

Research Summary

Citation:
Brownell, M.T., Yeager, E.A., Sindelar, P.T., vanHover, S., & Riley, T. (2004). Teacher Learning Cohorts: A Vehicle for Supporting Beginning Teachers. <i>Teacher Education and Special Education</i> , 27 (2), 174-189.
Description of Participants:
The participants of this study were three beginning general education teachers in two urban schools in the Duval County School District in Jacksonville, Florida. Teachers were part of a Teaching Learning Cohort (TLC). Two teachers in the study taught at Hilton Elementary, a cluster school for students with disabilities that were served primarily in self contained environments. The school's population was mostly African American and eligible for free or reduced lunch. One of the teachers taught at Hidden Valley Elementary, a Regular Education Initiative school that served the majority of its students in a regular education classroom. Hidden Valley's population was 55% non-White, with 59% eligible for free and reduced lunch. The first teacher involved in the study is described as a first year teacher of first grade students. She is a woman of Middle Eastern heritage who completed a bachelor's degree in elementary education at a school noted for its attention to preparing teachers to create learning communities for students with disabilities. The second teacher in the study is described as a first year teacher of second grade students. She had previous teaching experience, as well as coursework in special education. Her bachelor's degree is in Elementary Education, with a background in language diverse populations and special education. The third teacher was in her second year of teaching third grade. She has a bachelor's degree in Elementary Education, and was working on a Master's degree in the same discipline. All three women were in their mid to late twenties during the time of the study.
Description of Methodology:
Case study methodology based on the work of Yin (1994) and Miles and Huberman (1994) was used in this study. Methods of data gathering included semi-structured interviews, formal and informal observations, notes from TLC meetings, and notes taken from informal conversations, with the two main sources used being classroom observations and semi-structured interviews. Triangulation, peer debriefing, and member checks were used as a way to ensure accuracy of the data collected. Formal observations for each teacher, which occurred one time, of classroom activity used the Pathwise diagnostic and instructional observation system. Pathwise is implemented through direct observation of the teacher, interviews with the teacher both before and after the observation, and review of written documentation produced by the teacher. The system evaluates teachers across four domains: organization of content knowledge for student learning, creating an environment conducive to student learning, teaching for student learning and professional attributes and actions of the teacher. Environment and teaching data was collected during the observations, while organization and professionalism data were obtained from teacher writings and documentation. 3 semi structured interviews were conducted individually with each teacher. All data collected was eventually analyzed using a coding system that was developed by the researchers and was systematically refined throughout the study. 72 codes were created and put into eight categories: school change, teacher attributes, non-inclusive views and practices, inclusive views and practices, collaborative practices, evidence of student change, and student concerns.
Summary of Findings:

The effectiveness that the TLC group had on teachers was found to be proportional to several attributes that teachers brought into the situation through their prior experiences. In particular, the confidence that the teachers displayed in working with urban children, their ability to plan effective instruction, and their capacity to manage the behavior issues of their students proved to lend direction as to whether teachers took on a leadership role in the group, or were identified as needing support from the group. Prior supports from internship and other classroom based experiences appeared to have the greatest effect on the teacher's confidence in working with urban students. Those teachers who exhibited the most confidence were found to have had positive mentored experiences with past veteran teachers who taught them effective strategies that equivocated to later successes in the classroom. Teacher ability to conceptualize instruction seemed to also benefit greatly from past experiences in classrooms guided by veteran teachers; surprisingly, college based teacher preparation did not always seem to line up with later classroom practices. Management of student behavior also seemed highly correlated to positive and meaningful interactions with veteran cooperative teachers during student teaching experiences. The two teachers with more of these positive experiences seemed to take on leadership roles in the group, while the third teacher who did not have these experiences seemed to seek them from the group. This would suggest that TLC's take on different roles depending on the background of the teachers worked with, and seem most effective with those who have had past successful classroom based experiences.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Billingsley, B. (2002). Beginning special Educators: Characteristics, qualifications, and experiences; (*University of Florida, Study of Personnel Needs in Special Education Summary Sheet*). Retrieved November 17, 2008, from <http://ferdig.coe.ufl.edu/spense/IHESummaryfinal.doc>.

Description of Article:

The purpose of this article is to describe certain qualities of special educators with three years or less of teaching experience. The article defines these qualities as characteristics, qualifications, work experiences, and career plans. As little is known about special educators who are new to the field, this article provides a valuable profile of these teachers, who are often times deemed to be at risk of leaving the teaching profession within three to five years of beginning their career.

Summary of Findings:

The characteristics of beginning special educators are interesting. Many beginning special educators do not work in urban districts, which may work to aggravate the fact that these beginning teachers do not feel equipped to work with students whose backgrounds and cultures differ from their own. More teachers need to be recruited from diverse backgrounds. Beginning special educators, despite many times not being fully certified or prepared for their jobs, put in long hours at school- sometimes as many as 55 hours per week. Certification test passing rates are questionable, with 25% of students having to take the exam more than once. Those teachers who perceive their initial teacher preparation programs to be exceptional or very good seem to enter schools with more efficacy and enthusiasm to perform the functions of their jobs, with those who feel that their programs were inadequate or those lacking a program (alternate certificate) experiencing lower amounts of efficacy. In particular, beginning teacher educators feel the most prepared to deal with appropriate and inappropriate classroom behaviors, communicate with parents, and monitor their students' progress in the classroom. Those issues that teachers are less likely to feel prepared to address in their early years of teaching include working with students who have emotional difficulties, suggesting that perhaps more teachers need to be recruited into programs that might better prepare them to work with these populations. Overall, giving teacher more pre-teaching experiences with students from diverse background would prove to be beneficial. Among the issues that tend to aggravate both beginning and experiences teachers alike, paperwork seems to be the most prevalent. Beginning teachers tend to feel isolated and somewhat detached from their peers and administrators. Sixty-five percent of teachers report having some sort of mentoring program available to them, but many teachers seem to benefit more from informal help from their peers. It would appear, then, that the support for these teachers needs to come from their peers and less from a formal process. Novice special educators are less likely to stay in the teaching field long term, but not always for identified difficulties such as paperwork, low pay, long hours, or the lack of a certificate...many younger beginning special education teachers site other job opportunities that are of interest as a factor in deciding to leave the teaching profession.

Effective Instructional Practice Criteria Level 1

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Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Billingsley, B. (2004). Special education teacher retention and attrition: A critical analysis of the literature. *The Journal of Special Education*, 38 (1), 39-56.

Description of Article:

This research synthesis describes the factors that lead to attrition among special educators new to the teaching profession. Factors are reported across four themes; findings from research are discussed relating to teacher characteristics (age, gender, race) and personal factors, qualifications (certification, academic ability, degrees earned, teacher preparation), work environments (salary, school climate, administrative support, supports from peers/colleagues, induction programs, professional development opportunities), and reactions to work (teacher roles and role problems, paperwork, changing roles of the special education teacher, stressors, and students and caseload issues). These issues affect the willingness and ability for individuals to remain in the teaching profession past the three to five year point. Implications for further research are also discussed.

Summary of Findings:

This article talks about three separate types of attrition, and the factors that influence and/or exacerbate each. Among the types of attrition discussed (transfer to general education, transfer to different position within special education, and exit from the profession entirely), exit attrition was thought to be the most severe due to its reduction effects on the teaching workforce. Among the teacher characteristics that were found to affect teacher attrition, age is one factor to which it was consistently linked, as younger special educators are more likely to leave the field than their older counterparts. This finding may be correlated due to the link between age and teaching experience. Levels of debt, high frustration, and family responsibilities are also listed as reasons younger professionals leave their teaching positions. Those individuals who perceive greater amounts of professional opportunities outside the classroom have also been found more likely to leave the teaching profession after only a few years. In the area of teacher qualifications, certification was found to have a huge effect on teacher exit attrition, while studies on academic preparation and exit attrition have yet to be fully explored. It is noteworthy and somewhat disturbing to mention that teachers with higher levels of knowledge (advanced degrees and tested ability) were also more likely to leave the special education teaching profession than those with lesser levels. Also, perceptions of effectiveness or efficacy have not been linked to attrition. For working environments, school climate was the variable that was most prevalent in the research as a possible link to exit attrition. In particular, the lack of administrative support when dealing with student behavioral issues, especially from the principal, was a significant factor in determining teachers' decisions to stay in the field or to leave it. This factor was even more prevalent in urban settings. The impacts experienced from lack of administrative support may also come from other involved factors such as role design, satisfaction with one's position, role confusions, and professional development. The article also mentioned paperwork, induction support, and role confusion to be among the top precursors leading to or preventing exit attrition. Lastly, among reactions to work, stress was a leading cause of teacher exit attrition. Higher levels of job satisfaction and commitment also were cited as leading to teachers remaining in the special education profession.

