Electronic Journal for Inclusive Education

Volume 2 Number 8 Electronic Journal for Inclusive Education Vol. 2, No. 8 (Summer/Fall 2011)

Article 4

Summer 2011

Paraeducators Perceptions of Their Roles in Inclusive Classrooms: A National Study of Paraeducators

Ida M. Malian Ph.D. imalian@asu.edu

Follow this and additional works at: https://corescholar.libraries.wright.edu/ejie

Part of the <u>Curriculum and Instruction Commons</u>, <u>Curriculum and Social Inquiry Commons</u>, <u>Disability and Equity in Education Commons</u>, <u>Special Education Administration Commons</u>, and the <u>Special Education and Teaching Commons</u>

Repository Citation

Malian, I. M. (2011). Paraeducators Perceptions of Their Roles in Inclusive Classrooms: A National Study of Paraeducators, *Electronic Journal for Inclusive Education*, 2 (8).

This Article is brought to you for free and open access by CORE Scholar. It has been accepted for inclusion in Electronic Journal for Inclusive Education by an authorized editor of CORE Scholar. For more information, please contact corescholar@www.libraries.wright.edu, library-corescholar@wright.edu.

Malian: Paraeducators Perceptions of Their Roles in Inclusive Classrooms:

Paraeducators Perceptions of their Roles in Inclusive Classrooms: A National Study of Paraeducators

Ida M. Malian, Ph.D

Mary Lou Fulton Teachers College

Arizona State University

Paraeducators Perceptions of their Roles in Inclusive Classrooms:

A National Study of Paraeducators

Abstract

With increased mandates for providing FAPE, districts are employing paraprofessionalsspecifically paraeducators to assist in special education as well as inclusive classrooms. A

National Survey was conducted to ascertain paraeducators perceptions regarding their roles with
inclusive classes, collaboration with general and special education teachers, responsibilities
within the classroom regarding instruction and other management of the daily routines, their
beliefs about teaching and training needs. Respondent included 202 paraprofessionals from 34
states with varying degrees of experience and training. Overall, paraprofessionals were positive
about their roles in the classroom ad the impact of their work with students with disabilities.

More time for collaboration with teachers and additional targeted training in disabilities,
behavior management and law were expressed as professional development areas.

Paraeducators Perceptions of their Roles in Inclusive Classrooms:

A National Study of Paraeducators

The reauthorization of IDEA, the mandates of NCLB, demands by states to increase graduation requirements and the expressed desires of parents of students with disabilities to have more inclusive education have set the stage for added pressure for special educators and administrators involved in special education services. Although aides have been utilized as paid and volunteer support in general education classes-districts are more inclined to hire paraprofessionals to support specific special education goals. According to National Center for Educational Statistics (2000) there is a distinction in the definition between aides and paraprofessionals. Aides are defined as "non-professional person who assists in the administration of the classes". Correspondingly, the definition of paraprofessional is "a person who has obtained a certificate by passing an exam, that enables him or her to perform a task requiring significant knowledge but without having the occupational license to perform at the professional level of the field" (p.1). Consequently, the prevalence of paraprofessionals overall in education is difficult to determine due to varying definitions, functions and roles. A cursory review of IEP's can provide a rough estimate of paraprofessionals assigned to specific students in non-inclusive classes. National statistics on paraprofessionals estimate that more than 525,000 are employed in full-time positions (NCES, 2000). Of this estimate approximately 250,000 are working in special education classes (NRCP 2010). Further analyses to reveal paraprofessional in inclusive classes have not been accurately determined. Again, definition precludes an accurate estimate. Also compounding the issue is the fact that districts have utilized a theme and variation

approach to "inclusion". A standard definition advanced by Liston, Nevin & Malian (2009) establishes an inclusive classroom "as a classroom where two or more educators having responsibility for teaching students with and without disabilities". (p.2). In most cases the terms, paraprofessionals and paraeducators are used synonymously. For the purpose of this paper, paraeducators will be referred to as those paraprofessionals in educational settings.

