

Alternative Teaching Certification in Special Education: Rationale, Concerns, and Recommendations

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Introduction

Perhaps one of the most controversial topics in the field of teacher education today is what constitutes an effective preservice program for preparing individuals to instruct students in the twenty-first century. Questions concerning the content of such teacher education programs as well as the most resourceful method of delivery of this content have arisen. A discussion of the merits of the approaches to teacher certification has also been compounded by issues relating to legal mandates such as the “highly qualified teacher” provision of the *No Child Left Behind Act* and job market realities, including teacher shortages in key instructional areas, one of which is special education, the focus of this article.

In response to such issues, alternative routes to teacher certification have appeared in various formats and levels of rigor. There has been much discussion regarding the benefits of these alternative approaches to certification in comparison with the more traditional route of university-sponsored programs of specific requirements and coursework.

Some of the advantages of alternative certification (AC) approaches reported in the professional literature include the ability to attract (a) a more diverse field of educators (Humphrey & Wechsler, 2007; Zeichner

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& Schulte, 2001), and (b) educators in areas of shortage such as science, mathematics (Honawar, 2007), and special education (Sindelar, Daunic, & Rennells, 2004), which assists in fulfilling crucial areas of personnel need (Burstein & Sears, 2008). Proponents of alternative routes to certification also emphasize the field-based preparation component in the programming (Humphrey & Wechsler) as well as the appeal of such approaches to more mature, capable individuals (Burstein & Sears) who are interested in teaching but not doing so through the more traditional methods for certification (Laczko-Kerr & Berliner, 2003).

In regard to the efficacy of these alternative approaches and/or the teachers certified through these programs, it appears that “research on the effects of teacher preparation programs with reduced requirements prior to teaching is scarce” (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2005, p. 2). Of the research that is available, the findings are often inconsistent (Humphrey & Wechsler, 2007) and inconclusive (Constantine et al., 2009). Some findings suggest that teachers certified through AC have effects on student performance comparable to those of traditionally trained teachers, while other studies tend to underscore the superiority of traditional teacher preparation options.

In their comparison of teachers prepared through alternative and traditional approaches, measured by instructional behaviors, student performance, and teacher perceptions, Miller, McKenna, and McKenna (1998) reported no major differentiation between the two groups. Goldhaber and Brewer (2000) found that students in mathematics who had teachers certified through an emergency route performed no more poorly than students whose teachers were credentialed through a more standard approach.

Nevertheless, special education research provides examples of the inadequacy of AC as compared to traditional teacher preparation. In a study of traditionally licensed teachers and teachers holding emergency provisional licenses, Nougaret, Scruggs, and Mastropieri (2005) found that, across all indicators on a teacher rating scale, those teachers licensed through a traditional route were assessed more favorably than were those with an emergency licensure. In their comparative research of traditional teacher preparation, district-university collaboratives, and add-on approaches at the district level, Sindelar et al. (2004) found that traditional preparation program completers surpassed other teachers on numerous criteria related to instruction. Further, in their study of personnel who teach students with emotional disturbance, Henderson, Klein, Gonzalez, and Bradley (2005) observed that these teachers were more liable to be certified through alternative programming than were other special education teachers and that they perceived themselves to

be less competent in instructional activities, other than those associated with the assessment of and attending to behavioral issues.

Whichever side of the argument one supports in regard to AC options for teacher certification, the reality is that AC appears to have evolved in response to unmet and far-reaching demands to educate our students. This is particularly evident in the area of preparing special education teachers. Providing qualified educators to instruct students with disabilities is a major area of need in our schools, and the traditional college degree approach to meeting this demand has not been adequate. While this author believes that traditional teacher education in special education has many advantages and should continue in its goal of preparing effective special educators, the reality is that AC in teaching exists and that many of these AC teachers are or will be in classrooms instructing students with special needs. The discussion seems to have moved beyond whether AC *should* be an option for preservice special educators to how to make AC a viable and valuable route for gaining expertise to successfully instruct students with disabilities.