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Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
Boe, E.E., Cook, L.H., & Sutherland, R.J. (2008). Teacher turnover: examining exit attrition, teaching, area transfer, and school migration. <i>Exceptional Children</i> , 75(1), 7-31.
Overview of Article:
Despite differences in reported statistics concerning the number of special education teachers leaving the teaching profession, the purpose of this article was to discuss trends that occurred in the separate rates of teacher attrition, perceived trends in the combined rates of teacher turnover, the comparison of rates of attrition with number of years teaching experience and attrition rates in other occupations, and the main reasons for leaving the teaching profession. This data was gathered largely for special education teachers and general education teachers.
Description of Data and Methodology:
Teachers used in this study were defined as such due to their full time or part time assignment in regular or special education. Long term substitutes and those in public charter schools were included in this definition. Teachers were classified as either special education teachers (SET) or general education teachers (GET) based on their teaching assignment during the time of the study. This data was obtained from teacher questionnaires. The study examined attrition in the forms of (1) continuers versus leavers (those who stayed in teaching professions and those who left), (2) switchers versus remainers (those who switched into other areas of teaching such as elementary education and those who stayed in special education- within area switching was excluded from the classification of “switchers” versus “remainers”), and (3) movers versus stayers (those who stayed in a certain school and those who switched schools). 15 teachers in the sample were special education teachers, compared to 49 teachers in the sample who were general education teachers. National estimates of weighted numbers of teacher types, standard errors for the national estimates via statistical software, and logistic regression for significance of two predictors of each type of teacher turnover were methodologies used in the study. Aggregate teacher data were used to increase sample sizes for various topics. Rates of the three types of turnover were comparable because they were all calculated using the same method.
Summary of Findings:
The authors of the article argue that the turnover issues prevalent in most schools will continue, as the issues are largely dependent upon the organization, management, and the funding of schools themselves. Furthermore, the results of the study indicate that policy, working conditions, and increased pay will not severely impact attrition among educators, as only 25% of teachers were found to leave the field for reasons that would be influenced by these changes. Evidence from the study shows that attrition among teacher professionals is not out of line with statistics examined in other non-business occupations and that the best way to reduce attrition is to increase the supply of qualified special education teachers. The data shows that attrition is indeed higher during the first one to three years of the occupations, but that a certain amount of this attrition is reasonable and necessary as teachers assess their skill sets and their aptitude to perform the necessary functions of classroom teaching.

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Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
Brownell, M.T., Adams, A., Sindelar, P., & Waldron, N. (2006). Learning from collaboration: the role of teacher qualities. <i>Exceptional Children</i> , 72(2), 169-185.
Overview of Article and Description of Participants:
The purpose of this study was to determine the effects that a teacher's pedagogical practices, personal qualities, and beliefs had on the implementation of practices taught during professional development that aided in the effective teaching of students with disabilities. This study was part of a larger federally funded project that spanned three years. A total of eight teachers from two separate elementary schools volunteered and participated in the study. The first school served most of its mildly disabled population in inclusive settings; the second was a cluster school that served its cognitively and physically impaired population in mainly pullout settings. The eight participants, despite their commitment to professional development, varied in their ability to accept strategies learned during professional development, and were asked to participate directly for this reason. Teacher experience levels ranged from 2 to 22 years. Most of the teachers had degrees in elementary education; one teacher had a content area degree with a minor in elementary education.
Description of Methodology:
Qualitative case study methodology was used to examine the use of pedagogical practices, as well as teacher attitudes, beliefs, and qualities about the professional development. Formal classroom observations were among the methods used for collection of data. The data was collected through direct observations as well as examination of teacher documentation and formal interviews using Pathwise instrumentation. Data was also collected from each teacher using informal observations and semi-structured interviews. Researcher reflections and minutes from meetings were also used. All data collected was coded and sorted using one of several themes, such as "Understands how to structure instruction for struggling students". Data was triangulated and checked for trustworthiness.
Summary of Findings:
Teachers' tendency to use strategies learned in professional development did not seem to be highly correlated to their levels of experience, not the school that they taught at. For the purpose of identifying teacher use of professional development strategies, the teachers were classified as "high" (those who quickly implemented new practices into their classroom teaching), "moderate" (used practices but were more selective in the practices that they chose to use), or "low" (were not receptive to trying new strategies and did not use the new strategies effectively) adopters. High adopters were always interested in trying something new, and implemented the proposed new strategies quickly. Moreover, five specific characteristics were found to predict the extent to which the effects that a teacher's pedagogical practices, personal qualities, and beliefs had on the implementation of practices taught during professional development that aided in the effective teaching of students with disabilities. High adopters had considerable knowledge regarding the curriculum and pedagogy, effective management of student behavior, a belief that instruction should be student centered, were able to adapt instruction to meet the needs of the students, and were reflective practitioners. These qualities seemed to correlate with Pathwise scores, where those deemed as "high" adopters attained the highest scores for the group.

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Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
Brownell, M.T., Ross, D.D., Colon, E.P., & McCallum, C. (2005). Critical features of special education teacher preparation: a comparison with general educators. <i>The Journal of Special Education</i> , 38 (4), 242-252.
Overview of Article:
The purpose of this article was present a framework to analyze teacher education programs and then to use that framework to examine special education teacher preparation. Results from two large bodies of research examining effective components of general teacher education programs were examined for common program traits identified as effective practices in regular teacher education. These traits (strong program vision; strong amount of field experiences that were carefully put together and monitored; collaboration, reflection, and subject-specific pedagogical knowledge; focus on diversity and standards for quality teaching) were then used as a framework for examining the literature on special education teacher preparation programs.
Description of Data and/or Methodology:
Literature for the review was pulled from online data sources and had searches of five refereed journals. Of the 83 publications that were identified using various descriptors, 64 were used in the review. 44 programs that were reviewed were housed out of research institutions. 27 of the reviewed programs were federally funded (OSEP). Most of the programs were specific to special education, although a small amount of the programs produced dual certification for its graduates. All programs reviewed were either undergraduate or graduate (Master's) level programs.
Summary of Findings:
Characteristics that were identified as being effective program traits of special education teacher education programs were similar to those found in general education teacher preparation programs, with a few differences. <u>Both programs heavily emphasized the need for extensive field experiences that (1) tied to work being done in university education courses and (2) were closely monitored by university faculty.</u> This was not surprising, as other literature identifying traits of effective teachers, predictors of proactive teacher participants in professional development settings, readiness and effectiveness of teachers in working with diverse populations, and factors relating to retention of teachers all have identified early positive field experiences as essential. Additionally, <u>collaboration was identified by both general and special education teacher education programs as being an integral part of a successful student experience,</u> although definitions of "collaboration" varied across programs. In general, student-to-student and faculty-to-student collaboration were highlighted most often. <u>A focus on teaching diverse populations was also a commonality between programs,</u> although special education programs tended to identify that term more with varying disabilities in students than varying ethnicities. The authors emphasize both as equal parts of that definition. Both programs spoke about documenting the impact that their programs had on graduates. Special Education programs differed slightly in their beliefs of how learning is generated from a single set of knowledge (positivist) from the mixed or general education programs, which tended to take more of a constructivist view of learning. OSEP- funded programs were found to be more positivist and did not include as many co-teaching (collaboration) experiences as others. The authors note that research shows positive outcomes in both applications. Subject matter knowledge does not seem to be of high concern in special education at this time, due to the belief that more universal strategies and intervention ideas should be taught instead. However, this thought is changing, as