Review of Literature

The intersection of paraprofessionals and inclusive classes as topics in the practice literature has increased in interest in the professional journals. Nevin, Malian & Liston (2008) reported that seven studies were published between 1999-2006 As a result of a further search of the ERIC system using the following descriptors: paraeducators, inclusive education, seven studies emerged as published between 1999 and 2006. A further review from 2007 to 2010 revealed 60 additional publications. These publications addressed a wide spectrum of topics related to paraprofessional in inclusive classes. Topics included emotional exhaustion among paraeducators (Shyman 2010), turnover and retention (Ghere & York-Barr 2007), Response to Intervention (Fuchs & Fuchs 2009), on-line and mobile technology for coaching (Rock, Gregg, Howard, Ploessi, Maughn, Gable, & Zigmond 2009), facilitating peer interaction (Carter, Pesko 2008), assistive technology (Farnsworth, Luckner 2008), collaboration (Devlin 2008, Cramer & Stivers 2007), supporting art production (Causton-Theoharis, & Burick 2008), supporting literacy instruction (Causton-Theoharis, Giangreco, Doyle & Vadasy 2007), peer support (Carter, Sisco, Melekoglu & Kurkowski 2007), supervision (Steckelberg, Vasa, Kemp, Arthaud, Asselin, Swain & Fennick 2007) and empowerment (Keller, Bucholz & Brady 2007).

Paraeducators were also reported to deal with a wide spectrum of disabilities. Specific disabilities included visual impairments (Trief, Bruce, & Cascella 2010; Lewis & McKenzie 2010, Conroy 2008)), autism spectrum (Rossetti & Goessling 2010, Pierson, & Glaeser 2007, Giangreco & Broer 2007), intellectual and developmental disabilities (Giangreco 2010), emotional and behavioral disorders (Maggin, Wehby, Moore-Partin, Robertson, & Oliver 2009, Ryan, Reid & Ellis 2008),) and cross categorical classifications (Bouck 2008), moderate disabilities (Downing & Peckham-Hardin 2007) severe disabilities (Bentley 2008), Down's Syndrome (Grenier, Rogers, Iarrussa 2008) and young children (Hughes, Valle-Riestra 2008)

Educational settings that paraeducators were involved with were also found to be broad. Educational settings such as music classrooms (Darrow 2010), self-contained cross-categorical classrooms (Bouck 2008), vocational rehabilitation centers (Lifshitz, Klein 2007), physical education classes (Lytle, Lieberman & Aiello 2007) and residential settings (Lewis and McKenzie 2010) were reported in the educational literature.

Various administrative guides have also appeared in the literature. Dillon & Ebmeier (2009) suggested an employment interview instrument to be employed by special education administrators for hiring school paraprofessionals. Causton-Theoharis (2009) published "The Paraprofessional's Handbook for Effective Support in Inclusive Classrooms". Pickett and Gerlach (1997) wrote a well-received handbook for supervisors of paraeducators. Although it does not include any research *per se*, it is an informative book that provides many activities for professional development and helpful forms for teaming, evaluation, planning, and scheduling. One type of support that general education teachers have identified as essential for placing special education students in their classrooms has been extra classroom support (Marks,

Schrader, & Levine, 1999; Mueller & Murphy, 2001; Piletic, Davis, & Aschemeier, 2005; Riggs & Mueller, 2001). Other researchers have reported on university teacher preparation programs that recruit paraeducators with experiences in inclusive classrooms to complete special education certification programs (e.g., Littleton, 1998; Rueda & Monzo, 2002).

In their comprehensive study of paraeducators in two large school districts in Southern California, Rueda and Monzo (2002) reported a) the types of activities that the paraeducators engaged in, b) the input they had in classroom instructional activities, c) the assistance they received from teachers and others, and d) the factors that detracted from or fostered collaborative relationships. The findings emphasized that school cultures do not support collaboration between teachers and paraeducators due to a predominantly hierarchical structure of social relations and that teachers are not aware that paraeducators possess knowledge of the students' culture and community that is essential for tapping into students' prior knowledge and interests. Such findings reveal areas that are unknown or at best undiscovered between the teacher and the paraeducator. In order to better understand the perspective of paraeducators, a national study was conducted by disseminating a survey through the National Resource Center for Paraprofessionals Newsletter. The Survey consisted of 5 sections 1) definition of terms, 2) respondents demographics, 3) classroom demographic, 4) responsibilities, 5) beliefs, 6) collaboration, and 7) open ended questions. Sample Survey items included:

Sample of the demographic questions:

What is your gender?

