

RUNNING HEAD: Co-Teaching Standards in Teacher Education

Co-Teaching in Urban School Districts to Meet the Needs of all Teachers and Learners:
Implications for Teacher Education Reform

By

Elizabeth Cramer and Ann Nevin
College of Education
Florida International University
Miami, FL 33199

Jacqueline Thousand and Andrea Liston
College of Education
California State University San Marcos and San Diego City Schools

Paper Prepared for Presentation
American Association for Colleges of Teacher Education
January, 2006

Abstract

A mixed methodology approach was used to address the question: what are skills, knowledge and dispositions that co-teachers need to balance the seemingly competing mandates of NCLB and IDEIA in order to prepare teachers for the classrooms of today and tomorrow? Based on the results of two recent studies that focused on secondary co-teacher teams (one conducted in Florida; one in California), the authors report both quantitative and qualitative data obtained through the use of surveys, interviews, and observations in California and Florida. We extrapolated information for teacher educators as to how to prepare urban co-teachers to meet their needs and the needs of their students. Successful co-teaching practices that were observed are described and the assessed needs of current co-teachers are discussed for future planning of co-teaching preparation policies and practices.

Federal legislative changes, such as those described by the Individuals with Disabilities Education Improvement Act (IDEIA) reauthorized in 2004 (Pub. L. No. 108-466) and the No Child Left Behind (NCLB) Act of 2001 (Pub. L. No. 107–110), require that students with increasingly diverse learning characteristics have access to and achieve high academic performance in the general education curriculum. Changing legal requirements and student demographics combine to point to the need for increased collaborative planning and teaching among school personnel attempting to comply with legal mandates. Co-teaching, defined as a classroom that is taught by both general education and special education teachers, is a supplementary aid and service that can be brought to general education to serve the needs of students with (and without) disabilities through IDEIA. Such teaching requires a reconceptualization and revision for teacher preparation.

Recent studies show the benefits of co-teaching arrangements for students, teachers, and school organizations (Schwab Learning, 2003; Villa, Thousand, & Nevin, 2004). At the secondary level, co-teaching has been found to be effective for students with a variety of instructional needs including learning disabilities (Rice & Zigmond, 1999; Trent, 1998); high-risk students in a social studies class (Dieker, 1998) and in a language remediation class (Miller, Valasky, & Molloy, 1998). This research indicates that co-teachers can structure their classes to use more effectively the research-proven strategies required of the NCLB Act of 2001. For example, Miller et al. (1998) described how a co-teacher team (a special educator, a general educator, and two paraprofessionals) blended whole-class and small-group instruction, peer teaching, and small cooperative learning groups to provide language remediation activities within the general education

curriculum and resulted in increased literacy achievement for their students. These outcomes encourage administrators, advocates, and even state departments of education (Arguelles, Hughes, & Schumm, 2000) to adopt cooperative models such as co-teaching for the effective education of students with disabilities.

Other researchers are cautious about the claims for effectiveness of collaborative teaching methods. For example, Zigmond (2004), reporting on preliminary results of co-teaching in inclusive science classrooms at six high schools, found little difference in the amount of time students spent working on task, interacting in small groups, or interacting with the teachers. Rarely have researchers or practitioners analyzed the impact of collaborative teaching on other variables.

Purpose

The purpose of this paper to address the question: What are skills, knowledge, and dispositions that co-teachers need to balance the seemingly competing mandates of NCLB and IDEIA in order to prepare teachers for the classrooms of today and tomorrow?

Method

Based on the results of two studies that focused on secondary co-teacher teams (Cramer & Nevin, *in press*; Villa, Thousand, Nevin, & Liston, 2005), the authors report both quantitative and qualitative data obtained through the use of surveys, interviews, and observations in California and Florida. We extrapolate information for teacher educators as to how to prepare urban co-teachers to meet their needs and the needs of their students. Successful co-teaching practices that were observed will be described and the assessed needs of current co-teachers will be discussed for future planning of co-teaching preparation policies and practices.

Results of the Florida Study

The development of an evaluation instrument for co-teachers has been systematically studied only very recently. For example, Noonan, McCormick, and Heck (2003) developed and validated a co-teacher relationship instrument with a small sample of early childhood educators in Hawaii and two supervisors. Villa et al. (2004) developed the *Are We Really Co-Teachers Scale* which focuses on actions and behaviors in the classroom rather than beliefs and attitudes. Given expected increases in co-teaching teams, principals and other supervisory personnel will be required to use different evaluation procedures and so will university student teacher supervisors when their student teachers co-teach. The Noonan et al. *Co-Teacher Relationship Scale* focuses on the attitude, beliefs, and personal characteristics of co-teachers and may be helpful in matching potential co-teaching team members. In contrast, the Villa et al. (2004) *Are We Really Co-Teachers Scale* emphasizes the teaching interactions and classroom behaviors of co-teachers which may help administrators and other personnel design effective professional development activities to ensure that co-teachers have the skills to implement research-proven effective teaching practices. Cramer and Nevin (2005) conducted a mixed method study to validate these two instruments with a convenience sample of elementary and secondary co-teachers in Miami-Dade Public Schools.