The following discussion will provide a framework upon which to build a better understanding of the evolution and function of AC in special education. The discussion will focus on the rationale for the existence of AC in special education as well as various concerns about some components or lack thereof in some AC programs. The author also will present some recommendations for inclusion in a functional model of AC for special educators.

Rationale for Alternative Certification in Special Education

General Criticism of Traditional Teacher Certification Options

Teacher preparation involving the traditional approach of university-sponsored programs with specific requirements has been criticized by some as ineffectual in producing successful teachers as well as involving cumbersome, costly, and sometimes seemingly unnecessary coursework. In a 2001 report of the Abell Foundation, the requirements and process associated with teacher certification were discussed with serious reservations in regard to their effectiveness in producing a proficient teacher population (Walsh, 2001). In addition, the Secretary's Annual Report on Teacher Quality (2002) noted that:

universities may well have to transform their preparation and certification systems, by basing their programs on rigorous academic content, eliminating cumbersome requirements not based on scientific evidence, and doing more to attract highly qualified candidates from a variety of

fields. (U.S. Department of Education, Office of Postsecondary Education, 2002, p. viii)

This report further brought into question the importance of some of the elements of traditional teacher preparation related to methodology and pedagogy by noting that “solid verbal ability and content knowledge are what matters most” (p. 9).

Certainly, the other side of the debate has also been represented in the professional literature, particularly in regard to the importance of training in the areas of pedagogy and methodology, areas of focus in conventional teacher preparation programs. “Without methods courses to learn pedagogical content knowledge, novices are unlikely to provide quality instruction” (Laczko-Kerr & Berliner, 2003, p. 35). In their review of teacher education research, Wilson, Floden, and Ferrini-Mundy (2001) reported that some studies focusing on pedagogical aspects of teacher education validated the importance of these elements on instructional practice and student accomplishment. Wenglinsky (2002) discussed the importance of classroom practices and teacher characteristics in contributing to the learning of students. As Laczko-Kerr and Berliner (2002) have observed, the majority of the training in classroom procedures as well as pedagogical expertise and a rigorous student teaching experience are provided through teacher education programs. Other authors have noted various positive results from involvement in a conventional teacher education program, such as better teaching qualifications (Shepherd & Brown, 2003), stronger feelings of preparedness of teachers (Silvernail, as cited in Darling-Hammond, Chung, & Frelow, 2002), and extended participation in sequential coursework coupled with opportunities for practice (Baines, McDowell, & Foulk 2001).

Debate ensues and general criticism of conventional approaches to teacher preparation continues. Regardless of the side on which one’s particular orientation falls, there is sufficient discontent with aspects of traditional teacher education to the point of inviting alternative options for consideration and laying a foundation for further dialogue regarding the structure and function of an effective approach for preparing educators, in both general and special education.

Teacher Shortages in Special Education

An enduring shortage of teachers has beleaguered the field of special education (Billingsley, 2004; Billingsley & McLeskey, 2004; Brownell, Hirsch, & Seo, 2004; Connelly, Rosenberg, & Sindelar, 2004; deBettencourt & Howard, 2004; Katsiyannis, Zhang, & Conroy, 2003; McLeskey, Tyler, & Flippin, 2004; Sindelar, Bishop, Gill, Connelly, & Rosenberg, 2007). This shortage has been recognized as a national issue related

to the difficulty with employing adequate numbers of qualified special educators, decreases in personnel through attrition, special education teachers exiting the field or transferring to general education placements (Thornton, Peltier, & Medina, 2007), and the high number of teachers already working upon graduation from their training (McLeskey et al.).