In what state do you work?

Do you speak a language other than English? What are the types of disabilities that you work with? Sample of questions with Likert scale ratings: To what extent have you used the following strategies in the inclusive classroom? Cooperative learning groups Individual tutoring Giving corrective feedback on assignments Sample of attitude Items: I think that all students must do the same activity in the same way I know how to use flexible grouping in the inclusive classroom Sample items related to issues I have adequate time to plan with the teacher(s) that I work with I need more training in order to be more effective with children with disabilities When I work in inclusive classrooms, I receive supervision Sample Open-ended questions:

The most important part of the work I do in inclusive classrooms is:

Published by CORE Scholar, 2011

To be a successful paraeducator in the inclusive classroom, you must know about:

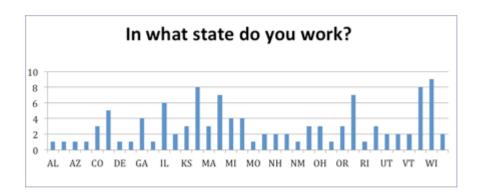
Three things that I think other paraprofessionals should know about inclusive classrooms are:

The survey was administered on-line, all information was anonymous and data was aggregated for the purpose of analysis. Non-parametric descriptive statistics were employed for the final quantitative analysis. Qualitative measures were used for the open-ended questions. To identify common themes, an analytic inductive approach was employed with a constant comparison method, which led to the emerging themes.

Demographic Results

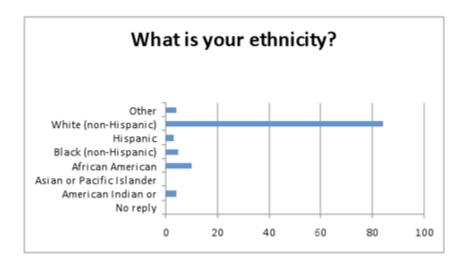
The national survey yielded 202 respondents from 34 of the United States. Overall the profile of paraeducators participating in the survey were predominately White, female, English speaking, with 7 years of experience as a paraeducator. The socio-economic range of the schools that the respondents were employed were reported to be between \$25,000-\$75,000. Most of the respondent also reported working in elementary education inclusive class with approximately 20 student. The majority of the paraeducators worked in small groups or one-on-one. In terms of collaboration overwhelmingly the paraeducators indicated that they did not met regularly with the supervising teacher. The responded also indicated that had a family member or friend with a disability. Respondents reported working in 34 of the 50 states. Wisconsin, Washington and Kentucky respondents comprised the greatest percentage while multiple states comprised the lowest responding states. (Figure 1).

Figure 1. Representative States of the National Survey Respondents



The respondents represented all ethnic groups with White being self-selected as the most prevalent. (Figure 2).

Figure 2. Ethnic Representation of Respondents



With increasing information available that an over representation of minorities and the misplacement of non-Engkish speakers in special education, the survey asked paraeducators if they

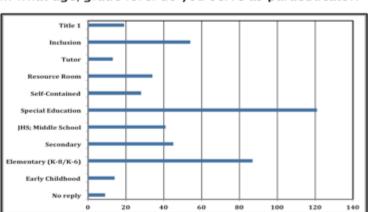
Published by CORE Scholar, 2011

spoke another language other than English. At times, bilingual paraeducators have been asked to provide translation for students with disabilities and for their parents. The survey respondents overwhelmingly reported that English was the predominate language. However Spanish, Portuguese, German, Swahili and Creole were also mentioned. A possible motivation for paraeducators to serve in inclusive classes with students with disabilities is suggested by the response to the question, "Do you have a friend or family member with a disability? Fifty-four percent responded affirmatively. One person revealed that her son had a disability, while another reported the daughter of a friend had a disability.

