate learners with physical disabilities in their classrooms. Further, majority of the general education teachers do not feel confident and fully prepared for the inclusion of learners with physical disabilities.

General Education Teachers and Students with Physical Disabilities: A Revisit

Inclusion is based on the conviction that learners with disabilities should be fully integrated into regular classroom and schools. Inclusion consists of physical, social, and instructional integration. The physical integration assumes that students with disabilities will be placed in the regular classroom along with their non-disabled peers, social integration necessitates that students with disabilities be an integral part of the social fabric of their general classroom, and instructional integration presupposes that students with disabilities will be taught according to their specific needs and not any predetermined set of curricular standards (Friend & Bursuck, 2006; Wilson, 1999).

The trend towards educating students with disabilities in the regular classroom has grown with the implementation of Individuals with Disabilities Education Act (IDEA) of 1997. The 1997 amendments require that the IEP address how a student with a disability will access the general education curriculum. The lawmakers believed that the majority of children eligible for special education and related service are capable of participation in the general education classroom to varying degrees. As reported in Twenty-fourth Annual report to Congress (U.S. Department of Education, 2003), in 1999-2000, 95% of the students with disabilities were served in regular schools with 47.3% served out of the regular classroom for less than 21% of the school day as compared to 32.8% served out of the regular classroom in the year 1990-191 (U.S. Department of Education, 2002).

Some advocacy groups such as The Association of Severe Handicaps (TASH) support full inclusion of students with disabilities although there is not sufficient empirical evidence to

conclude that needs of all children can be met in the regular classroom. On the contrary, there is evidence that suggests that general education teachers do not believe that they are fully prepared for the inclusion of students with disabilities (Schumm & Vaugh 1995; Schumm & Vaughn 1993; Singh, 2001). And as researchers Heller, Dykes, Best, and Cohen (1999) found, even a large proportion (40%) of special education teachers certified to teach students with physical disabilities do not feel prepared. They lack essential knowledge and skills in about half of the competencies needed to educate students with disabilities.

Soodak, Podell, & Lehman (1998) have ascertained that general educators' willingness and confidence in their professional readiness is critical to the successful implementation of inclusive educational practices. In the context of standards, increased accountability, and No Child Left Behind Law, there is need to address inclusion issues for students with physical disabilities. Given the recent advances in medical technology that can save extremely low weight and premature babies, provide surgical interventions to unborn babies, and sustain lives of children with severe physical disabilities who might not have survived the infancy, there is an increased need of qualified teachers who can educate these students (Heller, et al., 1999). The bulk of current research literature focuses on students with mild disabilities. Students with physical disabilities, despite their relatively low incidence deserve research attention. The present study was designed to address the pressing need for current knowledge base. Its main objective was to collect data on the knowledge base and professional readiness of general education teachers for the inclusion of student with physical disabilities. Specifically, the study addressed the following questions:

1. Do general education teachers have adequate knowledge about the disability specific characteristics and health related need of students with physical disabilities?
2. Do general education teachers have adequate knowledge about the educational needs of students with physical disabilities?
3. Do general education teachers have adequate knowledge about adaptive equipment needed by students with physical disabilities?
4. Do general education teachers have adequate knowledge about the environmental adaptations required by students with physical disabilities?
5. Do general education teachers perceive themselves as competent and adequately prepared for the inclusion of students with physical disabilities?

Let us define the term "**physical disabilities**". The terms, "physical disabilities" and "orthopedic impairments" are often used interchangeably. The federal law, Individuals with Disabilities Act (IDEA) uses the term, "orthopedic impairments" and educators typically use the term "physical disabilities" (Turnbull, Turnbull, Shank, Smith, and, Leal, 2002). The IDEA defines an orthopedic impairment as:

"A severe **orthopedic impairment** that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures) (U.S. Department of Education, 2001).

As stated in IDEA, physical disabilities can be congenital or acquired. The students with physical disabilities represent a heterogeneous population. The number of students with physical disabilities is growing. As reported in the Twenty- second Annual Report to Congress, in 1998-99, across the nation, 69,492 students with orthopedic disabilities who were in ages 6-21 received special education and related services. The number of students increased by 3 percent from 1997-1998 to 1998-199 and by 48 percent from 1987-88 to 1998-1999 and again by 44.8% in 1999-2000 (U.S. Department of Education, 2001; U.S. Department of Education , 2003).