the authors point to this as a deficit in research. Three areas for further research were suggested: (1) a determination of valued outcomes of a teacher preparation program and how one might measure those outcomes, (2) how preparation programs make a difference in the student outcomes and teacher practice and how that might be assessed, (3) if the understanding and possession of content area knowledge influences classroom practice in special educators, and (4) the issue of federal funding in special education programs and how it may mitigate or change the student experiences in those programs.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
CEC (Council for Exceptional Children) (2000). <i>Bright futures for exceptional learners: introduction- an action agenda to achieve quality conditions for teaching and learning</i> . Reston, VA: Author.
Overview of Article:
This report was prepared to address the reasons why teachers in special education were experiencing hardships on the job, and how those hardships, along with other factors, led to attrition. With a discussion of the issues surrounding the hardships experienced by special education teachers in place, the report suggests an action plan to improve the conditions that many special education teachers work in, as well as revolutionize their preparation, professional development opportunities, their view of opportunities for advancement, and ultimately, their effectiveness to afford all students with disabilities an equitable and enriching classroom experience.
Description of Data and/or Methodology:
Data was collected over a time span of two years from various sources including interviews, online surveys and questionnaires, research literature, forums, and national databases. These means of data assembly were employed with educators, administration, and parents.
Summary of Findings:
Almost half of all special educators leave the field within their first five years of teaching, and veteran special education teachers are now leaving the field at a rate that is nearly two times that of general educators. This attrition can be traced to various factors that affect the day to day life of the special educator including paperwork and unclear job responsibilities that lead to a lack of focus on planning and increased student outcomes and a lack of support from administration and fellow teachers (isolation). Other factors influencing special educator teacher attrition include the inadequate preparation of pre-service special education teachers and paucity of professional development opportunities for existing teachers, along with disjointed state licensure systems with little consistency across state lines; the specialty of special educators to a specific age or type of disability exacerbates the certification issue. Solutions to these issues are offered and discussed.

Effective Instructional Practice Criteria Level 1

Yes	10. Practice is based on educational theory.
Yes	11. Practice can be supported with prior research.
Yes	12. Practice has a clear purpose.
Yes	13. Practice has an appropriate target population.
Yes	14. Practice has well-defined anticipated outcomes.
Yes	15. Implementation of the practice results in positive student outcomes.
Yes	16. Practice is replicable.
Yes	17. Practice has face validity.
Yes	18. Practice has social validity.

Research Summary

Citation:
McLesky, J. & Waldron, N.L. (2004). Three conceptions of teacher learning: exploring the relationship between knowledge and the practice of teaching. <i>Teacher Education and Special Education</i> , 27, 3-14.
Overview of Article:
This article discusses varying schools of thought regarding ways that teachers acquire the knowledge that they need to be effective teachers. The article begins with a review of commonly acknowledged research based practice and interventions in special education. Next, concerns regarding the transition from research to regular practice of identified effective methods in education are discussed. While several commonly held views pertaining to the question are discussed (the blaming of teachers, the blaming of researchers and the blaming of university preparation programs), the authors focus much of the article on the identification and discussion of differing views of teacher learning, from knowledge-for-practice, knowledge-in-practice, and knowledge-of-practice, and how these issues relate to the research-to-practice phenomenon.
Description of Data and/or Methodology:
The article aims to examine the problem of why researched-based strategies found highly effective in special education settings are not translating to classroom practice. The authors examine 3 scenarios, or perspectives, on teacher learning, and prior research conducted pertaining to each of those perspectives is compared and contrasted for their effectiveness on teacher's prolonged usage of the learned strategies.
Summary of Findings:
Many implications for researchers, teachers, university preparation programs, and other stakeholders are uncovered throughout the article. First, to promote the longevity of use of learned research based practices, the article argues that those responsible for training pre-service teachers should emphasis research in their programs; that is, pre-service teachers should know what research is and how to evaluate and use research to better student learning. Once teachers know and understand about research and its role in education and effective teaching strategies, they can better understand the need for proven interventions and the powerful role that they play in the classroom with students. The article also states that research-based interventions are better translated into practice if the intervention is simple, concrete, and specific. However, these are only the beginnings of what promotes long term use of learned research based strategies by teachers. <u>The issue is also largely influenced by the way in which the strategy is developed in professional development situations.</u> Currently, a "knowledge-for-practice", or positivist, ideology exists throughout much of the special educator community. This view holds that much of what is known to be effective practice in special education is part of a specific, formal knowledge base that is disseminated to teachers, who are simple end users of that knowledge. Here, the researcher is the expert; teachers are not creating anything new in terms of strategy; they are simply using what is given to them. Despite its popularity, this view of teacher learning does not translate to wide and prolonged usage of strategies taught in professional development. In previous studies, strategies that were provided by "outside experts" that were taught using the mentality that teachers simply needed to learn the strategy and then use it did not promote long term usage and acceptance of the strategy among teachers. Another view of teacher learning is "knowledge-in-practice" (constructivist). Teachers become not only users of strategies but also reflective creators of strategies, and become better through their own experience and

experimentation of the strategy. Here, the teachers are the experts of knowledge; the belief is that “teachers in a given school have the knowledge and skills to solve most problems that arise in classroom, but they need a method to share this information with others”. This use of this view in professional development settings speaks to mentoring, collaboration, inquiry in the classroom, and communities of teachers, and has been shown in prior research to aid in longer durations of strategy use in schools. The last view of teacher learning discussed is “knowledge-of-practice” (a blend of a pure positivist and a pure constructivist view). This view holds that teachers, schools, researchers, and communities construct what would be known as “effective practices” together. Here, “neither researchers nor teachers serve as ‘experts’, but rather, all involved are equal, fellow learners in the process”. In this model, many schools kept and improved upon changes made to curriculum over a number of years (at least two years).

Effective Instructional Practice Criteria Level 1

Yes	19. Practice is based on educational theory.
Yes	20. Practice can be supported with prior research.
Yes	21. Practice has a clear purpose.
Yes	22. Practice has an appropriate target population.
Yes	23. Practice has well-defined anticipated outcomes.
Yes	24. Implementation of the practice results in positive student outcomes.
Yes	25. Practice is replicable.
Yes	26. Practice has face validity.
Yes	27. Practice has social validity.

Research Summary

Citation:
Carr, S. C. & Evans, E.D. (2006). Helping beginning teachers remain in the profession: a successful induction program. <i>Teacher Education and Special Education</i> , 29 (2), 113-115.
Overview of Article:
This article describes a mentoring program for beginning teachers in which participants earn a specialized Master's degree in Exceptional Education, Elementary Education, or Reading.
Summary of Findings:
Teachers who enter the Master's/Induction program go through an interview process and must meet certain beginning criteria to be accepted. Called Teacher Scholars (TS), these teachers are contracted out into the schools by the university, and assume the class loads of the mentor (link) teachers (LA) that are to provide them support. Spanning a period of a year to a year and a half, the program prepares teachers using classroom experiences (supervised by a link teacher), coursework (course names of interest include "constructive classroom management", "humanistic approaches to behavior management", and "alternative assessment"- all taught by a special education faculty member), heavy amounts of collaboration between teacher, mentor, university faculty, and coordinators. Classes are delivered via non-traditional means (internet, summer mini sessions, Saturdays once a month, etc), and teachers are encouraged to attend professional developments, conferences, and observe experienced teachers.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
Otis-Wilborn, A., Winn, J., Griffin, C., & Kilgore, K. (2005). Beginning special educators' forays into general education. <i>Teacher Education and Special Education</i> , 28 (3), 143-152.
Description of Participants:
36 total participants with demographic background reflective of the general special educator population took part in the study. A majority of the participants taught in urban schools (44%), with other participants teaching in suburban and rural areas. A variety of special education settings were utilized in the schools, with one-eighth being in inclusive settings. The participants came from with (1) a Master's degree program where they obtained dual certification in special and regular education or (2) a certification program, where the students came in with limited or no background in education.
Methodology:
The purpose of this study was to examine the perceptions that beginning special educators had of their ability to implement legislation brought forth by IDEA 1997, namely their ability to increase their students' access to and participation in general education curriculum activity. Qualitative data was derived through a larger three year project. This qualitative data came from semi structured interviews conducted with teachers at the beginning and the end of their first year of teaching. The information from the interviews was then coded according to the two purposes of the study (student access to general education curriculum and participation in general education curriculum activity).
Summary of Findings:
Barriers were identified as far as "curriculum access", "involvement in general education", "role and responsibility issues", and "alternative experiences" by 29 of the teachers in at least one of these areas. In <u>curriculum access</u> , teachers complained of not being provided support from other teachers and moreover administrators to obtain the general education materials in which to base their instruction. Additionally, many of the teacher struggled to understand the content presented in general education courses. Some teachers felt overwhelmed by the amount of general education teachers that they were to keep in contact with, and complained that those teachers did not make an effort to maintain appropriate levels of contact with them regarding special education students, lesson planning, and other important information. This took place across all special education delivery settings. Barriers concerning <u>involvement in general education</u> included feeling isolated (location) from general educators and general education students, being shunned by general educators in the sense that they did not feel responsible for the special education students in their classrooms, and a low level of expectations for special education student by general education teachers. Lastly, general educator's neglect to get to know students with disabilities in their classrooms and role confusion among special educators provided the basis for "a clear need for a structure and process to establish and clarify roles and responsibilities throughout the school for students with disabilities. (role and responsibility issues). The implications of this study argue that "it is not sufficient to instill a 'philosophy' of inclusive education; teachers must have specific skills and strategies for implementation of change". The article summarizes by highlighting three key areas where special educator teacher preparation programs are failing to adequately prepare pre-service special educators: (1) content knowledge and pedagogy, (2) deriving accommodations from general education curriculum, and (3) teaching ways for teachers to clarify their role and collaborate with general educators.