Classroom Demographic Results

Respondents reported that inclusive classes were the predominate settings for paraeducator roles. Additionally, self conatined and general education classes were also options. In terms of the grade levels, the majority of respondents reported working in 7th-9th grade classrooms. The distribution of respondents were skewed towards the elementary level. The total number of students in the classrooms that the paraeducators participated, ranged from 3 to 64, with the most predominate number of students reported to be 20. The number of students that the paraeducators reported to working with at a time ranged from 1 to 35, with 3 students representing the greatest frequency of reponses. The specific types of settings that paraeducators served were typically elementary (K-8) special education classes. (Figure 3).

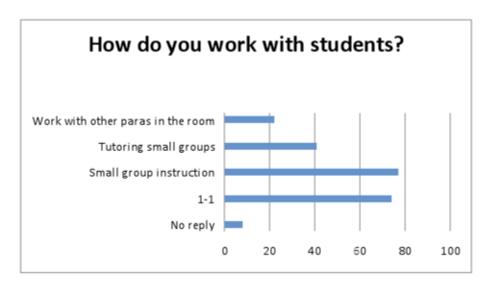
Figure 3. Types of classroom and grade level of paraeducators



In what age/grade level do you serve as paraeducator?

Paraeducators were asked about the type of instructional interaction they have with the students in their classes. The majority of respondents stated that they direct instruction in small groups, followed closed by 1:1 instruction. (Figure 4).

Figure 4. Type of Instructional Interaction Between Paraeducators and Students



One of the concerns stated consistently by paraeducators and teachers alike was the lack of time in preparation for the days planned instruction and other classroom details (i.e. behavior

11

Published by CORE Scholar, 2011

management plans, individual follow up with students, division of responsibilities). The survey asked paraeducators about their preparation time. Approximately 60% of the respondents reported having between 1-5 hours a week in preparation for the follow week's activities. This translates to about 10 minutes to one hour a day to prepare collaboratively with the teacher for the days responsibilities. (Figure 5).

Figure 5. Weekly Preparation Time for Paraeducators



Paraeducators reported receiving training in various professional development topics. However, when asked if the training included the supervising teacher, the majority of respondents reported that their supervising teacher was not included in the training the paraeducators received. (Figure 6).

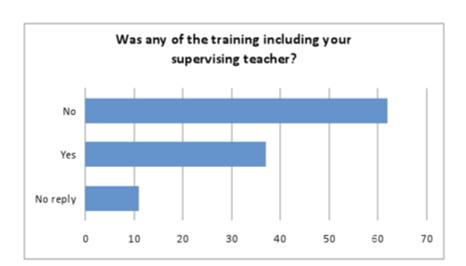


Figure 6. Supervisor Inclusion in Paraeducator Training

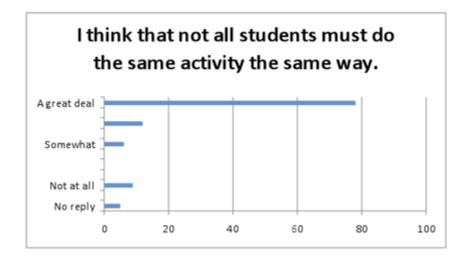
Result of Reported Responsibilities and Beliefs

Paraeducators completing the National Survey reported several strategies supporting the teaching and learning processes in the inclusive classes. The majority of respondents (68%) stated that they directed student behavior, delivered individual instruction to students in the inclusive classes (59%) and taught appropriate social skills (50%). The least utilized strategies included supervising peer tutoring sessions (36%), coaching homework (26%) and supporting cooperative learning groups (14%).

The beliefs that paraeducators hold regarding students with disabilities in inclusive classes underscored their approached to instruction. Clearly, the inclusive setting with greater involvement with students with disabilities has led to greater understanding of the strengths and challenges faced by these students. There also seems to be an understanding that "business as usual" is not an appropriate strategy for teaching or learning. The needs for diversity of strategies

in the classroom by the paraeducators were highlighted when asked their beliefs regarding how students learn. Approximately 80% of the paraeducators reported "not all students need to do the same activity in the same way". (Figure 7). This was followed by a strong self-statement to adjust teaching strategies for students in inclusive classes. Paraeducators believed that *they* needed to adjust *their* teaching strategies to meet the needs of students with learning problems. (Figure 8).