In their study of the shortage of teachers with full certification, Boe and Cook (2006) reported on data that “strongly suggest a serious deficiency in the numbers of graduates produced by teacher preparation programs in special education” (p. 456). If conventional approaches to teacher education are unable to meet the supply and demand of required teachers, then alternative options to certification must be used (Cook & Boe, 2007). The teacher shortage has had a major influence on the growth of alternative routes to teaching certification in special education (Honawar, 2006; Rosenberg, Boyer, Sindelar, & Misra, 2007; Rosenberg & Sindelar, 2005).

The Issues of a Highly Qualified Teacher (HQT) and Diversity

An issue that has been seriously affected by the implementation of the *No Child Left Behind Act* (NCLB) and the special education-related law, *the Individuals with Disabilities Education Improvement Act* (IDEIA) of 2004 is the definition of a *highly qualified teacher* (HQT) in special education. According to NCLB, to be identified as HQT, the individual must have obtained a bachelor’s degree, full certification, and competency in the subject matter in which he or she will instruct (King-Sears, 2005). The additional legal requirements for HQT status, particularly in relation to subject area competency, may exacerbate an already acknowledged teacher shortage. Consequently, alternative routes to teacher certification are being considered as viable options to meeting the challenge of being an HQT (Billingsley & McLeskey, 2004; Rosenberg et al., 2007).

A second area of concern and need is the recruitment of special education teachers from diverse linguistic and cultural backgrounds (Brownell et al., 2004; Tyler, Yzquierdo, Lopez-Reyna, & Flippin, 2004). This “acute need for personnel from underrepresented groups” (Connelly et al., 2004, p. 122) is another contributor to the expansion of AC, as alternative options have been reported to achieve greater success than do conventional teacher education programs in recruiting both Hispanic and African American individuals to the teaching profession (Rosenberg et al., 2007). A report of the National Center for Education Information (as cited in Feistritz, 2005), *Profile of Alternate Route Teachers*, validates this assertion by noting that there is a higher incidence of minorities, males, and older individuals in the population of

teachers certified through alternative routes than those certified through more conventional approaches.

Issues of Concern and Recommendations Regarding AC in Special Education

Alternative routes to certification as well as the number of graduates of these types of programs have increased dramatically since the 1990s (Feistritzer, 2007). As Feistritzer noted in a 2007 examination of AC options, all states reported having some type of AC program, and approximately one-third of newly hired teachers had been involved with AC programming on a national basis. Special education, in particular, has experienced a surge in the number of AC options available to prospective teachers (Honawar, 2006). While there is clearly a rationale for the evolution and expansion of AC in special education, there are various factors of such a credentialing system that should be noted and addressed before accepting its viability and efficacy.

Variability in Composition and Structure of AC Programs

While it is clear that AC in special education has been determined to be an increasingly available option, what is unclear are the defining components of such a certification system. Generally, AC has been described as a way of generating alternatives to conventional teacher education options while providing certification to individuals attracted to the teaching field who have already attained at minimum a bachelor's degree (Feistritzer, 2007). In addition, AC generally involves the completion of courses while already placed in the teaching environment and a form of temporary certification overseen by the state department of education (Tissington & Grow, 2007). Some other characteristics of AC options that have been noted in the literature relate to the promotion of rapid access to the teaching profession (Constantine et al., 2009; deBettencourt & Howard, 2004; Rosenberg & Sindelar, 2005; Shaw, 2008); abbreviated course requirements and training (Constantine et al.; Sindelar et al., 2004); course offerings at schools of employment (Rosenberg & Sindelar, 2005); and the provision of mentoring to the candidates (Zeichner & Schulte, 2001).

While there may be some common characteristics among AC programming options, much of the description of AC is generic and lends itself to multiple interpretations. There appears to be a general lack of consensus as to specific substantive issues and particular features of implementation (Humphrey & Wechsler, 2007). "Alternative program designs have dramatically varied, even on such fundamental considerations as program length and the amount of preparation trainees require

before becoming teachers of record” (Dai, Sindelar, Denslow, Dewey, & Rosenberg, 2007, p. 422).