In this paper, the data for secondary teachers only was analyzed and showed that high school co-teachers ratings of the top five items on both scales showed similarities as illustrated in Table 1. Specifically, two of the top five items reflected strong similarities: flexibility in dealing with unforeseen events and sharing responsibility through collaborating with others.

<Insert Table 1 About Here>

Interviews and observations with a subset of co-teachers from one high school provided confirmation that the survey items accurately reflected their actions and beliefs. The special educator and the content teacher were interviewed separately for one co-teaching team and for the other, the co-teachers were simultaneously interviewed. Cesar Chavez High School [a pseudonym] includes a multicultural and ethnically diverse population of over 4,000 students in grades 9-12 in southwestern Miami-Dade County School district. About 80% of the students are of Hispanic origin, 12% are white, 5% are black, and 2% are from asian or pacific islander heritage; 45% of the students come from families that qualify for free and reduced lunch; 8% are classified as English Language Learners. At Cesar Chavez, several models of support for students with disabilities are offered: consultation and collaboration with special educators, in-class support through support facilitators and special educators who co-teach with regular educators, and specialized instructional support in resource or self-contained special classes. Faculty and administration have systematically increased the percentages of inclusion of students with disabilities from 32.7% in March 2004 to 40% in November 2004.

The four co-teachers who were observed and interviewed taught various levels of science classes. A brief summary of their characteristics is shown in Table 2.

<Insert Table 2 About Here>

Types of Students with Disabilities

Co-teachers were asked to describe the students in their classrooms. Primarily, students with mild-to-moderate disabilities were included in co-taught classes: students with learning disabilities, students with other health impairments (such as Attention

Deficit Hyperactivity Disorder), and students with emotional handicaps, and at one high school, students with autism were included in co-taught science classes.

Validating Survey Responses

From the classroom observations and interviews, the researchers derived common themes and differences in order to surface any discrepancies between survey responses and actual practice. The researchers searched for teacher responses related to flexibility and collaboration, the two most highly rated items on both surveys.

Evidence of flexibility. One special education co-teacher said, “*What co-teaching means to me is the ability to be flexible when the lesson needs to be adjusted. I have learned so much, in fact, the students often see me taking notes.*” Furthermore, when asked to describe the teaching strategies that co-teachers use, responses across all secondary interviewees included “ESL strategies,” hands-on activities, guided notes, graphic organizers, cooperative learning groups, real life experience, and web based learning.

Another example of flexibility shows up in the way teachers accommodated each other’s schedules in deciding what to teach. This is an important accommodation for special educators who also had responsibilities for teaching students in resource rooms for part of the day, or general educators who were away for a workshop. As another special educator stated:

We jump into one another’s lessons. We share the planning of the lessons. If I’m having a busy week because of testing (like this week has been IEP testing), my partner is aware of it and knows I have no other choice. And I’ll do the same. The majority of the time we do it together.

A third example of flexibility is the way that co-teachers often made room for teachers' preferences and strengths regarding teaching specific content. One high school teacher noted:

[When we first meet with our co-teachers at this high school] *we explained that he or she is a curriculum or content specialist and that the special educator is the strategy specialist. It's a matter of organizing, a matter of knowing the needs according to their disabilities, and individualized approach.*

Another high school special educator explained how she used her versatility, "*I call myself the 'rubber-band' because I really have to go into classrooms and formulate my teaching style to another's teaching style.*"

Evidence of collaboration. One of the science co-teacher teams that were interviewed described how they used a process to come to an agreement about how to teach a lesson that required the students to discuss ethical issues in genetic engineering. They listed their ideas, brainstormed the advantages and disadvantages of each, and arrived at an activity that could be implemented in the amount of time they had for the class session. As the general educator partner explained, "*I don't know that we disagree a lot! We might have two different ideas. We don't get much choice about what content to teach because of the scope and sequence.*"

Collaboration was also evident in the level of understanding for each other that the co-teachers developed over time. One general education co-teacher explained: "*Sometimes it's just non-verbal language. You get to know each other so well, you can pretty much read each other's mind after a while.*"

A special education co-teacher commented:

We DO learn from each other and when I notice that my partner is teaching something in a certain way, and I think I can do it too, then I've benefited. At different times, I'm leading the lesson and at other times my partner is leading the activity at that moment. We do plan together; we meet with the other biology teachers; so I think all of that is part of being a co-teacher."