Figure 7. Beliefs about Diversity in Learning of Students by Paraeducators



I think that a student with learning problems needs me to adjust my teaching strategies or curriculum.

Agreat deal

Not at all

No reply

0 10 20 30 40 50 60 70

Figure 8. Adjustment of Teaching Strategies by Pareducators

The majority of paraeducators (73%) also reported using flexible grouping and employed varying classroom routines to help meet the needs of the diverse learners in their inclusive classes. It appears that the experiences of the paraeducators with students with diverse learning needs has heightened their need to incorporate new strategies for all learners. Figure 9. depicts of skill enhancement as a result of the inclusive teaching experience. Paraeducators reported improvement in their ability to address diverse needs as a result of working in inclusive classes. With greateer student involvment and interaction, paraeductors persist in exploring options for student to demonstrate their learning.

My ability to meet students' diverse needs has improved because of my work in the inclusive classroom.

Agreat deal

Not at all

No reply

0 10 20 30 40 50

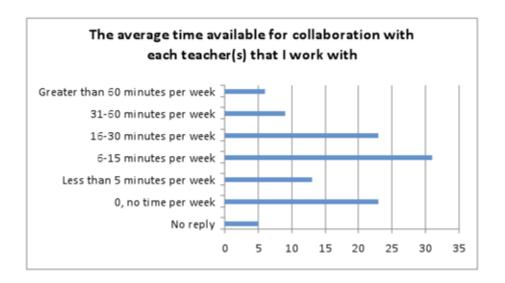
Figure 9. Paraeducator Ability Improvement in Inclusive Classrooms

Collaboration and Training Results

Effective collaboration between paraeducators and classroom teachers, particularly in an inclusive classroom is essential for consistency of instruction and behavior management. Additionally, weekly plans need to be aligned with the annual goals and short term instructional objectives expressed in the IEP of students receiving special education services in the inclusive class. Time constraints have typically been barriars to collaborative planning. In fact, approximately 80% of paraeducators reported they did not have adequate time to plan with their supervising teachers. In terms of specific timeframes for collaboration, the majority of paraeducators reported an average of 6-15 minutes per week for this teaming. (Figure 10). However, 70% of the paraeducators reported receiving supervision in the inclusive classes. This supervision was received from general education teachers (62%) and the special education teachers (58%). There was an overlap for supervision by both general and special educators. More importantly, over 85% of the paraeducators stated that the teacher that they worked with

asks their opinion about the students in the inclusive class. This indicates a level of respect and credibilty for the work provided by the paraeducator.

Figure 10. Average Time Available for Collaboration



Training is a key element for all educators. Updating of knowledge and skills for instructional practices and behavior managament are reaccuring topics for professional development.

Approximately 80% of the paraeducators reported needing more training in order to be more effective with children with disabilities. Specific areas include knowledge of the laws governing special education provisions, behavior management, Response to Intervention, characteristics of autism, categories of disabilities and differentiated instruction.

Implications

The role of the paraeductor in the inclusive classroom is evolving from an independent tutor to a collaborative partner. To further professionalize this partnership, paraeducators and teachers need to plan together to assure consistency in goal attainment for the the students. Embedded in

this planning is the clear delineation of roles and responsibilities and areas of overlap for the paraeducators and teachers. Thus, teaming may also be encouraged as the curriucum and student needs dictate. Paraeducators have expressed a strong desire for continued upgrading of their skills and knowledges. Professional development opportunities need to be institutionalized within a district and/in conjunction with university's continuing education programs. Further, paraeducators may also be eligible for admission into teacher prepsartion programs. Fast-track programs, on-line certificate and degree programs that allow the paraeducator to demomstrate skills within the distict are avaliable within innovative teacher education programs. Hence, this "grow your own" model has been attractive to school district desireous of retaining paraeducators with the demonstrated potential to acquire professional credentials. Other paraeducators have firmly held that paraeducation is a profession in and of itself and as such should be acknowledge.