The variability in structure and lack of definition of essential components of AC programming make it difficult to draw conclusions about its utility and effectiveness. Because there is the possibility of many differing variables, it is difficult to paint an accurate picture of the options for alternative routes to certification. Clearly, not all AC programs are created equally. Consequently, certain comparisons among varying AC routes, not to mention the comparisons between AC and traditional certification programming, may bring into question issues of research validity, particularly in regard to the definition of specific independent variables and their influence on dependent variables such as student achievement and teacher self-efficacy ratings. The diversity of elements of both AC and traditional programming makes simple comparisons between them ineffectual (Wenglinsky, as cited in Brownell, Ross, Colon, & McCallum, 2005). At a time when scientifically-based research and evidence are becoming the standards for teacher education and practice, there appears to be a disconnection between the goal and the methodology, particularly if one wants to move beyond the broad generalizations of which system is more effective, AC or traditional certification programming, to specific factors of influence.

Perhaps instead of focusing on the argument of AC versus traditional teacher education in general, specific program components should be the concern of investigations (deBettencourt & Howard, 2004), leading to a delineation of the most crucial features of effective teacher training in special education, which should then be incorporated into all types of certification options, including AC. Brownell et al. (2005) suggested that more research be completed on factors that may have the ability to affect the learning of teachers. These authors provide the example of how components of field experiences could be investigated to determine how variations of these features influence learning.

While flexibility should continue to be integrated into program design, based on areas of need and specific contexts, it seems that teacher preparation programs should and do have some commonly accepted components for inclusion. With continued evidence-based identification of these components and procedures, less variability in AC options and more focus on the essential aspects of teacher preparation in special education within these alternatives should result.

Obtaining this type of information based on research, however, remains a great area of need. While there has been some discussion regarding the particular elements of teacher education and certification standards that contribute to the production of effective teachers, and

consequent positive student outcomes, there is a paucity of these kinds of investigations.

Of those studies available, two have attempted to determine indicators of teacher quality by examining National Board Certification standards. Vandervoort, Amrein-Beardsley, and Berliner (2004) compared the academic outcomes of elementary-level students of teachers certified through the National Board for Professional Teaching Standards with those of their counterparts not certified through the National Board. They found that the achievement test scores of the students of the teachers certified through the National Board Standards exceeded those of the students whose teachers did not hold Board certification in almost 75% of the comparisons made. In a study of the association between teacher quality and student achievement in math in grades nine and ten, Cavalluzzo (2004) also found evidence that National Board Certification was linked to student outcomes.

Teacher quality research specifically related to special educator preparation appears to be equally, if not more, elusive in the professional literature. According to Brownell et al. (2005):

Although the link between evidence-based practice and student achievement exists, no research exists to show that including this knowledge in teacher preparation programs or including specific teacher education program components make a difference in outcomes for special education teachers, and more important, for their students with disabilities. (p. 249)

Blanton, Sindelar, and Correa (2006) further emphasize the essential issue of assessing teacher quality in special education and recommend the use of multiple research approaches and measures as well as investigations of the link between teacher knowledge and behaviors and student outcomes. These authors also contend that a more robust connection between teachers and learners would open the door for a more thorough assessment of teacher education.

While it is clear from the previous discussion that additional research should be completed in regard to teacher preparation program efficacy and student outcomes, inferences may still be drawn from what we do know from the existing literature in relation to aspects of teacher education critical for inclusion in AC programming in special education. The remainder of this discussion addresses two additional controversial issues associated with AC options, in addition to the aforementioned variability in AC programming, as well as potential ways to alleviating these issues based on the available knowledge base in teacher education. The discussion does not attempt to focus on all issues of controversy

in special education AC programming but rather on two of the most pertinent. The recommendations discussed represent some of the elements and educational practices that the author feels are essential for inclusion in AC options for special education teachers.