A general education co-teacher illustrated how this collaboration has carried over to the students.

"Yes! I guess we've really set it up for our students to be co-teachers with us. Now they are preparing to teach about their special projects so that everyone in the class will know what they've discovered. They are actually doing what they have seen us co-teachers do...for example, making sure to have some hands-on activity, some visuals like a power point slide, and so on."

Impact on Students with Disabilities. A general education co-teacher captured the impact that co-teaching has had on her students when she shared:

I'm co-teaching with an ESE teacher who wants her students with autism to experience social integration. What I see is that both sets of students are benefiting. For example, the students with autism are actually learning some science that they wouldn't ordinarily learn! And their peers are having their original beliefs about autism changed dramatically. They no

longer expect what they thought would be ‘retarded’ behavior and are often surprised at what the students with autism contribute to class.”

A conversation between a general and special educator reveal both of their perspectives about the impact on students:

[Co-Teacher #1] *We’ve seen such growth for the students. For example, one of the ESE students was really shy about coming in to the inclusion class. He would stand outside the door looking in during the first few days of class. Now he just comes in and starts working.*

[Co-Teacher #2] *I want to add that what I’ve seen is how the inclusion and co-teaching has benefited all the students. We have so many low-level learners. They seem to enjoy and acquire so much more with the hands-on activities, the attention they can get from each of us, and what I think of as ‘double teaching.’ If I’m teaching something a certain way, my co-teacher can explain it and show it in a different way and connect with the kids that I didn’t reach.*

[Co-Teacher #1] *We’ve asked the students how they feel about having 2 teachers. They report they like it. When the parents were given an option, no parents refused to have their student attend the co-taught class!*

Summary

In summary, the interviews seemed to corroborate the most highly rated items on flexibility and collaboration in the survey ratings. Similar to Keefe and Moore (2004), teachers in this study reported positive student outcomes from co-teaching as well as

diverse responses about the outcomes for teachers. The teachers were most concerned about the student outcomes.

Results of the California Study

An in-depth study of an urban city school district can offer insights into both the process and the structures of secondary school reform on behalf of youth with disabilities when the professional staff had received training and support for gaining new skills and knowledge. The San Diego City Schools (SDCS), the second largest district in California and the seventh largest in the United States, includes a diverse population of about 138,000 students. Liston and Thousand (2004) reported the preliminary analysis of a longitudinal study of President High School (a pseudonym) in the San Diego City High Schools which serves a multicultural, multi-lingual population with a high percentage of youth whose families qualify for free and reduced lunch. Educators at President High School [a pseudonym] were interviewed because they had participated in Project Co-Teach (Thousand, Glynn, & Liston, 2004) so as to facilitate their collaboration in co-teaching students with disabilities in the general education classrooms. This comprehensive personnel development project included a needs assessment from general and special educators, the subsequent design and implementation of instructional modules, and systematic follow-up support for practicing co-teachers that resulted in effective partnerships. Educators acquired knowledge and skills to implement many of the exemplary practices described in this article: how to differentiate curriculum and instruction, how to develop agreed-upon goals when co-teaching, how to use heterogeneous cooperative learning groups, how to include students in peer-mediated instruction, and so on.

To gain a better understanding of how secondary educators facilitated inclusive education, Liston (2004) conducted individual interviews over a three week period with 10 general educators and 10 special educators working in co-teaching relationships in a large, urban, southern California multi-cultural and multi-lingual comprehensive high school. These educators were interviewed because of their participation in a university-district partnership to promote co-teaching as a way to promote inclusive practice as well as comply with IDEIA and NCLB requirements for access to the core curriculum and access to highly qualified teachers (Liston & Thousand, 2004). Interviewees were asked to honestly respond to a series of structured interview questions regarding their successful inclusive practices, observed student and teacher outcomes, and needed steps for improvement. Interview transcripts analyzed to identify patterns and regularities, with emerging words used to create categorical themes (Bogdan & Biklen, 1998). Six “best practice” themes emerged from the interviews: 1) administrative support, 2) ongoing professional development, 3) collaboration, 4) communication, 5) instructional responsiveness, and 6) expanded authentic assessment approaches.