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Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:
Zabel, R.H. & Zabel, M.K. (2001). Revisiting burnout among special education teachers: do age, experience, and preparation still matter? <i>Teacher Education and Special Education</i> , 24 (2), 128-139.
Description of Participants:
A total of 301 people took part in the study. These participants were all current special education teachers in Kansas (57% provisionally endorsed and 43% fully endorsed) and represented several different areas (classifications) within special education.
Methodology:
The purpose of this study was to replicate an earlier study from 20 years ago that examined factors that contribute to teacher burnout. The methods used to collect the data were in the form of questionnaires that were mailed out to potential participants. Return rates on the questionnaires were almost as high as those in the previous study (around 70%). The Maslach Burnout Inventory Educators Survey was also used to assess the level of burnout among the responders as regards their sense of “emotional exhaustion, depersonalization, and personal accomplishment”. The instrument uses comparison in regards to others level of burnout as a framework.
Summary of Findings:
It would appear from the results of this study that many special educators are now people who have a number of years of teaching experience. However, the link to experience in general education settings is lacking: “still, in both studies, nearly half of all special educators had no experience in regular education”. Teachers who reported having master’s degrees or experience in general education scored higher on their opinions of their own personal achievement. Accomplishment and achievement were also linked to teacher preparation and years of experience. <u>Stress management, mentoring, and collaborative experiences with peers have been cited in this article as practices evident in teacher preparation programs that confront the issue of burnout.</u> One of the biggest causes of burnout is paperwork and bureaucratic issues; the article suggests that policies should be put in place to combat this issue. The majoring of those currently in the profession lends to exacerbate the issue of teacher shortages in special education.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Campbell-Whatley, G. (2003). Recruiting and retaining of culturally and linguistically diverse groups in special education: Defining the problem. *Teacher Education and Special Education*, 26(4), 255-263.

Overview of Article/Description of Participants:

This author reports that today's school teachers are not representative of the diverse cultural and ethnic groups of students. As teacher salaries continue to decline, ethnically and culturally diverse teachers are leaving the profession in greater numbers. This article looks at the factors that contribute to the declining numbers of diverse special education numbers and how to entice individuals of diverse backgrounds to enter the profession. These factors include the number of individuals with diverse backgrounds is limited in higher education suggests that diverse students may feel alienated, they may not have the money to attend college, and competency and other licensure exams prevent diverse individuals from obtaining teaching licensure. Current professors from culturally and linguistically diverse backgrounds felt experience bias going through admission processes, recruiting and hiring process, and the tenure and promotion process. The author cites researchers that have found that culturally diverse students drop out of college because of the difficulty of surviving in a culturally different atmosphere. Other researchers have found that a supportive climate helps students to succeed as they feel they belong to their greater community. Undergraduate students receiving financial aid in their first year of college have a better chance at continuing their studies than students who lack funding. A 6.4 percent decline of teachers with diverse backgrounds was found in states that require certification tests. Because of the lack of diverse teachers in the special education field, students' cultural, social, emotional, and academic needs are for the most part not being met. Diverse teachers would act as role models to students, connecting and motivating students to succeed. Stipends, support services, and mentoring could all be solutions to increase diverse student populations. Teacher educators must be focused on how they can entice diverse populations to the profession. "Early groundwork" could include recruitment efforts through linkages in the community, school districts, and other post secondary institutions. There are currently programs in place that target specific populations to increase the number of teachers from diverse backgrounds into special education. Alternative assessment strategies are also being researched to provide varied measures to special populations.

Summary/ Findings:

The programs that have had success in recruiting and retaining diverse populations as teachers should be modeled in order to increase the number of ethnically and culturally diverse teachers.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Richards, H., Brown, A., & Forde, T. (2007). Addressing diversity in schools: Culturally responsive pedagogy. *Teaching Exceptional Children*, 39(3), 64-68.

Overview of Article/Description of Participants:

The authors discuss the importance of addressing the needs of the changing student body. They feel teachers must create a welcoming environment and use approaches that are culturally responsive. A culturally responsive pedagogy facilitates and supports students in a learner-centered context where students' strengths are identified and nurtured. Schools must reform the organization of the school, the school policies and procedures, and increase community involvement in order to make the institution more culturally responsive. In order to help teachers become more culturally responsive, teachers must first reflect on the biases they may hold. These biases could impact teachers working effectively with students and their families. The authors of this article discuss eight different activities for teachers to complete to become more culturally responsive. These activities include engaging in reflective thinking and writing, exploring personal and family histories, acknowledging membership in different groups, learning about the history and experiences of diverse groups, visiting students' families and communities, visiting or reading about successful teachers in diverse settings, developing an appreciation for diversity, and participating in reforming the institution. In order for instruction to become culturally responsive it must recognize and respect students' personal and cultural identities. Ten activities are described to create culturally responsive instruction and they include acknowledging students' differences as well as their commonalities, validating students' cultural identity in classroom practices and instructional materials, educating students about the diversity of the world around them, promoting equity and mutual respect among students, assessing students' ability and achievement validity, fostering a positive interrelationship among students, their families, the community, and school, motivating students to become active participants in their learning, encouraging students to think critically, challenging students to strive for excellence as defined by their potential, and assisting students in becoming socially and politically conscious.

Summary/ Findings:

By creating a culturally responsive pedagogy, teachers are addressing the needs of all students. This provides students with equal opportunity to achieve to the best of their abilities. Teachers have a responsibility to all students and fulfill this responsibility when they create instruction that is culturally responsive.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Tyler, N. & Smith, D. (2000). Welcome to the TESE special issue: Preparation of the culturally and linguistically diverse special educators. *Teacher Education and Special Education*, 23(4), 261-263.

Overview of Article/Description of Participants:

In the following articles, the efforts to diversify the special education teaching force are discussed. The programs are discussed in depth for the reader to get a better picture of what is being done at MIHEs.

Description of Data and/or Methodology:

Throughout this TESE issue, funded projects are discussed that were implemented at minority institutions of higher education (MIHEs). The Alliance 2000 Project; the Alliance Project; and Project SUCCESS were supported by federal funding to provide these MIHE enhanced preservice preparation programs and funded projects. The efforts of those to increase numbers of diverse educators have benefited from the reauthorization of the IDEA.

Summary/ Findings:

These researchers question whether the demographics of teachers will match the demographics of the changing student population in the coming years. Without intervention, these researchers feel that the differences between teachers and their students will continue to grow. Through federal efforts, the U.S. Department of Education's Office of Special Education Programs are making a difference. In the past, the federal government has stepped in to hinder the disparity between students with disabilities and their teachers. These researchers warn that if the federal government had not stepped in, any other efforts would have failed.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Citation:

Gay, G. (2001). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53 (2), 106-116.