The data from the National Paraeducator Survey have underscored the profile, setting, responsibilities, beliefs, collaborative and training needs reported by respondents nationwide.

Action steps by districts, personnel development specialists, institutions of higher education and collaborative efforts by teachers and paraeducators need to be developed to retain and recognize the contributions of paraeducators in inclusive classes.

References

- Bentley, J.K.C. (2008). Lessons from the 1% children labels of severe disabilities and their peers as architects of inclusive education. *International Journal of Inclusive Education*. 12, 5-6, 543-561.
- Bouck, E.C. (2008). Exploring the enactment of functional curriculum in self-contained cross-categorical programs: A case study. *Qualitative Report*, 13, 495-530.
- Carter, E., & Pesko, M.J. (2008). Social validity of peer interaction intervention strategies in high school classrooms: Effectiveness, feasibility, and actual use.

 Exceptionality, 16, 156-173.
- Carter, E., Sisco, L.G., Melekoglu, M.A., & Kurkowski, C. (2007). Peer supports as an alternative to individually assigned paraprofessionals in inclusive high school classrooms. *Research and Practice for Persons with Severe Disabilities*, 32, 213-227.
- Causton-Theoharis, J. (2009). *The paraprofessionals handbook for effective support in inclusive classrooms*. Baltimore, MD: Brookes Publishing Company.
- Darrow, A. (2010) working with paraprofessionals in music classrooms. *General Music Today*, 23, 35-37.

- Causton-Theoharis, J. & Burdick, C. (2008). Paraprofessionals of authentic art production.

 Studies in Art Education: A Journal of Issues and Research in Art Education, 49, 167182.
- Causton-Theoharis, J. Giangreco, M.F., Doyle, M., & Vadasy, P.F. (2007). Paraprofessionals: The "sous-chefs" of literacy instruction. *Teaching Exceptional Children*, 40, 56-62.
- Conroy, P.W. (2008). Paraprofessionals and students with visual impairments: Potential Pitfalls and Solutions. *Rehabilitation Education for Blindness and Visual Impairments*. 39, 43-55.
- Cramer, S. & Stivers, J. (2007). Don't give up! Practical strategies for challenging collaboration.

 *Teaching Exceptional Children, 39, 6-11.
- Devlin, P. (2008). Creating Effective teacher-paraprofesional teams. *Intervention in School and Clinic*, 44, 41-44.
- Dillon, A. & Ebmeier, H. (2009). The development and field test of an employment interview instrument for school paraprofessionals. *Journal of Special Education Leadership*, 22, 93-104.
- Downing, J.E., & Peckham-Hardin, K.D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities. *Research and Practice for Persons with Severe Disabilities*, 32, 16-30.

- Farnsworth, C.R. & Luckner, J.L. (2008). The impact of assistive technology on curriculum accommodations for a Braille-reading student. *Rehabilitation Education for Blindness and Visual Impairments*. 39, 171-187.
- Fuchs, D. & Fuchs, L. (2009). Response to intervention: Multilevel assessment and instruction as early identification and Disability Identification. *Reading Teacher*, 63, 250-252.
- Ghere, G. & York-Barr, J. (2007) Paraprofessional turnover and retention in inclusive programs: Hidden coasts and promising practices. *Remedial and Special Education*, 28, 21-32.
- Giangreco, M.F. (2010) One-on-One paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong? *Intellectual and Developmental Disabilities*. 48, 1-13.
- Giangreco, M.F. & Broer, S.M. (2007). School based screening to determine overreliance on paraprofessionals. *Focus on Autism and Other Developmental Disabilities*, 22, 149-158.
- Grenier, M., Rogers, R., & Iarrusso, K. (2008). Including students with Down's syndrome in adventure programming. *Journal of Physical Education, Recreation and Dance*, 79, 30-35.

- Hughes, M.T. & Valle-Ristra, D.M. (2008). Responsibilities, preparedness and job satisfaction for paraprofessionals: Working with young children with disabilities.