Evidence of Instructional Responsiveness

Listen to the voices of the high school co-teachers as captured in these representative responses to the interviews. Instructional responsiveness to the individual learning needs of all students can occur, as one general educator reported, through *“hands-on experiences where students are engaged in helping one another, teaching one another, and sharing their talents.* She further commented *“this far surpasses the outcomes when a student is assigned a one-on-one aide.”* Another general educator remarked that, as an inclusive educator, he needed to think *“more deeply about how to*

engage all students, and give students ample opportunities to receive multi-modality instruction.” All interviewees expressed that they experienced an *“increased sensitivity to the emotional, academic, and physical needs of the students”* and that this led to *“increased opportunities for students to succeed.”*

Differentiated Instruction and Assessment

Co-teachers utilized principles of differentiated instruction to try new arrangements in the presentation of curricular content. One special educator emphasized that students enjoyed multiple educators in the classroom. *“It breaks up the presentation style, and the monotony that can happen when just one educator presents for the entire period.”* Another remarked, *“When all students are included, the stigma of being in special education is removed. Quite often, peers do not know who is in special education, and who is not.”*

Differentiating assessment methods led to new insights about what students actually could do. The teachers used more authentic assessments in the general education classroom. *“The general educators are looking at the whole child rather than one set of test results. They seem to see the big picture.”* One special educator described a project-based assessment where students had the choice of presenting to the entire class, a small group, or (because of shyness) to the teacher alone. Reporting on the academic success of co-taught students, a general educator shared, *“With alternative assessments, students with disabilities are showing that they can keep up with the academic expectations. No, they may not be getting A’s, but they are passing, and they are doing their own work. As they do better and better, they become more confident, and empowered to keep up academically.”*

Impact on Competencies for General and Special Educator
Teacher Preparation in California

When local university teacher educators engaged in a dialog with personnel from San Diego City Schools on the legal implications of IDEIA and NCLB, the focus was on the impact on special education teacher education programs. Traditionally, special education candidates who participated in the District's special education intern programs could only demonstrate instructional competencies when teaching students in segregated special education classes or by providing remedial-based small group instruction. New legal requirements mandated shifting the instructional delivery methods from pull-out and separate instruction to push-in and inclusive instruction. This required a review of the current competencies required by the California Standards of the Teaching Profession (CSTP), the California Teaching Performance Expectations (TPE), and university established Level One Preliminary Special Education Teaching Competencies.

<Insert Table 3 About Here>

Given the outcomes of Project Co-Teach which assessed the instructional needs of co-teachers to include differentiated instruction, cooperative learning groups, peer-mediated instruction, role rotation, collaborative planning, and so on, Liston and Thousand (2005) developed a matrix that integrated the various certification competencies with co-teacher interactions and classroom behaviors. With this alignment in place, teacher preparation coursework and ongoing professional development opportunities can be re-designed and District staff can adapt their coaching and supervisory expectations.

Conclusions from the California and Florida Studies

In the study conducted by Cramer and Nevin (2005), only one elementary general educator and one secondary special educator reported they had received training in co-teaching in their university teacher preparation programs while all co-teachers reported they had received in-service training and planning time to implement co-teaching. Liston's high school co-teachers had participated in a systematic inservice training co-taught by school district and university personnel. Thousand, Villa, and Nevin (*in press*) conducted a review of the extant research on collaborative teaching. This research confirms that there is less power in co-teaching without training in selecting and planning for implementing the various approaches to co-teaching. In the study conducted by Cramer and Nevin (2005), only one elementary general educator and one secondary special educator reported they had received training in co-teaching in their university teacher preparation programs while all co-teachers reported they had received in-service training and planning time to implement co-teaching. In contrast, Magiera et al. (2005) reported a descriptive study of 10 high school co-teachers who were observed every 5 minutes for entire class period describing the instructional roles of the teachers. Although other forms of co-teaching were observed, team teaching was observed in 9 of the 49 observations of the co-taught classes where both teachers were active instructors. Interview results indicated that none of the co-teachers had received training in co-teaching.

Analysis of Standards for Teachers

Teacher education standards are not silent about this set of knowledge and skills. Standards from National Board for Professional Teacher Standards (2005), the Council

for Exceptional Children (2005), and Interstate New Teacher Assessment and Support Consortium (2005) were analyzed for content with respect to inclusive education and collaboration or co-teaching. As shown in Table 4, there seems to be substantial agreement among these diverse boards with respect to knowledge and skills for differentiating instruction, working collaboratively with others, and supporting the education of diverse learners. For example, INTASC Standard 3 requires teachers to understand how learners differ; Standard 4 requires teachers to use a variety of instructional strategies; and Standard 10 asks teachers to collaborate and communicate with parents, families, colleagues to support student learning.