Overview of Article/Description of Participants:

This article focuses on improving the success of ethnically diverse students through culturally responsive teaching. Five areas of this teaching technique includes developing a knowledge base, demonstrating caring and building learning communities, communication with ethnically diverse students, and responding to ethnic diversity in the diversity in the delivery of instruction. Culturally diverse teaching involves using ethnically diverse student's characteristics, experiences, and perspectives in order to help teach them more effectively. It has been shown that students learn more easily and thoroughly when the content relates to their experiences, is personally meaningful, and is a topic that student is highly interested in. Developing a cultural diversity knowledge base is the first area of concern when dealing with culturally responsive teaching. In order for teachers to be effective they need to have mastery of the information being taught and be knowledge about cultural diversity when working with ethnically diverse students. Teachers also need to be aware of the detailed factual information regarding specific groups of ethnicity. Cultural diversity should be present in every subject taught by using multicultural strategies as well as, adding this content to the curriculum. The next area of interest is designing a relevant curricula focusing on specific designs and instructional strategies. One example is formal plans that rely on the use of textbooks to help teach cultural diversity in the classroom. This example is not as good as it needs to be and teachers that are culturally responsive are able to determine the strengths and weaknesses of such designs and make changes to improve them. One way to make changes is to have teachers perform deep analyses of the textbooks and materials in order to revise them and make the necessary changes. Another plan example is symbolic curriculum which includes images, symbols, icons, mottoes, awards, and other artifacts. Culturally responsive teachers use this curriculum to help convey information, values, and actions about diversity. The last curriculum that is mentioned in the article in regards to culturally responsive teaching is the societal curriculum. This is the plan that focuses on the information and ideas portrayed in the media in which culturally responsive teaching involves analyses of how ethnic groups are presented and the effect they have on different groups. Demonstrating cultural caring and building a learning community is the next area of focus. Culturally responsive teachers create classroom environments that are compatible for ethnically diverse students through a lot of care and concern. They also are able to design a more communal learning environment that bridges the gap between different cultural work styles that can interfere with academic efforts and outcomes. Cross-cultural communications is the fourth element in culturally responsive teaching. Preparation programs teach how the communication styles of different ethnic groups reflect cultural values and shape learning behaviors and how to modify classroom interactions to better accommodate them. Skills used to accommodate help so they can communicate in different ways with different people in different settings for different purposes.

Summary/ Findings:

The previous were merely suggestions of the knowledge and skills needed to prepare teachers to work more effectively with students who are not part of the U.S ethnic, racial, and cultural mainstream. Teacher preparation programs must be as culturally responsive to ethnic diversity as K-12 classroom instruction.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Citation:

Artiles, A.J., Harry, B., Reschley, D.J. & Chinn, P.C. (2002). Over-identification of students of color in special education: A critical overview. *Multicultural Perspectives*, 4(1), 3-10.

Overview of Article/Description of Participants:

This article discusses how students of color are overrepresented in special education programs. Many problems contribute to this issue that is discussed throughout the article. Each of these problems interconnects with each other to help contribute to the extent of the problem. The first issue includes socioeconomic factors such as poverty. Poverty can contribute to special education placement directly or indirectly, due to its association with lower academic achievement. Specifically, African Americans have a higher chance of being placed into these programs in low-poverty school areas. A second issue contributing to this overrepresentation is structural and instructional factors including funding, resources, and the overall quality of schooling. Schools are responsible for educating children and children in poor neighborhoods are more likely to be enrolled in poor schools. Funding policies and teacher qualities in these schools are the main contributor to the low achievement rate. School size, climate and achievement are another issue that is associated with the structural and instructional factors. The smaller the school size the more likely teachers will have stronger collective responsibility for student learning. Schools with a larger capacity have more conflicting political demands as well as, more constraints on resources needed. These issues can contribute to the overrepresentation in special education programs. The next issue involves personnel qualifications, student demographics, and instructional problems. The highest poverty schools are more likely to have inexperienced and uncertified teachers. These poverty schools tend to be primarily ethnic minority students with research indicating that these students are being taught by less qualified personnel and a lower quality of instruction that causes the academic achievement itself to be low. Student demographics report that schools with high minority enrollment have a lower amount of special education students, unlike schools that are predominantly white that place a very high percent of the minority population into special education. Cultural discontinuity in referral and placement practices is the next problem relating to overrepresentation. Special education placement may be affected when cultural backgrounds between students and teachers do not match. Most of the referrals to special education programs are most commonly done by these teachers. Schools that have a large number of White teachers tend to have higher rate of minority enrollment in special education programs, while the amount of White student enrollment is unaffected. The last issued addressed falls into the category of assessment. Throughout the special education process the area of assessment has been controversial. The assessment process is greatly influence by unofficial and undocumented practices, while lacking to consider any information pertaining to the atmosphere and practices obtained in the classrooms of referring teachers. Many children were referred from poor instruction and classroom management classrooms where it is impossible to know if the student' s difficulties could have been helped through a more effective environment.

Summary/ Findings:

Ways to address this problem include more and better research that is comprehensive, interdisciplinary, and should represent analyses of placement figures. Two areas should be taken into consideration when addressing this topic such as structural antecedents and mediating forces and activities associated with the special education process. Structural antecedent and mediating forces include the idea that because the poverty rate is higher among minorities this is why there is a minority overrepresentation. There is a great need to study the politics of education placement in different socioeconomic areas. Difference is also a factor that should be considered and how schools respond to different people. Future research focuses on the following questions relating to differences; What are the assumptions about difference that inform decisions to place students in special education, What functions are served by the maintenance of a rigid demarcation between general and special education, When is overrepresentation a problem, What are the consequences of overrepresentation, and What is the function of special education in an increasingly diverse society? Lastly, when it comes to biases educators need to be able to recognize them and deal with them in an appropriate manner. The other area of interest is the contexts and activities linked to the special education process. Literature for solutions is continuing to grow, two specific areas are commented on; personnel preparation and pre referrals. These two areas are the least developed in the overrepresentation literature. Personnel preparation focuses on keeping teachers and school psychology programs prepared in the areas of diversity and multicultural education. In regards to pre referral interventions, it is the responsibility of educators to draw attention to the problems of assessment biases, keeping teachers and programs prepared, and continue to work on the goals of special education in an increasingly diverse society.

Effective Instructional Practice Criteria Level 1

Yes	1. Practice is based on educational theory.
Yes	2. Practice can be supported with prior research.
Yes	3. Practice has a clear purpose.
Yes	4. Practice has an appropriate target population.
Yes	5. Practice has well-defined anticipated outcomes.
Yes	6. Implementation of the practice results in positive student outcomes.
Yes	7. Practice is replicable.
Yes	8. Practice has face validity.
Yes	9. Practice has social validity.

Research Summary

Citation:

Bondy, E. & Brunell, M.T. (2004). Getting beyond the research to practice gap: researching against the grain. *Teacher Education and Special Education*, 27, 47-56.

Overview of Article:

The authors report on three major schools of thought regarding researchers and their views of teacher roles in professional development. Reports from various cited research articles are summarized, and argue that the reported research to practice gap in special education and other educational methodologies may stem from a disconnect between researchers thoughts on how teacher acquire and form knowledge for their jobs and the reality of that situation. Implications for retention of learned practices and meeting the goals of IDEA are discussed.

Summary of Findings:

Despite considerable gains toward “moving teachers and classrooms to the center of their research”, researchers in special education continue to struggle with the problem of putting their research into practice in teacher classrooms. This, as argued by the authors, could be the result of teacher and researcher views on how teachers learn successful classroom practices. The view currently predominant throughout much of special education is that teachers are passive in the acquisition and formulation of classroom practice. Sometimes referred to as “knowledge for practice”, this view holds that teachers are simply taught how to perform best practices in their classrooms that have been identified by outside researchers. Another view teacher learning is referred to as “knowledge in practice”, which holds that teachers acquire knowledge through mentoring and learning through a master teacher. Here, learning leans more towards collaboration, where teachers learn from the mentoring of master teachers. Although very different from learning for practice, this practice still holds that most novice teachers acquire practices from the skills and expertise of another party; this third party mentor is assumed to have acquired their knowledge over time through a sort of “artistry”. The third type of teaching is called “research of practice”. This thought process views learning as a highly collaborative process involving researchers, novice teachers, and master teachers performing inquiry into their classroom practice, reflecting on what works and what did not, and then adjusting classroom practices according to what was learned. Here, everyone is a learner, and “best practices” are consistently reviewed, reformulated, and revisited as classroom experiences warrant. Regardless of the view taken by researchers as they attempt to put research into practice, problems could still arise if the underlying cultural aspects of teaching and learning are not uncovered and entwined within the learning process. Merging research and practice, referred to in this article as “researching against the grain”, most closely follows the “research of practice” thought process, and “requires that we examine our relationships with one another and, in doing so, our knowledge and our effectiveness, thereby education all who participate”. The authors conclude by suggesting that issues in special education such as inclusion could largely benefit from researchers and professional developers adopting a more collaborative approach to professional development.