Lack of Emphasis on Pedagogy and Methodology

Although some AC programs include courses and experiences related to pedagogy and methodology, many do not emphasize them as critical to preparing prospective educators, instead promoting the belief that content knowledge is sufficient (Laczko-Kerr & Berliner, 2003). Even the emphasis in NCLB appears to be that content knowledge is the gauge by which HQT status is determined (Porter-Magee, 2004), a perspective that tends to trivialize the value of methodology expertise in teaching the content area (Kaplan & Owings, 2003).

Certainly subject matter expertise is a vital piece of effective instruction, and special educators should be competent in content knowledge for areas in which they instruct. It is not only essential that special educators have content knowledge to meet the aforementioned legal mandate of an HQT and to be in line with sound educational thought but also that expertise in core content will afford them the opportunity to be sole instructors and teachers of record for those students with disabilities requiring their direct intervention. Further, subject matter proficiency will strengthen their skills in inclusive settings for truly collaborating with their general education counterparts in co-teaching situations as well as in the supplemental roles of consultant for such issues as instructional accommodations and curricular adjustments.

Implementing a viable and pragmatic procedure for providing special educators with content expertise may be perceived as somewhat of a challenge, particularly if the instructor is called upon to teach multiple subject matter areas. Quigney (2009) suggested that teacher training should be “collaborative, as much as possible with general and special educators participating together in the same courses with opportunities to practice innovative instructional strategies together as they would be when co-teaching in the schools” (pp. 56-57). In collaborative teacher training, both preservice special and general educators would not only be exposed to content knowledge but rather to pedagogical concepts, instructional strategies, and curricular adaptations. While this collaborative approach may be more easily implemented in a more traditional teacher education environment, AC options may also be arranged in a collaborative format or, at the very least, be sufficiently rigorous to integrate core area content and pedagogy with a field-intensive perspective.

Regardless of whether it is attained more traditionally or through AC

programming, the importance of subject matter expertise to special education teachers is clear. What is of concern in AC programming, however, is the potential loss, or, at minimum, diminishing of the value of pedagogical coursework and experiences in relaying that content to students whose academic needs require specialized instructional approaches.

The importance of pedagogical knowledge and practice has been supported in the professional literature (e.g., Laczko-Kerr & Berliner, 2003; Wenglinisky, 2002; Wilson et al., 2001). Pedagogical preparation for prospective special education teachers is imperative. As previously noted, they may be called upon on a routine basis to not only supplant general education content with more appropriate alternative programs of study but also to supplement the learning of students with special needs in general education content by providing instructional adaptations or modifications to the existing subject matter. Special educators may also act as consultants to general educators on such issues as behavioral mediation for the students with disabilities (Quigney, 2009). Connelly et al. (2004) succinctly summarized this issue:

Special education teaching is not like subject-matter instruction, and training models based on the subject matter model do not fit special education well. Special education teachers require extensive training in pedagogy, instructional accommodations, behavior support, and communication skills that complement verbal ability and subject knowledge expertise. (p. 123)

It is apparent that a viable and effective AC program in special education would need to focus on these aforementioned aspects of pedagogical knowledge and, as Connelly et al. (2004) noted, should do so comprehensively. Required pedagogical coursework should also include “learning theories, developmental theories, theories of motivation, and issues of student assessment” (Laczko-Kerr & Berliner, 2003, p. 37) as well as “instructional methods . . . foundations of education, and classroom management (Wilson et al., 2001, p. 2). Other elements related to pedagogy that should be emphasized in special education teacher preparation include effective lesson planning, using various methods for instructional purposes, choosing materials related to the curriculum (Boe, Shin, & Cook, 2007) and pedagogy which “centers on the evidence-based expertise of special educators to alter instructional variables to individualize instruction for individuals with exceptional learning needs” (Council for Exceptional Children, 2007, para. 5).