<Insert Table 4 About Here>

In comparison, CEC standards for entry into the profession includes competencies related to knowledge and skills in understanding characteristics of learners with different cognitive, physical, cultural, social and emotional needs; competencies related to knowledge and skills for instructional content and practice; and competencies related to communication and collaborative partnerships. These are strongly correlated with NBPTS standards 1 (teachers adjust their practice according to individual differences in their students), 3 (teachers show multiple methods to engage student learning and to enable students to reach goals), and 5 (teachers collaboratively work with others and coordinate services).

Analysis of Teacher Education Programs

Overall, teacher educators have not been silent about the need for more specific preparation in these areas. Historically teacher preparation programs are separated into regular and special education programs and thus have not provided pre-service teachers

with the intensive training and experience they need to be effective collaborators in planning, teaching, and evaluating instruction. Although many universities have collaborative experiences for general educators and special educators, there are few empirical studies (Blanton, Blanton, & Cross, 1994; Patriarcha & Lamb, 1990). Villa, Thousand and Chapple (2000) delineated how faculty at five universities “retooled their professional preparation programs to better ready graduates for meeting the challenges of inclusive 21st century education ... to create new and innovative training initiatives that model faculty and community collaboration and depart from traditional ways of inducting educators into their profession” (p. 536).

Some researchers have studied various aspects of this challenge. Carey (1997) reported the development of a partnership between Northern Arizona University and a local school district that enables pre-service teachers to practice innovative strategies for facilitating inclusion of students with disabilities into general classrooms. Strategies such as cooperative learning, collaborative teaming, peer tutoring, student empowerment, and creative problem solving were helpful in facilitating this initiative. Keefe, Rossi, de Valenzuela, and Howarth (2000) describe the Dual License Teacher Preparation Program at the University of New Mexico and the national and state context within which it was developed and continues to evolve. Graduates of this program are eligible for licensure in general education (K-8) and special education (K-12). The unfortunate reality is that, for the co-teachers who participated in the California and Florida studies, the majority reported no pre-service preparation for the work demands of their current teaching positions.

Implications

Several implications are derived from the analysis of the two studies, the analysis of the standards from professional organizations, and the analysis of teacher preparation programs. First, all general and special educators should be alerted to the fact that when they engage in collaborative planning and teaching, they are demonstrating at least 3 sets of standards (either INTASC, CEC, or NPBST). Second, for special education teachers seeking their credentials, they can demonstrate mastery of the general education standards without having a separate general education experience. This helps to prepare them for the demands of the special educator's role to provide special education services to students in general education classrooms due to NCLB and IDEIA mandates that require access to the general education curriculum. Third, when matching the co-teaching skills to standards, both relationship-building skills and instructional strategies must be emphasized to ensure effective co-teacher interactions, thus thinking about teaching in another way. There is not only a focus on instructional strategies but a whole set of planning and collaborative skills as well as approaches to co-teaching that must be connected to the standards, and, by implication, to the credentialing programs for each state.

Fourth, reflective teaching practice must expand from self-reflection to team reflection as well as emphasize attention to student performance and integrity of instruction. Fifth, because they are expected to evaluate the co-teachers, school administrators need to be taught about collaborative planning, co-teaching approaches, and effective instructional practices. This would allow administrators to encourage effective co-teachers to mentor others. Sixth, school districts as well as university teacher

preparation programs must have methods of continuous monitoring or student progress at both the micro and macro levels. Finally, school districts and universities can establish awards and honors to show the value of co-teaching. In addition to teacher of the year awards, there can also be an award for the collaborative team of the year.

Conclusions

We hope that this analysis will inspire teacher education faculty to restructure teacher preparation programs at the pre-service and in-service levels so as to better prepare both general and special educators to work effectively with each other and with the diverse students they encounter in the classroom today and in future years. For example, teacher educators might consider setting up co-teaching exercises and/or internships whereby general education and special education pre-service teachers have the opportunity to co-teach together from the beginning of their preparation so that prospective teachers could more readily and preparedly meet the standards laid out by three major professional organizations.