Effective Instructional Practice Criteria Level 1

Yes	10. Practice is based on educational theory.
Yes	11. Practice can be supported with prior research.
Yes	12. Practice has a clear purpose.
Yes	13. Practice has an appropriate target population.
Yes	14. Practice has well-defined anticipated outcomes.
Yes	15. Implementation of the practice results in positive student outcomes.
Yes	16. Practice is replicable.
Yes	17. Practice has face validity.
Yes	18. Practice has social validity.

Research Summary

Citation:
Klingner, J.K., Ahwee, S., Pilonieta, P., & Menendez, R. (2003). Barriers and facilitators in scaling up research-based practice. <i>Exceptional Children</i> , 69 (4), 411-429.
Description of Participants:
In an effort to implement four research based strategies across six elementary school sites, this study involved the participation of three resource, 21 general education, and five special education teachers. All but two of these pre-kindergarten through five grade teachers had special education students in their classrooms as well as at risk students.
Description of Data and/or Methodology:
The purpose of this study was to attempt to implement four research based practices found in previous studies to promote student growth. Researchers began this paper by acknowledging several attempts by previous studies and researchers to implement long-term professional development of research based methodologies in various school environments. In particular, this study aimed at “scaling up” professional development of “partner reading”, “collaborative strategic reading”, “making words”, and “phonological awareness” strategies across the six schools. Teachers were asked to select a practice (or practices) that they felt would best fit their needs in the classroom and implement it. Follow up support was provided for the strategies by research assistants who came to the classroom once per week. Data was collected through individual interviews (pre training and post training); teacher logs, and classroom observations.
Summary/ Findings:

Although the study claims to have provided support to teachers through problem solving through challenges and collaboration, it was evident through the reading that the researchers held a predominant “research for practice” view of professional development. Researchers acknowledged the importance of collaboration and teachers seeing usefulness in the practices taught, but the actuality of the professional development is that was largely similar to those conducted in the past that focused on teaching a particular practice, providing some sort of modeling of practices, and then seeing if the practice would be implemented long term. Views of the teachers as equal collaborators and knowledge creators were not evident in the reading. Nonetheless, nine teachers were identified as “high implementers”, nine teachers were identified as “moderate implementers”, and 11 teachers were identified as “low implementers” of research based practices taught during professional development. High implementers seemed to be the ones who changed the practices learned during professional development the least, while moderate implementers seemed to make the most changes to strategies learned. Additionally, results showed several reasons that teachers selected to implement certain practices, barriers to implementing those practices, as well as teacher identified facilitators to selected practices. Barriers to practices identified by the teachers included a lack of time to implement the strategies, off-task students, and lack of administrative support, although these thoughts varied among high, moderate, and low implementers of the strategies. Facilitators for strategy use included the student’s attitude toward the strategy (if the students enjoyed the strategy, that was named a facilitator), support from administration, and if the students learned well from the strategy. Not surprisingly, teachers chose strategies that best suited their existing curriculum and instructional needs. Although researchers were concerned with the amount that teachers adapted strategies to suit their own classroom needs (this was shown to affect student outcomes in previous studies), it should be questioned how bad this phenomenon really is for professional development and long term use of what was taught. Other studies have discussed the need for researchers to adapt what they teach and how they teach to participant’s culture, informal ideas about teaching, instructional backgrounds and classroom needs.

Effective Instructional Practice Criteria Level 1

Yes	10. Practice is based on educational theory.
Yes	11. Practice can be supported with prior research.
Yes	12. Practice has a clear purpose.
Yes	13. Practice has an appropriate target population.
Yes	14. Practice has well-defined anticipated outcomes.
Yes	15. Implementation of the practice results in positive student outcomes.
Yes	16. Practice is replicable.
Yes	17. Practice has face validity.
Yes	18. Practice has social validity.

Research Summary

Citation:
Billingsley, B.S. (2004). The working conditions and induction support of early career special educators. <i>Exceptional Children</i> , 70 (3), 333-347.
Description of Participants:
Participants were chosen from a larger sample collected for SPeNCE. Participants were specifically selected due to their lack of teaching experience (less than five years) and their appointment (prekindergarten through secondary teaching assignments). Of the 1,153 teachers in the sample, the average amount of teaching experience was around 3 years. Most of the teachers were female, in their early thirties, and fully certified in special education. Over half of the teachers worked in suburban areas and did not relocate for their teaching positions. Teacher taught anywhere from 15 to 23 students in their classrooms.
Methodology:
The purpose of this study was to provide researchers with a “description of the characteristics of a national sample of beginning special educators and their perceptions of working conditions and induction support”. Since the data used was collected by SPeNCE, the methodologies described herein are ones that were employed by SPeNCE as part of their larger study. A two-phase sample was used, and surveys served as the instrumentation to collect the data. Two sources were surveyed for information: local special education administrators and service providers; surveys were administered by telephone and by computer. Chi-square analysis was used to analyze patterns in the data, and data was weighted to control for non responders. ANOVAs and t-tests were also performed on the data using WasVat (a statistics computer program).
Summary of Findings:
Most respondents indicated that they were happy with their school assignment and climate, with teachers who planned to retire from the system (stay in for the “long haul”) the happiest with school climate. However, teachers indicated that materials and supplies that enabled them to adequately perform their jobs was lacking. Reports also indicate that teachers felt somewhat disconnected from others in their schools, and many did not feel supported by their administrators. Caseloads and paperwork were cited as issues that teachers had that made their jobs somewhat unmanageable. Most teachers agreed that informal support from fellow teachers and lead teachers made them feel more supported than formal mentoring or new teacher meetings. Those teachers who felt the most level of support were the ones that reported that they felt most comfortable dealing with difficult students. Because of these factors and issues related to attrition, researchers have cited early induction support and encouraging teacher learning and growth as imperative to heading off attrition rates in special education.

Effective Instructional Practice Criteria Level 1

Yes	19. Practice is based on educational theory.
Yes	20. Practice can be supported with prior research.
Yes	21. Practice has a clear purpose.
Yes	22. Practice has an appropriate target population.
Yes	23. Practice has well-defined anticipated outcomes.
Yes	24. Implementation of the practice results in positive student outcomes.
Yes	25. Practice is replicable.
Yes	26. Practice has face validity.
Yes	27. Practice has social validity.

Research Summary

Citation:

Brownell, M.T., Sindelar, P.T., Bishop, A.G., Langley, L.K., & Seo, S. (2002). Special education teacher supply and teacher quality: the problems, the solutions. *Focus on Exceptional Children*, 35 (2), 1-16.

Overview of Article/:

This article aims to describe the supply issues that affect the shortage of special education teachers. Policy that attempts to simultaneously solve the issues of quantity and quality of special education teacher supply is analyzed, and attrition concerns relating to beginning special educators is discussed. Programs that have aided in the retention of beginning special educators are reviewed in regards to their role in the supply of special education teachers as well as the attrition issues plaguing the field.

Summary/ Findings:

The national policies highlighted in this article include *No Child Left Behind (NCLB)* and the *National Commission on Teaching and America's Future (NCTAF)*. Both programs are discussed in the context of their influence and relevance to special education and the supply issues. NCLB aims to lessen the teacher shortage issue through its claim that it “eliminates barriers and raises standards for teaching”, while the NCTAF emphasizes “cognitive, social, and cultural foundations” gained primarily through mentoring, technology, and on-going professional development. Both policies are similar in their concerns for the shortage of teachers in special (and general) education. Shortage issues related to special education shortages include the evaporation of the reserve of experienced teachers who return to special education after a numbers of years and the general lack of new teachers and high attrition rates. “Age, experience and certification status” all contribute the attrition issues in special education, as well as working conditions. Teacher’s salaries, relationships with administrators, changing demographic base of students, and relationships with colleagues also affect teacher turnover. Recruitment ideas are also discussed in this article. In particular, internet advertising, monetary incentives and signing bonuses, but these efforts have not enjoyed any statistically based proof that they increase recruitment or retention of teachers. A program in Connecticut was referenced several times throughout the article as being an exemplary example of a program that has “completely eradicated teacher shortages”. This program did much to rectify issues that have been cited in this article and other research as agitators in retention and attrition issues, such as not hiring uncertified teachers, instituting a three part certification program that infuses mentoring, professional development, and induction into its layers, and the development of teachers in leadership roles as regards instruction. Alternative certification issues, such as training paraprofessionals, former armed service veterans, and career changers, were also discussed.