A number of students with physical disabilities use mechanical devices that replace or augment vital body functions. Many of these students need assistance with personal care such as using the bathroom, and eating. Generally, these students have to cope with the challenges of chronic illness, pain, and anxiety; have to comply with medical regimen, and may have to deal with co-occurring disabilities (Caldwell, Sirvis, Still, Schwab & Jones, 1997). Teachers who work with these students must possess specific knowledge and skills. They must be well versed in a range of instructional strategies, physical management, health maintenance, environmental adaptations, and assistive technology. They need to be able and willing to collaborate with a variety of personnel; must be able to modify curricula to accommodate the characteristics of these learners; apply knowledge of disability conditions to educational outcomes, and provide resources for family and service providers (Best, Heller, & Bigge, 2005; Bigge, Best, & Heller, 2001; Council Exceptional Children, 2003).

Methodology

Sample

The sample for this study constituted of 115 general education teachers. These teachers served as cooperating teachers for the teacher candidates of secondary and elementary teacher education programs offered at a state university in a rural area of Connecticut. The teacher candidates of this university spend 14 weeks of their student teaching with these cooperating teachers.

Seventy three percent of the sample members represented elementary teachers and 27% of the sample members represented secondary teachers. Further, 47% of the sample members taught in rural schools, 35.7% taught in suburban schools, and 17.3% taught in urban schools. Ninety eight percent of the sample members held full time positions in their schools and 2% of the sample members taught part time. Eighty nine percent of the sample members held Permanent Certification and 11% of the sample members held Provisional Certification. Seventy percent of the sample members had completed their teacher training in Connecticut and the remaining 30 % of the sample members had completed their teacher training in a state other than Connecticut. Some of these other states are: California, Kentucky, Maine, New York, New Jersey, Ohio, Pennsylvania, and Massachusetts. The mean teaching experience of the sample members was 16.6 years. The most experienced teacher of the sample had completed his/her teacher training in 1963 and the youngest teacher of the sample had completed his/her teacher training in year 2001. Majority of the sample members, that is, 60.9% reported that they had not taken any course in special education during their teacher training. The mean hours of in-service training received by sample members for the integration of students with disabilities in their

classrooms was 3.69 with a standard deviation of 2.65. Two sample members who had received approximately 100 hours of in-service training were considered outliers and thus excluded in the calculation of mean and standard deviation.

Instrumentation

A questionnaire that was developed by the principal investigator was used to collect the needed data and to address the research questions. This questionnaire gathered information about demographic variables and perceptions of regular education teachers about their knowledge, skills, and preparedness in educating students with physical disabilities. The demographic information included items such as type of school, type of certification, years of teaching experience, the state in which the sample member had completed teacher training, and number of in-service hours the sample members had received for the inclusion of students with physical disabilities The remainder of the questionnaire had five sections of Likert-type items and space for narrative comments. **Section 1** of the Likert-type items gathered data about the knowledge and skills of general education teachers as they relate to the disability specific characteristics and health related needs of students with physical disabilities. **Section 2** gathered data about the general education teachers' knowledge and skills about the educational needs of students with physical disabilities. **Section 3** gathered data about the general education teachers' knowledge and skills as they relate to the adaptive equipment often used by students with physical disabilities. **Section 4**, gathered data about general education teachers' knowledge and skills as they relate to environmental adaptations required by students with physical disabilities. **Section 5** gathered data about general education teachers' perceptions about their competence, and their willingness to collaborate with physical therapists, occupational therapists, and speech pathologists. This last section also gathered information about their interest in learning about selected adaptive equipment that is often used by students with physical disabilities.

The completion of this questionnaire requires 20-25 minutes. The questionnaire with a cover letter explaining the purpose of the study was mailed to the members of sample with a postage-paid return envelope. A total of 240 questionnaires were mailed and a total of 115 responses were received. The return rate for the study was 47.9%. We believe that this return rate is adequate given that no follow-up letters were sent to the members of sample.