Although the inclusion of appropriate and adequate pedagogy and methodology appears to be an issue for some AC programming, exceptions to this may be found, as evidenced in the following two examples. In a

study of special education teachers credentialed through AC, deBettencourt and Howard (2004) reported on the Recruiting and Preparing of Special Education Teachers with Survival Skills (RAPSETSS) program, which was federally funded to prepare special education teachers, particularly in regard to learning disabilities. The program is characterized as providing graduate level preparation in pedagogy, with course content comparable to that covered in the traditional special education teacher preparation program, although provided at an accelerated rate. An issue that was noted, however, was the lack of exposure to instructional methodology and behavioral management for the students prior to entering the classroom, two issues that this author believes are imperative for coverage prior to teaching in a school setting.

A second example, although not exclusive to special education teacher preparation, is the North Carolina Teachers of Excellence for All Children (NC TEACH) program. NC TEACH is also an AC approach, with an emphasis on issues related to pedagogy, such as awareness of students as learners, student evaluation, classroom management, learner diversity, classroom management, and the instructional environment (Simmons & Mebane, 2005).

It is apparent that preparation in skills related to pedagogy and methodology is essential for a successful special education teacher. If pedagogical training in areas such as those previously discussed are reduced or eliminated, personnel preparation will fail to provide the prospective educators with vital information and practice relative to the very nature of their role as special education teachers.

The timing of the presentation of pedagogical knowledge and practice is also an important issue. AC programs have often been depicted as quick entry options into the profession, some with little pre-classroom placement instruction or experience. The author believes that, for prospective special educators, a good portion of pedagogical training should be implemented prior to classroom placement. That is not to say that all of this type of training must precede the placement, but rather a strong foundation in particular aspects, such as behavior and classroom management strategies as well as a basic exposure to instructional accommodations and curricular orientations, should be presented. This recommendation is supported by deBettencourt and Howard (2004), who found that the AC special education teachers' lack of coursework in behavior management and exposure to instructional strategies prior to their classroom teaching resulted in feelings of inadequacy and less preparedness for their students' academic and behavioral deficits.

Premature Entry to the Classroom and Too Great a Reliance on on-the-Job Training

It is clear from the preceding discussion that training in pedagogy as well as content area knowledge is recommended for AC special education programming. It is also proposed that the prospective special educators acquire a sound background in these areas before assuming the responsibility of being a teacher of record. The exposure to this training may be condensed to some extent as compared to traditional programming, but this author agrees with Rosenberg et al. (2007) that “placing a novice teacher with limited training in a classroom of challenging and needy students with disabilities is a high-risk endeavor” (p. 235).

In addition to adequate and quality exposure to required knowledge and skills prior to assuming full classroom responsibility, continued on-the-job training and support are key factors for consideration in AC programming and should be intensive and frequent. Particularly with the tendency of AC programs toward abbreviated coursework and field experiences as well as early entry into the classroom, it is imperative that these teachers have access to mentoring opportunities and supervisory feedback on a regular basis while performing their classroom functions.

Although mentoring has been identified as an area that is deficient in many AC options (Laczko-Kerr & Berliner, 2003), its importance, particularly by experienced educators, has been recognized in the professional literature (Council for Exceptional Children, 2007; deBettencourt & Howard, 2004; Esposito & Lal, 2005; Rosenberg & Rock, 1994; Wilson et al., 2001). In their review of the research on AC in special education, Rosenberg and Sindelar (2005) noted that mentoring support on the building level was an identifying factor of effective AC programming in special education. This mentoring would have particular relevance if an experienced teacher in the same area of special education focus as the AC teacher, preferably in the same school building, would be formally assigned the mentoring role, perhaps receiving some compensation for the sharing of expertise.

Further, systematic supervision of the AC teachers by university personnel should be considered as a potential component of AC programs. While one may argue that AC programming is often an attempt to circumvent the traditional coursework and requirements of the university approach to certification, the reality is that that the majority of AC special education options reviewed for a national database were involved with institutions of higher education (IHE) in the drafting and provision of essential facets of programming (Rosenberg et al., 2007).