Effective Instructional Practice Criteria Level 1

Yes	10. Practice is based on educational theory.
Yes	11. Practice can be supported with prior research.
Yes	12. Practice has a clear purpose.
Yes	13. Practice has an appropriate target population.
Yes	14. Practice has well-defined anticipated outcomes.
Yes	15. Implementation of the practice results in positive student outcomes.
Yes	16. Practice is replicable.
Yes	17. Practice has face validity.
Yes	18. Practice has social validity.

Research Summary

Citation:

Ingersoll, R. & Kralik, J.M. (2004). The impact of mentoring on teacher retention: what the research says. Retrieved November 17, 2008, from <http://www.ecs.org/clearinghouse/50/36/5036.htm>.

Overview of Article/Study:

This article/study aimed to review relevant existing literature concerning the effects on retention of new teachers as a result of an induction or mentoring program. Around 500 studies and articles were identified for review; of these, ten were chosen for review based on three criteria used for selection purposes (attempts of the study to quantify mentoring effects on retention, evaluation of mentoring by analyzing participant outcomes, and the use of a control group for comparison purposes). Information pertaining to the ten included studies is presented, along with implications for teacher induction and mentoring efforts and future research issues.

Summary/ Findings:

Ten studies were reviewed by the authors, and a central theme throughout all information discussed was that, despite differences in implementation and mentor/mentee participants, induction and mentoring efforts do have a positive effect on the retention of beginning educators, although slight in some studies reviewed. In many studies reviewed, those who received some sort of mentoring experience tended to rate their first year of teaching as more positive than those who did not have similar experiences. One study found that mentoring tended to have a more positive effect on those who had not had previous teaching experience than those who had some sort of prior experience. Many of the studies emphasized the effects of “effective? Mentoring programs over those that were not as effective. Several factors related to effective mentoring were uncovered by the studies: (1) Having a mentor in the same field as the mentee; (2) Common planning time with other teachers; (3) Collaboration with other educators; (4) a formal induction program in addition to the mentor experience; and to a lesser extent (5) support from administration. The authors called for further research in these areas, but cautioned that the research should be done using a randomized, experimental design with a control group.

Effective Instructional Practice Criteria Level 1

Yes	19. Practice is based on educational theory.
Yes	20. Practice can be supported with prior research.
Yes	21. Practice has a clear purpose.
Yes	22. Practice has an appropriate target population.
Yes	23. Practice has well-defined anticipated outcomes.
Yes	24. Implementation of the practice results in positive student outcomes.
Yes	25. Practice is replicable.
Yes	26. Practice has face validity.
Yes	27. Practice has social validity.

Research Summary

Citation:
Cook, L.H., & Boe, E.E. (2007). National trends in the sources of supply of teachers in special and general education, <i>Teacher Education and Special Education</i> , 30 (4), 217-232.
Overview of Article/Study:
The purpose of this article is to provide a type of meta analysis to examine key issues that pertain to the issue of teacher shortages and supplies in the area of special education. The article also provides a comparison between teacher shortage and supply for regular and special educators. A literature review is provided at the beginning of the article to provide of framework to the purpose of the study. Issues outlined in the literature review include amount of vacancies currently experienced in special education, the “inadequacy” of the supply of special education teachers as well as the quality versus quantity debate in the supply of teachers, and the source of supply of teachers for special education. Conclusions and trends are discussed for the data.
Data/Methodology:
The authors used self reported teacher data from surveys for its source of information. This data came from a questionnaire that was conducted by the National Center for Education Statistics from the year 1999-2000. Longitudinal data was collected from the same source to obtain information on the “number of degree graduates with majors in teacher preparation programs”. The sample consisted of over 40,000 teachers.
Summary of Findings:
Special education teachers and general education teachers experienced a equal amount of continuity in the target year of the study. This also held true for the amount of first time teachers across both areas. Many teachers who act as a supply source in both general and special education came from what is known as the “reserve pool”. There are concerns listed that this supply is dwindling. The information from the surveys provide information that there continues to be a shortage in supply for newly trained special educators, and there is also evidence from the surveys that the number of qualified graduates is decreasing.

Effective Instructional Practice Criteria Level 1

Yes	28. Practice is based on educational theory.
Yes	29. Practice can be supported with prior research.
Yes	30. Practice has a clear purpose.
Yes	31. Practice has an appropriate target population.
Yes	32. Practice has well-defined anticipated outcomes.
Yes	33. Implementation of the practice results in positive student outcomes.
Yes	34. Practice is replicable.
Yes	35. Practice has face validity.
Yes	36. Practice has social validity.

Research Summary

Citation:

O'Shea, D.J., Hammitte, D., Mainzer, R. & Crutchfield, M.D. (2000). From teacher preparation to continuing professional development. *Teacher Education and Special Education*, 23(2), 71-77.

Overview of Article:

Modern special educators are expected to take on increasingly complex roles in their work, as students being referred for special education services grow in number, and populations grow more diverse and experience more difficulties in their family lives and communities. The purpose of this article is to inform readers of recent "standards and assessment" efforts as regards to assessment and standards for special educators. Policy efforts to improve standards and qualifications for special educators are discussed and reviewed, and past research is included at the conclusion of the article.

Summary of Findings:

The council for Exceptional Children (CEC) efforts for increasing content area knowledge and effectiveness in the classroom. It holds that special educators need a gambit of qualities and skills in order to be effective in the classroom, including knowledge of children and how to teach them social skills, knowledge of meaningful assessment and instruction, and collaborative partnerships and communication. To meet these ends, the CEC seeks strategic partnerships with other educational agencies, such as the National Council for Accreditation of Teacher Education. With these partnerships, "standards for accomplished practice for an 'exceptional needs specialist' are designed so that accomplished teachers demonstrate what they know and are able to do in providing exemplary support for students in a broad range of settings and roles." The CEC also seeks partnerships with state government agencies and certification agencies to ensure that special educators seeking employment across state lines will not find difficulties or barriers to find jobs due to certification issues. With teacher preparation programs, the CEC aims to alter the preparation of special educators by insisting that special educators need hard preparation in content areas and other areas of general education, field experiences, technology applications, and collaborative issues, as well as proposing standards of success for paraprofessionals in special education. Reviews of articles, research and manuscripts are summarized at the end of the article that provide a supportive framework for the ideas expressed above.

Effective Instructional Practice Criteria Level 1

Yes	37. Practice is based on educational theory.
Yes	38. Practice can be supported with prior research.
Yes	39. Practice has a clear purpose.
Yes	40. Practice has an appropriate target population.
Yes	41. Practice has well-defined anticipated outcomes.
Yes	42. Implementation of the practice results in positive student outcomes.
Yes	43. Practice is replicable.
Yes	44. Practice has face validity.
Yes	45. Practice has social validity.

Research Summary

Citation:

Griffin, C.C., Winn, J.A., Otis-Wilborn, A., & Kilgore, K.L. (2002). New teacher induction in special education. Gainesville, FL: University of Florida, Center for Studies in Special Education.

Overview of Article:

(From www.monarchcenter.org) “A research brief from the Center on Personnel Studies in Special Education, this paper describes the critical concerns confronting special education regarding new teacher induction and various definitions of induction. A literature review includes: (a) the school and classroom conditions under which new special education teachers must perform and (b) induction for special education teachers. Given what we have learned about new teacher induction in special education, the paper draws implications from our findings and identifies needs for additional research.”

Summary of Findings:

Major points from the article include:

- Characteristics of successful induction programs include “supportive school culture/collective responsibility”, “opportunities for interactions between new/experiences teachers”, “degrees of professional growth and responsibilities”, “explicit intentions”, “diversified content”, “mentoring”, “fiscal and political support”, and “minimized evaluation”.
- Conditions affecting the working conditions of teachers working with special education populations include “role ambiguity”, lack of resources, lack of time, no or little support from administration, no or little collaboration, dealing with difficult students and unreasonably heavy caseloads, no continuing support or meaningful professional development, paperwork and administrative issues (tied to role ambiguity), and insufficient preparation.
- Mentors provide huge benefit to special educators at the beginning of their careers, and benefits to mentors are equally as beneficial.
- Mentors should not be evaluative of mentees, should have jobs similar to those that they are mentoring, and have frequent interaction with mentees.
- Retention has been linked to better attitude and higher retention of new teachers in general and special education, although its long term effects on retention are not fully understood.