 International Journal of Early Years Education, 16, 163-173.
- Keller, C.L., Bucholz, J. & Brady, M.P. (2007). Yes, I can! Empowering paraprofessionals to teach learning strategies. *Teaching Exceptional Children*, 39, 18-23.
- Lewis, S. & McKenzie, A.R. (2010). The competencies, roles, supervision and training needs of paraeducators working with students with visual impairments in local ad residential schools. *Journal of Visual Impairments & Blindness*, 104, 464-477.
- Liefshitz, H., & Klein, P.S. (2007). Comparison and mediation between paraprofessionals and individuals with intellectual disability: Vocational rehabilitation centers versus special education schools. *European Journal of Special Needs Education*, 22, 459-470.
- Liston, A., Nevin, A., & Malian, I. (2009). What do paraeducators in inclusive classrooms say about their work? Analysis of national survey data and follow-up Interviews in California. *Teaching Exceptional Children Plus*.

 5, 2-17.

- Lytle, R., Lieberman, L., & Aiello, R. (2007). Motivating paraeducators to be actively involved in physical education programs. *Journal of Physical education*, *Recreation & Dance*, 78, 26-30.
- Maggin, D.M., Wehby, J.H., Moore-Partin, T.C., Robertson, R., & Oliver, R.M. (2009). Supervising paraeducators in classrooms foe children with emotional and behavioral disorders. *Beyond Behavior*, 18, 2-9.
- Nevin, A., Malian, I., & Liston. (2008). Paraeducator's profile in inclusive classrooms:

 Analysis of national survey data and follow-up interviews in California. Paper presented at the Annual Meeting of the National Resource Center for Paraprofessionals. Hartford, CT.
- National Center for Education Statistics (NCES) (2000). Education statistics: Elementary and secondary schools and staffing survey: Non-professional Staff in the Schools and Staffing Survey (SASS) and Common Core of Data (CCD, Working Paper No. 2000-13.

 Washington, DC: US Department of Education, Office of Education Research.
- National Resource Center for Paraprofessionals: Employment and Preparation of Paraprofessionals. (2010). Retrieved December 30, 2010

 http://www.nrcpara.org/report/demographics.

- Pickett, A.L., & Gerlach, K. (Eds.). (1997). Supervising para-educators in school settings: A team approach. PRO-ED, 8700 Shoal Creek Boulevard, Austin, TX 78757-6897
- Pierson, M.R. & Glaeser, B.C. (2007). Using comic strip conversations to increase social satisfaction and decrease loneliness in students with autism spectrum disorder.

 Education and training in Developmental Dsabilities, 42, 460-466.
- Rock, M.L., Gregg, M., Howard, P., Ploessi, D.M., Maughn, S., Gable, R.A., & Zigmond, N.P. See me, hear me, coach me. *Journal of Staff Development*. 30, 24-26, 28-31.
- Rossetti, Z.S., & Goessling, D.P. (2010). Paraeducators' roles in facilitating friendships between secondary students with and with autism spectrum disorders or developmental disabilities. *Teaching Exceptional Children*, 42, 64-70.
- Rueda, R., & Monzo, P. (2002). Apprenticeship for teaching: Professional development issues surrounding the collaborative relationship between teachers and paraeducators. *Teaching and Teacher Education*, 18, 503-521.
- Ryan, J.B., Reid, R., & Ellis, C. (2008). Special educators' knowledge regarding psychotropic interventions for students wit emotional and behavioral disorders. *Remedial and Special Education*, 29, 269-279.

- Shyman, E. (2010) Identifying predictors of emotional exhaustion among special education paraeducators: A preliminary investigation. *Psychology in the Schools*. 47, 828-841.
- Steckelberg, A.L., Vasa, S.F., Kemp, S.E., Arthaud, T.J., Asselin, S.B., Swain, K., & Fennick, E. (2007). A web-based training model for preparing teachers to supervise paraeducators. *Teacher Education and Special Education*, 30, 52-55.
- Trief, E., Bruce, M., & Cascella, P.W. (2010). The selection of tangible symbols by educators of students with visual impairments and additional disabilities. *Journal of Visual Impairment & Blindness*, 104, 499-504.