# CURRICULUM RECOMMENDATIONS FOR INCLUSIVE TEACHER EDUCATION

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*In 1989, the American Association of Colleges of Teacher Education (AACTE) published "The Knowledge Base for the Beginner Teacher". More than a decade later, teachers, teacher educators and scholars from across the country came together to revise and refine the curriculum in teacher education. This article focuses on the recommendations of the Committee on Teacher Education (CTE) which wrote three books describing the basic foundational knowledge that all American teachers—including special education teachers—should know before they graduated from their pre-service programs. In this paper, the authors articulate the CTE's recommendations and then provide additional special education content recommendations for general education teachers working in highly diverse inclusive classrooms.*

## Introduction

In 1989, the American Association of Colleges of Teacher Education (AACTE) published "The Knowledge Base for the Beginner Teacher" (Reynolds, 1989). In that volume, Henrietta Barnes (1989) stated that although "there is no unitary, bounded knowledge base for teaching on which everyone agrees, the body of knowledge from which teacher educators can draw in formulating an effective curriculum is substantial and growing" (p. 13). More than two decades later, teachers, teacher educators and scholars from across the United States came together to form the Committee on Teacher Education, sponsored by the National Academy of Education (NAE), to further refine and articulate the knowledge base for teaching and to make recommendations for the development of curriculum in teacher education (Darling-Hammond, Bransford, with LePage, Hammerness, & Duffy, 2005).

The purpose of this paper is to discuss the evolution of a stated knowledge base and curriculum for teacher education in the United States. While many professional organizations have worked to define the knowledge base of teaching and to list research-based practices in various fields, the focus of this paper is on the recent work of the Committee on Teacher Education (CTE). CTE committee members and staff authored three publications that articulated their vision for teacher education: *Preparing Teachers for a Changing World: What Teachers Should Know and Be able to Do* (Darling-Hammond et al., 2005); *A Good Teacher in Every Classroom: Preparing the Highly Qualified Teachers our Children Deserve* (Darling-Hammond & Baratz-Snowden, 2005); and *Knowledge to Support the Teaching of Reading: Preparing Teachers for a Changing World* (Snow, Griffin, & Burns, 2005). In this paper, we describe the process of inquiry utilized by the committee and summarize their findings. In turn, we present recommendations from other groups who have also provided curriculum recommendations for general education. We discuss the challenges of inclusive education and we provide special education curriculum recommendations for general education teachers who are working in highly diverse inclusive classrooms.

## Focusing on the Committee for Teacher Education

The specific goals of the CTE publications were (a) to demonstrate how research can provide a more systematic approach to teacher preparation, (b) to articulate and refine the knowledge base and make curriculum recommendations based on that research, (c) to explain and justify why certain types of knowledge are important for teachers to know before taking full responsibility for classrooms, (d) to provide suggestions for how this knowledge might be taught in pre-service

programs (both traditional and alternative programs), and (e) to set curriculum recommendations in a context of teacher education. In their main volume, the CTE articulated the big ideas in eight domain areas including (a) learning, (b) development, (c) language, (d) educational goals and purposes: curriculum, (e) teaching subject matter, (f) teaching diverse learners, (g) assessment, and (h) classroom management.

The Committee was made up of well-known education academics in the United States. The chairs of the committee, Linda Darling-Hammond and John Bransford, also served as editors of the initial publication, as well as Pamela LePage, Karen Hammerness, and Helen Duffy, who directed and worked full time on the project. The CTE's Reading Subcommittee, whose members were also leading reading researchers, was chaired by Catherine Snow and produced a volume describing what teachers should know in reading. That volume was edited by Catherine Snow, Peg Griffen M. Susan Burns. A third publication, written by Committee Members Linda Darling-Hammond and Joan Snowden, discussed policy recommendations for attaining the goal of having a highly-qualified teacher in every classroom.