Effective Instructional Practice Criteria Level 1

Yes	46. Practice is based on educational theory.
Yes	47. Practice can be supported with prior research.
Yes	48. Practice has a clear purpose.
Yes	49. Practice has an appropriate target population.
Yes	50. Practice has well-defined anticipated outcomes.
Yes	51. Implementation of the practice results in positive student outcomes.
Yes	52. Practice is replicable.
Yes	53. Practice has face validity.
Yes	54. Practice has social validity.

Research Summary

Citation:

Darling-Hammond, L. & Sykes, G. (2003). Wanted: a national teacher supply policy for education: the right way to meet the “highly qualified” teacher challenge; *Education and Policy Archives Analysis*, 11 (33). Retrieved November 17, 2008, from <http://epaa.asu.edu/apaa/v11n33/>.

Overview of Article:

(From www.monarchcenter.org) “The authors state that No Child Left Behind provides a standard for equitable access to teacher quality that is reasonable and feasible. However, it requires a new view of the teacher labor market and development of a national teacher supply policy based on medical manpower efforts which deploy physicians to high-need communities and reduce shortages in specific medical fields.” Various research and existing examples of programs and policies that address the teacher supply issue are examined.

Summary of Findings:

Major points from the article include:

- High quality teachers in classrooms have a direct impact on student achievement and classroom success. Standards should not be lowered to ease the issue of teacher shortages and retention.
- Policy change is necessary to achieve the demands for “highly qualified teachers” in today’s classrooms. Retention is a larger problem than attraction, especially among new (beginning) teachers.
- State and national agencies must work together to achieve this change. National policy should be put in place to aid in teacher supply.
- Policy changes at the state level should perhaps model already in place successful programs that currently attract qualified teachers to high need districts.
- Policy makers should look to the medical community’s example of drilling down on shortages in specific medical areas.
- State governments need support from federal governments to decrease the supply problem among educators, working with high need schools, and decreasing attrition in schools. The creation of a national labor market” could also aid in putting down barriers to teacher mobility and the issue of teacher rehire across state lines.
- Creating universal teacher certification exams, interstate agreements, and “pension portability” are ways that federal supply policy can aid in retention issues.

Effective Instructional Practice Criteria Level 1

Yes	55. Practice is based on educational theory.
Yes	56. Practice can be supported with prior research.
Yes	57. Practice has a clear purpose.
Yes	58. Practice has an appropriate target population.
Yes	59. Practice has well-defined anticipated outcomes.
Yes	60. Implementation of the practice results in positive student outcomes.
Yes	61. Practice is replicable.
Yes	62. Practice has face validity.
Yes	63. Practice has social validity.

Research Summary

Citation:

Blanton, L.M. & Pugnach, M.C. (2007). *Collaborative programs in general and special teacher education: an action guide for higher education and state policy makers*, Washington, D.C. Council of Chief State School Officers.

Overview of Article:

The authors present an action plan for those looking to reformulate their existing special and general education teacher preparation programs into a collaborative venture that seeks to fuse the two programs together into one cohesive program that trains teachers in both content and special education pedagogy. Self assessment checklists for policymakers and teacher educators/universities are included, and various examples of the three identified levels of collaboration between general and special education teacher education programs are discussed.

Summary of Findings:

Major points from the article include:

- While defined by the author, different titles given to teacher education programs that attempt to describe the extent to which general education and special education are presented as a cohesive program are sometimes ambiguous and do not present an accurate picture as to the true nature of the collaboration efforts between teacher education programs.
- Discrete approaches in teacher education represent the “status quo” among preparation programs and involve the least amount of collaboration. They are characterized by lack of coordination and collaboration efforts between general and special education faculty as well as faculty from the arts and sciences. Dual licensure is difficult to obtain for graduates of these programs, and graduates find a gap between what they were trained to do in college and what they are expected to do on the job as regards collaboration.
- While their implementation may appear different given the institution, integrated approaches are defined by the authors as ones in which “general and special education faculty engage in intentional and coordinated program-level efforts to accomplish a significant degree of curricular overlap”. They are characterized by an effort by both schools of pedagogy to build content knowledge among students, to design courses and programs (and evaluate them) with all faculty from all parts of general and special education, coordinated portfolio and field experiences for students, and the option for graduates to obtain a general or special education license (if students elect both licenses, than the special education license is added to the general education license).
- A merged approach to teacher education prepares teachers with a single curriculum, where courses are completely merged with one another, as are all field experiences. Characteristics, while not exactly alike, are similar to those of the integrated program, with the exception that the merged program graduates obtain two certifications and can be hired as either a general or a special educator upon graduation. Students from this program are licenses to help students with mild to moderate disabilities.
- Depth of knowledge is an issue when considering which program approach to employ. The authors seem to favor the integrated program, where in its use it is proposed that students could obtain a 5 year degree to obtain the needed content knowledge for general and special education. Under this approach, students could also obtain a four year degree in general education (with special education principles weaved into content and methods

classes), and then obtain a position in a special education classroom while obtain a master's degree and the special education license. This would help to ease shortage issues feared exacerbated by the integrated or merged programs.

- Self assessment among policy makers, teacher educators, and university personnel are needed to ensure success of creating more collaborative program formulation.

Effective Instructional Practice Criteria Level 1

Yes	64. Practice is based on educational theory.
Yes	65. Practice can be supported with prior research.
Yes	66. Practice has a clear purpose.
Yes	67. Practice has an appropriate target population.
Yes	68. Practice has well-defined anticipated outcomes.

Yes	69. Implementation of the practice results in positive student outcomes.
Yes	70. Practice is replicable.
Yes	71. Practice has face validity.
Yes	72. Practice has social validity.

Research Summary

Citation:
Van Garderen, D. (2008). Middle school special education teachers' instructional practices for solving mathematical word problems: an exploratory study. <i>Teacher Education and Special Education</i> , 31 (2), 132-144.
Overview of Article/Study:
The purpose of this study was to investigate the instructional strategies that special educators use to teach problem solving to their students. Participants of the study were 89 special education teachers who returned the survey instrument used for the study. 39 of those teachers taught in inclusive settings, and 48 of the teachers taught in either resource room or other settings. Respondents were grouped as either "push in" or "pull out".
Data/Methodology:
The methodology used in this study was a survey instrument that measured teachers responses to five selected topics: general information, problem solving resources used during instruction, approach and focus, and amount of time spent on problem solving in the classroom. The survey results were tested using the statistical methods of Pearson's Correlation to test for a relationship between certain combination of responses to survey items and Mann Whitney U for similar purposes with non-normal data.
Summary of Findings:
The results of the survey show that, during problem solving exercises taught by special educators, there is not enough emphasis placed on the explanation and justification given by students who are working on the problems. Also, problem solving exercises given to students by special educators seem to be more practice based (related directly to the material that was just taught) versus rich, authentic problem solving situations. Time given for students to work on problem solving was also found to be inadequate- the only way that students of any sort get better at problem solving is by solving problems. In many cases, students were found to be working from below-grade level supplemental materials...this creates more of a problem in that these students will not have adequate exposure to the general curriculum. Implications from this study for future research involve investigating the benefits of providing special educators more experience and training in problem solving in mathematics and instruction, as well as more fully exploring the notion of "mathematical knowledge for teachers" as it relates to the preparation of special educators, especially as it relates to the number of math methods courses taken by special educators in their teaching preparation.

Effective Instructional Practice Criteria Level 1

Yes	73. Practice is based on educational theory.
Yes	74. Practice can be supported with prior research.
Yes	75. Practice has a clear purpose.
Yes	76. Practice has an appropriate target population.
Yes	77. Practice has well-defined anticipated outcomes.
Yes	78. Implementation of the practice results in positive student outcomes.
Yes	79. Practice is replicable.
Yes	80. Practice has face validity.
Yes	81. Practice has social validity.