References

- Arguelles, M., Hughes, M., & Schumm, J. (2000). Co-teaching: A different approach to co-teaching. *Principal*, 79(4), 48, 50-51.
- Blanton, L. Blanton, W., & Cross, D. (1994). An exploratory study of how general education and special education teachers think and make instructional decisions about students with special needs. *Teacher Education and Special Education*, 17, 62-73.
- Bogdan, R.C., & Biklen, S.C. (1998). *Qualitative research in education* (3rd ed.). Boston, MA: Allyn and Bacon.
- Carey, L. K. (1997). Inclusion training for pre-service teachers-From theory to best classroom practice. *B.C. Journal of Special Education*, 21(2), 52-58.
- Compton, M., Stratton, A., Maier, A., Meyers, C., Scott, H., & Tomlinson, T. 1998). It takes two: co-teaching for deaf and heard of hearing students in rural schools. In *Coming together: Preparing for rural special education in the 21st century*. Conference Proceedings of the American Council on rural Special Education, Charleston, SC. (ED 417901).
- Council for Exceptional Children (2005). *CEC International Standards for Entry into Professional Practice*. Arlington, VA: Author. Retrieved April 19, 2005: <http://www.cec.sped.org/ps/ps-entry.html>
- Cramer, E., & Nevin, A. (2005, April). *A mixed methodology analysis of co-teacher assessments: Preliminary results*. Paper presented at American Educational Research Association, Montreal, Canada.

- Cramer, E. D., & Nevin, A. I. (*in press*). A mixed methodology analysis of co-teacher assessments: Implications for teacher education. *Teacher Education and Special Education*.
- Dieker, L. (1998). Rationale for co-teaching. *Social Studies Review*, 37(2), 62-65.
- Individuals with Disabilities Education Improvement Act (IDEA) of 2004, 20 United States Congress 1412[a] [5]), Pub. L. No. 108-466.
- Interstate New Teacher Assessment and Support Consortium (INTASC) (2005). *Interstate New Teacher Assessment and Support Consortium Standards*. Washington, DC: Council of Chief State Schools Officers. Retrieved 4/18/05 from World Wide Web: http://www.ccsso.org/projects/Interstate_New_Teacher_Assessment_and_Support_Consortium/
- Keefe, E. B., & Moore, V. (2004). The challenge of co-teaching in inclusive classrooms at the high school level: What the teachers told us. *American Secondary Education*, 32(3), 77-88.
- Keefe, E. B., Rossi, P. J., de Valenzuela, J. S., & Howarth, S. (2000). Reconceptualizing teacher preparation for inclusive classrooms: A description of the dual license program at the University of New Mexico. *Journal of the Association for Persons with Severe Handicaps*, 25(2), 72-82.
- Liston, A. (2004). A qualitative study of secondary co-teachers. Orange, CA: Argosy University.
- Liston, A., & Thousand, J. (2005). Analysis of co-teacher competencies in relation to state standards for certification. San Marcos, CA: Cal State San Marcos.

- Luckner, J. (1999). An examination of two co-teaching classrooms. *American Annals of the Deaf*, 144(1), 24-34.
- Magiera, K., Smith, C., Zigmond, N., & Gabauer, K. (2005). Benefits of co-teaching in secondary mathematics classes. *TEACHing Exceptional Children*, 37(3), 20-24.
- Mahoney, M. (1997). Small victories in an inclusive classroom. *Educational Leadership*, 54(7), 59-62.
- Miller, A., Valasky, W., & Molloy, P. (1998). Learning together: The evolution of an inclusive class. *Active Learner: A Foxfire Journal for Teachers*, 3(2), 14-16.
- National Board Professional Teaching Standards (NBPTS) (2005). *Performance-based teaching assessments*. Princeton, NJ: Educational Testing Services. Retrieved April 19, 2005: <http://www.ets.org/nbpts/>
- Noonan, M., McCormick, L., & Heck, R.. (2003).The Co-Teacher Relationship Scale: Applications for Professional Development. *Education and Training in Developmental Disabilities*, 38, 113-20.
- Patriarcha, L., & Lamb, M. (1990). Preparing secondary special education teachers to be collaborative decision makers and reflective practitioners: A promising practicum model. *Teacher Education and Special Education*, 12, 228-232.
- Pugach, M., & Johnson, L. (1995). Unlocking expertise among classroom teachers through structured dialogue: Extending research on peer collaboration. *Exceptional Children*, 62, 101-110.