**Curriculum Development in the Past**

According to a survey by the American Association for Colleges of Teacher Education (AACTE), most of the 370 teacher education institutions polled have used accreditation boards and national and state standards to develop their individual knowledge bases for teacher education outcome measures. Eighty-five percent of the schools of education use National Council for the Accreditation of Teacher Education (NCATE) standards as the knowledge base for outcome measures; 95% use state standards as the knowledge base; and 69% use other national standards as the knowledge base (Salzman, Denner & Harris, 2002).

So, how have these accreditation agencies decided what teachers should know and be able to do? The Standards Committee of the Unit Accreditation Board of the National Council for the Accreditation of Teacher Education (NCATE) has revised its unit accreditation standards every five years (NCATE, 2002). The Committee reviews literature, compares their standards with state and regional accreditation Boards and specialized accrediting bodies, such as the National Board for Professional Teaching Standards (NBPTS) and Interstate New Teacher Assessment and Support Consortium (INTASC), and they seek input from a wide range of educators, including policymakers. NCATE conducts hearings at professional conferences and displays their work publicly on their Website in order to get feedback.

In addition to accreditation agencies, The American Association of Colleges of Teacher Education (AACTE) has sponsored a number of efforts to articulate the knowledge base of teaching, producing *Educating a Profession* (Howsam, 1976), *Essential Knowledge for Beginning Educators* (Smith, 1983), *The Knowledge Base for Beginning Teachers* (Reynolds, 1989), and the *Teacher Educator's Handbook: Building a Knowledge Base for the Preparation of Teachers* (Murray, 1996). AACTE's *Teacher Educator's Handbook* is organized into five sections: (a) the need for a knowledge base, (b) subject matter knowledge, (c) the discipline of education, (d) program structures and design, and (e) teacher education faculty and their work. The book provides teacher educators with an extensive overview of the field.

In the past, efforts to articulate the knowledge base have focused in specific topic areas. For example, the CTE reports drew heavily from *How People Learn*: *Brain, Mind, Experience and School* (Bransford, Brown, & Cocking, 2000), which provided a comprehensive overview about what was known in the area of learning. In another area, Fillmore and Snow (2001) explained why teachers need to know more about language development and described in detail what teachers needed to know about language development. Other educators have summarized what teachers need to know by comparing national and state standards, accreditation requirements and conclusions from various commissions and panels (Christensen, 1996; Darling-Hammond, Wise, & Klein, 1996**).**

People may wonder how the CTE reports differed from earlier efforts to develop the knowledge base. First, the reports did not purport to develop standards or a check-list of information: Instead, they included recommendations for how knowledge based on standards and other research could be incorporated into teacher education curriculum. Second, they developed clear, concise, and practical recommendations that were meant to stand on the shoulders of earlier comprehensive efforts that provided in-depth insights into the complexity of teaching, teacher education, and epistemology. Third, they narrowed their focus to provide recommendations about foundational knowledge that a vast majority of educators would agree upon. They focused only on the essential knowledge necessary for novice teachers and took into consideration the realities of teacher education programs, such as time constraints and resources. This was the first step in developing consensus. Ultimately, developing a knowledge-centered curriculum in teacher education had the widely shared, nonpartisan goal of articulating the knowledge that all could agree upon. The reports did not claim to cover all of the curriculum content that researchers might argue should be included in pre-service programs. Rather, they focused on

content considered essential by a vast majority of the community, based on convincing research evidence.

**Articulating the Knowledge Base and Developing Curriculum Strategies**

In addition to building on the experiences of accreditation agencies, standards boards, and other efforts to articulate the knowledge base, the reports were built on the knowledge and experience of its members, who conducted reviews of research associated with children's learning, development, assessment and other domain-specific areas, as well as on how teachers learn as the basis for making recommendations about curriculum. The committee members examined teacher education programs and curriculum artifacts (syllabi, assignments, and assessments) and vetted those ideas with researchers and practitioners of teacher education. In short, the methods used by the CTE to refine the knowledge base and make curriculum recommendations included the following: (a) evaluating the degree of consensus among constituencies about knowledge in specific domain areas regarding what matters for student learning and identifying areas of consensus and controversy, (b) exploring research evidence and professional consensus about what kinds of knowledge are critical for pre-service teachers, (c) examining research literature and program examples about teacher education strategies and pedagogies, (d) examining curriculum in action (learning experiences) in relation to the domains, and (e) vetting the committee's ideas about curriculum content and pedagogies with the partner institutions and other colleagues in the field as part of the design and writing process.