Data Analysis

Data were analyzed using SPSS. As needed, frequency counts, valid percents, cumulative percentages, means and standard deviations were obtained. Likert categories of strongly agree (5) and agree (4) as well as categories of strongly disagree (1), disagree (2)), and undecided (3) were collapsed. In other words, categories of agree and strongly agree were combined and a score of 1 was assigned to all agree/strongly agree responses. Categories of disagree/strongly disagree were combined and a score of 0 was assigned to all disagree/strongly disagree responses. We decided that a response "undecided" is as detrimental to the education of students with physical disabilities as a response that is incorrect. So, all responses in the category of "undecided" were also assigned a score of zero. **Section 1** of the survey tool had a possible total score of 19, **section 2** had a possible total score of 11, **section 3** had a total possible score of 10, and **section 4** had a possible total score of six. The responses to the questions of **section 5** were not summed, rather the frequencies/percents for the responses to each item were obtained. **To** determine if there were any differences in the survey responses of urban, rural, and suburban teachers; and elementary and secondary teachers respectively Analysis of Variance & t-test were used respectively.

Results

The findings discussed in this section correspond with the research questions posed earlier in this paper. In order to address the first research question, the responses of sample members to the **Section 1** of survey tool were summed; mean, and standard deviation were calculated. The total possible points for this section were 19. The sample mean for this section is 7.9 with a standard deviation of 4.13. The mean score of 7.9 indicates the average correct response rate of 41.6 % for the participants. We concluded that an average correct response of 41.6% is low and indicates that general education teachers do not appear to have adequate knowledge about disability specific characteristics and health related needs of students with physical disabilities.

To address the second research question, the responses to **Section 2** of survey tool were summed; mean and standard deviation were calculated. For Section 2, the total possible points were 11. The mean for the sample is 5.5 with a standard deviation of 2.89, indicating a correct response rate of 50% for the sample. We concluded that the 50% response rate is low and is indicative of general education teachers not having adequate knowledge about the educational needs of students with disabilities.

To address the third research question, the responses to **Section 3** of survey tool were summed; mean and standard deviation were calculated. For Section 3, total possible points were 10. The mean for the sample is 6.7 with a standard deviation of 2.7, indicating a correct response rate of 67% for the sample. We concluded that the 67% correct response is kind of low and is indicative of general educators' inadequate knowledge about the adaptive equipment needed by students with physical disabilities.

To address the fourth research question, the responses to **Section 4** of the survey tool were summed; mean and standard deviation were calculated. The total possible points for this section were six. The sample mean for this section is 4.4 with a standard deviation of 1.25. We

concluded that this correct response rate of 73.3% is indicative of general education teachers' having adequate knowledge about the environmental adaptations needed by students with physical disabilities.

To address the fifth research question, frequencies/percents of all of the responses to the questions of **Section 5** of the survey tool were obtained. Sixty one percent of the sample members reported that they do not feel confident and adequately prepared for the inclusion of students with physical disabilities in their classrooms. As far as the question of more training is concerned, 77.4% of the teachers reported that they need additional training in educating students with physical disabilities. Further, 89% of the sample teachers reported that they feel comfortable collaborating with other personnel such as physical therapists and occupational therapists. Also, majority of the sample members, that is 71% reported that they are comfortable accommodating push in services in their classrooms.

As far as additional training is concerned, 61% of the teachers expressed interest in learning about wheelchairs, 76.5% expressed interest in learning about communication boards, and 67.8% expressed interest in learning about positioning equipment. Data analysis indicated that there are no differences between the responses of secondary and elementary teachers; and urban, rural, and suburban teachers.

Conclusions

The findings of this study should be interpreted with caution. First, the sample was of convenience. The participants were not randomly selected. Second, due to variability in state regulations, general education teachers in other states may have more adequate or less adequate knowledge and skills related to the inclusion of learners with physical disabilities. Third, the reliability and validity of the survey tool is unknown at this time. Despite caveats, the present study is significant. It has addressed the inclusion of students with physical disabilities**, an area**

that needs research attention. Additionally, findings of this study allude to the in-service and pre-service needs of general education teachers as they relate to the inclusion of learners with physical disabilities. In the context of today's national concern for teacher quality and its subsequent impact on student performance, the study findings are significant.

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