- Rice, D., & Zigmond, N (1999). Co-teaching in secondary schools: Teacher reports of developments in Australia and American classrooms. *Resources in Education*. (ERIC Document Reproduction Services No. ED432558)
- Salazar, L, & Nevin, A. (2005). Co-teachers in an urban multicultural school. *Florida Educational Leadership*, 5(2), 15-20.
- Schwab Learning. (2003). Collaboratively speaking. A study on effective ways to teach children with learning differences in the general education classroom. *The Special EDge*, 16(3). Also available online:
<http://www.schwablearning.org/articles.asp?g=4&r=693>
- Thousand, J., Villa, R., & Nevin, A. (*in press*). Collaborative teaching: A critique of the scientific evidence. In L. Florian (Ed.) *Handbook of special education research* (Chapter 31). London, England: Sage Publishing.
- Trent, S. (1998). False starts and other dilemmas of a secondary general education collaborative teacher: A case study. *Journal of Learning Disabilities*, 31, 503-513.
- Villa, R. A., Thousand, J. S., & Chapple, J. W. (2000). Preparing educators to implement inclusive practices. In R.A. Villa & J. S. Thousand, *Restructuring for caring and effective education: Piecing the puzzle together*, 2nd ed. (531-557). Baltimore: Paul H. Brookes.
- Villa, R., Thousand, J., & Nevin, A. (2004). *A guide to co-teaching: Practical tips for facilitating student learning*. Thousand Oaks, CA: Corwin Press.
- Villa, R. A., Thousand, J. S., Nevin, A. I., & Liston, A. (2005, Fall). Successful inclusion practices in middle and secondary schools. *American Secondary Education Journal*, 33(3), 33-50.

Zigmond, N. (2004, Sept.) Research findings paint dark picture of co-teaching. *Inclusive Education Programs*, 11(9), 1-3, 6.

Table 1: Florida Secondary Teachers' 5 Highest Rated Items on 2 Surveys

VILLA ET AL. (2004) Co-Teacher Actions*			NOONAN ET AL (2003) Co-Teacher Beliefs**		
We share responsibility for deciding how to teach.	MEAN 3.83	SD 1.47	Flexibility in dealing with unforeseen events	MEAN 4.16	SD .76
We have fun with the standards and each other when we co-teach.	3.84	1.30	Parent involvement	4.21	.92
We are flexible and make changes as needed during a lesson.	3.94	1.43	Ability to be supportive to colleagues and other staff	4.21	.79
We share ideas, information, and materials.	3.95	1.27	Interest in learning new things	4.26	.81
We are each viewed by our students as their teacher.	4.05	1.31	Dedication to teaching	4.31	.82
* Rating scale ranged from 1 for “less than once a week” to 5 for “daily” actions of co-teachers			**Rating scale ranged from 1 “not at all similar” to 5 “very similar”		

Table 2: Florida Secondary Co-Teacher Interviewees

Co-Teaching Team 1	Co-Teaching Team 2
<p>Code 0501: Female, Hispanic, bilingual (Spanish/English), 25-35 years old, Bachelor’s Degree, 0-5 years teaching experience, 1 year experience in co-teaching, 1 year teaching with current co-teacher.</p> <p>Current teaching assignment: Exceptional Student Education teacher of students with learning disabilities and science classes; certified in biology.</p>	<p>Code 0503: Female, Hispanic, bilingual (Spanish/English), 25-35 year old, Master’s Degree, 5-10 years teaching experience, 1 year experience in co-teaching, 1 year teaching with current co-teacher.</p> <p>Current teaching assignment: Exceptional Student Education teacher for students with autism.</p>
<p>Code 0502: Female, Caucasian, 25-35 year old, Bachelor’s Degree, 6-10 years teaching experience, 1 year of experience in co-teaching, 1 year teaching with current co-teacher.</p> <p>Current teaching assignment: General education science teacher, biology & earth sciences, and assistant activities coach.</p>	<p>Code 0504: Female, Hispanic, bilingual (Spanish/English), 36-45 year old, Master’s Degree, more than 21 years teaching experience, 10 years experience in co-teaching, 1 year teaching with current co-teacher.</p> <p>Current teaching assignment: General education science teacher, agri-science; other certifications include varying exceptionalities, formerly taught students with learning disabilities, emotional handicaps, and gifted & talented designations.</p>