**Research Synthesis**

According to Wilson, Floden, and Ferrini-Mundy (2001), "There is no research that directly assesses what teachers learn in their pedagogical preparation and then evaluates the relationship of that pedagogical knowledge to student learning or teacher behavior" (p. 12). Although research has been conducted on student learning, development, language acquisition, assessment, and pedagogy in content areas, and separately on teacher effectiveness (Good, 1996), there has been very little research conducted that connects the specific knowledge teachers have, or are exposed to prior to teaching, with student learning outcomes.

Given the controversies surrounding teacher preparation, there is little consensus about what teachers need to know to be good teachers. Therefore, many outside observers and policy makers insist on empirical evidence on which to base curriculum decisions and professional entrance

requirements. For that reason, the CTE recommendations drew from studies that have demonstrated connections between what teachers know and how students learn.

The research that formed the foundation of the CTE recommendations included reviews of literature that explored evidence on how students learn, including the teaching strategies and contexts that support this learning, as well as the evidence on how teachers learn the knowledge, skills, and dispositions that allow them to use such strategies and create supportive contexts for learning. The reports relied on important research reviews in the field, such as American Educational Research Association's *Handbook of Research on Teaching* (Wittrock, 2001) and *Handbook of Research on Curriculum* (Jackson, 1992), the Association for Teacher Education's *Handbooks of Research on Teacher Education* (Sikula, 1996), and on research reviews in other topic areas.

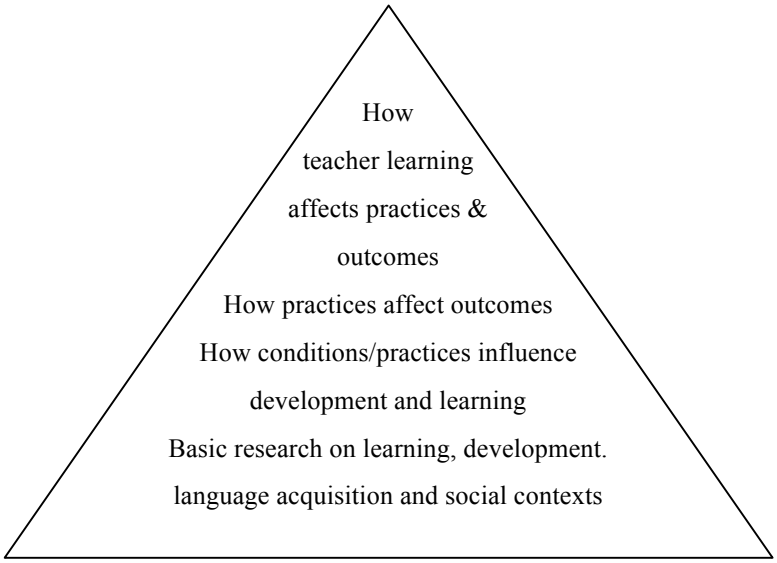
Recently, Marilyn Cochran-Smith, Sharon Feiman-Nemser D. John McIntyre and Kelly E. Demers edited a comprehensive volume, *Handbook on Research on Teacher Education* (2008), which provides many different perspectives on various aspects of teacher education. Recently, Marilyn Cochran-Smith edited a comprehensive volume, *Research on Teacher Education* (2008), which provides many different perspectives on various aspects of teacher education. The volume is comprehensive with 1341 pages, including nine parts and 64 chapters and commentaries. The volume provides a broad spectrum of different perspectives in teacher education on such topics as what teachers should know, who should teach, where they should be taught, what good is teacher education.

For the CTE Volume, the Committee conducted research on the organization of learning in a wide-ranging set of teacher education institutions. The CTE worked to examine courses, activities, assignments, assessments, and clinical experiences from the cooperating universities and other universities represented on the panel in order to make recommendations about how to improve teacher learning.