Instead of being forced out of the teacher-preparation marketplace, traditional IHEs have responded to LEA [local education agencies] concerns

about shortages of special education teachers and have been instrumental in designing and delivering either some or all of the critical components of AR [alternative routes to certification] programs. (p. 234)

The involvement of IHEs in the formation and provision of AC options in special education is strongly supported by the author. The expertise of university personnel can add considerable value to the education of prospective teachers in AC programs not only in program design but also in facets of implementation, such as direct classroom supervision. In their comparison of teacher education models, Sindelar et al. (2004) suggested that partnerships between universities and districts were more effective than add-on programs sponsored by the districts.

The previously mentioned RAPSETSS program of AC includes the involvement of IHE faculty, school district employees, and personnel from a nonprofit educational organization as well as incorporates both supervision of field experiences by IHE faculty and mentoring by experienced educators (deBettencourt & Howard, 2004). A second AC program that involves multiple participants in its delivery is the ALTCERT program (Rosenberg & Rock, 1994). Somewhat similar to RAPSETSS, this AC model involves collaboration among an IHE, the state education agency, and local education personnel and includes the components of supervision and mentoring. On-site supervision is IHE-based and mentorship opportunities are afforded by the local school (Rosenberg & Rock).

In addition to on-site mentoring, university supervision, and IHE involvement with the school districts, a requirement to ensure that AC programs provide ongoing professional development activities for prospective teachers should go a long way to counteracting the aforementioned concerns of early entry to the classroom and excessive reliance on on-the-job training. In their delineation of recommended elements of a rigorous AC program in special education, the Council for Exceptional Children (2007), the national professional society in special education, suggested continuous and concentrated opportunities for professional development that are oriented toward the classroom environment. In support of the views of the Council, Katsiyannis et al. (2003) suggested that the professional development opportunities for AC teachers could be provided through university-school district partnerships.

“Experienced and newly certified teachers alike see clinical experiences as a powerful—sometimes the single most powerful—element of teacher preparation” (Wilson et al., 2001, p. 2). Even with a more accelerated introduction to the classroom, which is a hallmark of some AC programs in special education, the implementation of the recommendations in this section should assist in the maintenance and practice of this most important clinical aspect of teacher education.

Conclusion

Regardless of one's perspective and position on alternative routes to certification in special education, their increasing existence in the field of teacher education cannot be disputed. The incidence of AC is directly related to issues of dissatisfaction with traditional teacher education programs, the shortage of special education teachers, the need to increase the diversity of educational personnel, and the requirement of meeting the legal standard of HQT status for special education teachers. While not an exhaustive listing, major issues of concern regarding AC programming in special education often include too much variability in composition and structure of AC programs, inadequate emphasis on pedagogy and methodology, and premature entry to the classroom experience.

Additional research specifically focused on program components and practices of effective teacher preparation in special education should assist in lessening this variability in AC programming and in identifying critical elements to be included in AC options. Further, it is imperative that AC programs in special education focus on issues of pedagogy in addition to content area knowledge due to the very nature of the special educator role. In that special education teachers are called upon to both supplant and supplement curricular content as well as practice a repertoire of instructional strategies with students with particular academic requirements and behavioral needs, a strong foundation in pedagogical knowledge and practice is essential. AC programs should also involve intensive and frequent on-site mentoring and systematic supervision, IHE involvement and partnership with school districts, and ongoing professional development activities. If these and other recommendations based on additional research are followed, AC programs should have positive outcomes in producing effective special educators. It is important to not lose sight of the major objectives of preparing special education teachers: "Regardless of type of program, the content of teacher preparation programs must be grounded in research and directly related to positive student outcomes" (Connelly et al., 2004, p. 123).

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