Table 3. Matrix of Co-Teacher Competencies

California Standards of the Teaching Profession	University Teacher Performance Expectations	Special Educator Co-Teacher Instructional Strategies	Special Educator Competencies
Engaging and Supporting all Students in Learning	<p>4: Making Content Accessible 5: Student Engagement 6A&B: Developing Appropriate Teaching Practices 6D: Special Education 7: Teaching English Learners</p>	<ul style="list-style-type: none"> • Providing the anticipatory set. • Pre-teaching vocabulary. • Previewing concepts. • Expanding on a new concept, role-playing, modeling new concept. • Reviewing directions using an alternative modality. • Promotes active learning.(decrease student passivity) • Appropriate pacing of instruction. • Incorporates instructional technology. • Use of peer supports. • Use of transitional signals and directives between activities. 	<ul style="list-style-type: none"> • Ensuring that students have access to the core curriculum. • Ensuring that students’ goals and objectives respond to students’ needs. • Ensuring that instructional strategies respond to students’ learning styles. • Promoting self-advocacy, self-determination, and individual accountability. • Ensuring appropriate transitional supports.
Creating and Maintaining effective Environments for Student Learning	<p>10: Instructional Time 11: Social Environment</p>	<ul style="list-style-type: none"> • Development of a trusting and professional teacher relationship with students. • Development of a classroom system that establishes and maintains standards for student behavior. • Use of cooperative structures to promote social development, and group responsibility. • Use of heterogeneous grouping to promote fairness and respect and promote social justice. • Use of proximity teaching, voice modulation, facial expressions, and planned ignoring for classroom management. 	<ul style="list-style-type: none"> • Uses interventions that are positive, and respectful of all students. • Designs and implements positive behavior support plans as needed.
Understanding & Organizing Subject Matter for Student Learning	<p>1A: Specific Pedagogical Skills for Subject Matter Instruction 4: Making Content Accessible</p>	<ul style="list-style-type: none"> • Collaboratively planning units of instruction and daily lesson plans according to state framework and standards. • Collaborative planning with respect to modalities of strength, multiple intelligences, and universal design. • Planning for learning centers, stations, and implementing cooperative group structures. • Planning instruction to the entire class, half the class, or small groups. • Planning the pacing of instruction to include a variety of activities within one class period. • Developing and modifying instructional materials. 	<ul style="list-style-type: none"> • Integrates academic and social competencies into lesson planning. • Scaffolds instructional activities to respond to students’ needs.
Planning Instruction & Designing Learning Experiences for all	<p>8: Learning about Students 9: Instructional Planning</p>	<ul style="list-style-type: none"> • Providing instruction to the entire class, half the class, or small groups. • Providing learning centers, stations, and implementing heterogeneous cooperative group structures. • Scribing essential concepts of lecture or 	<ul style="list-style-type: none"> • Provides paraprofessional with appropriate training. • Provides students the appropriate level of instructional supports and opportunities for increased independence.

Students		<p>assignment directives on a whiteboard, overhead, or LCD/computer.</p> <ul style="list-style-type: none"> • Offering 1:1 support. • Implementing a system for peer supports. • Offering tutoring and enrichment activities at an alternative time for all students. • Circulating the classroom to check for student comprehension of a lecture or assignment. • Re-teaching of key concepts. • Joint monitoring of guided and independent practice 	<ul style="list-style-type: none"> • Provides students with opportunities for transfer and generalization.
Assessing Student Learning	<p>2: Monitoring Student Learning During Instruction 3: Interpretation and Use of Assessments</p>	<ul style="list-style-type: none"> • Allowing for assessment with accommodations such as proctoring a small group and reading assessment questions for formative and summative assessments. • Promoting authentic assessments to include oral responses and project-based assessments, and portfolios • Collaborative reviewing classroom assignments, student homework, and periodic assessments. 	<ul style="list-style-type: none"> • Collects data pertaining to students' goals and objectives. • Analyzes students' performances and revises goals and objectives or instruction as needed.
Developing as a Professional Educator	<p>12: Professional, Legal, and Ethical Obligations 13: Professional Growth</p>	<ul style="list-style-type: none"> • Developing and maintaining a parent, teacher, student communication system. • Collaborating and reflecting with co-teacher to improve instructional practices. • Collaborating special education staff on students' performance. • Attending special education professional development activities. 	<ul style="list-style-type: none"> • Practices student confidentiality. • Attends professional growth activities. • Maintains professional relationships with school staff. • Practices self-assessment • Accepting critical feedback.

Table 4. :Analysis of Standards from Professional Organizations

INTASC*	CEC**	NBPST***
Standard 3 requires teachers to understand <i>how learners differ</i>	Knowledge and skills in <i>understanding characteristics of learners with different cognitive, physical, cultural, social and emotional needs;</i>	Teachers <i>adjust their practice according to individual differences</i> in their students,
Standard 4 requires teachers to <i>use a variety of instructional strategies</i>	Competencies related to <i>knowledge and skills for instructional content and practice;</i>	Teachers show <i>multiple methods to engage student learning and to enable students to reach goals,</i>
Standard 10 asks teachers to <i>collaborate and communicate</i> with parents, families, colleagues to support student learning	Competencies related to <i>communication and collaborative</i> partnerships	Teachers <i>collaboratively work with others</i> and coordinate services

*http://www.ccsso.org/projects/Interstate_New_Teacher_Assessment_and_Support_Consortium/

**<http://www.cec.sped.org/ps/ps-entry.html>

***<http://www.ets.org/nbpts>