The CTE has also made use of policy reports, such as *The Making of a Teacher. A Report on Teacher Preparation in the U.S.* developed by the National Center for Education Information (Feistritzer, 1999). This policy report, among others, provided statistical data about the scope and nature of teacher education programs in the United States.

The areas of research that provided the foundational recommendations for the reports included reviews of the following: (a) basic research on learning affecting child development, language

acquisition, and reading (see Bransford, Brown & Cocking, 2001), (b) research on conditions for learning that show that students who are provided with particular types of experiences learn and develop in productive ways, (c) research on teaching practices that demonstrates that teachers who practice in certain ways produce better outcomes, and (d) research on teacher education that shows that teachers who are prepared in certain ways develop practices that produce better outcomes. A pyramid was developed to illustrate warrants to be included:




Darling-Hammond, Bransford, & LePage (2005), p.22

The Committee built on the knowledge base in teacher education and further developed the professional community. The consensus panel examined peer-reviewed research, including concurrent work by an AERA panel studying teacher education (Cochran-Smith & Zeichner, 2005), in order to address questions such as, "What does the teacher education community know about teacher education-based on research?" Their task was to essentially propose a research agenda and talk about methodology. The CTE also drew from The National Board for Professional Teaching Standards (2000), the Interstate New Teacher Assessment and Support Consortium (INTASC, 1992)), and NCATE (1996).

Once again, the CTE articulated the big ideas in eight domain areas including (a) theories of learning, and their roles in teaching (b) educating teachers for developmentally appropriate practice, (c) enhancing the development of students' language, (d) educational goals and purposes: developing a curricular vision for teaching (e) teaching subject matter, (f) teaching

diverse learners, (g) assessment, and (h) classroom management. The book also includes information about teacher education pedagogy, policy and practice.

## Adding Special Education Content to Prepare Educators for Inclusive Settings

### *Professional Content Knowledge*

Other curriculum texts have focused on habits and dispositions (Beyer, 1991; Hansen, 2000; Richardson, 1996; Strike, 1996; Sockett, 1993; Zeichner, 1996). And, most recently, the AACTE published *Teacher Dispositions: Building a Teacher Education Framework of Moral Standards* (Sockett, 2006). This book is one of the AACTE's lastest efforts to focus on the dispositional knowledge base of teaching. The CTE's goal was to advance our thinking about professional and pedagogical knowledge. In most professional fields students are exposed to similar content. Most law students will certainly have courses in torts, contracts, constitutional law, and civil and criminal procedures (Margolis, Arnone, & Morgan, 2002). Medical students will study anatomy and physiology, as well as immunology, pathology, and a number of specialties of practice. Students of education are entitled to know the areas of educational practice that they must know to be an outstanding teacher. The consistency of approach and shared understanding in other professions was built from a consensus about knowledge from which certain practices evolved. If teachers are to engage with the knowledge available to inform their practice, such consensus and consistent practice must become a reality for the teaching profession as well.

### *CTE and Inclusive Education*

The CTE provided suggestions of what teachers should know about exceptional students in a chapter on diverse learners. Banks et al. (2005) claimed that the concepts of *culturally responsive classrooms* and *inclusive classrooms* were not entirely the same, but that they were similar. Specifically, both terms suggest that schools and teachers need to develop classrooms that are supportive of *all* children and accepting of differences. Within both of these conceptions, children's strengths are emphasized and differences are considered a positive part of a learning environment, because they allow children to share and experience diverse perspectives. In the past, children with exceptional needs were largely taught in isolated special education classrooms, and special education was associated primarily with a deficit orientation. Today, special education is still connected closely to a medical model because children are *diagnosed* with certain disabilities. Most children receive special education services when they are given a diagnosis that places them into one of fourteen categories identified under the Individuals with Disabilities Education Improvement Act (IDEA, 2004). However, according to the changes in

IDEA, 2004 children with learning disabilities can also get services throught a new model of service delivery called, the Response to Intervention (RTI) Model. Under that model, educators determine through various specialized assessments whether students are eligible for Tier I, II or III. These tiers represent various levels of specialized education interventions. In this model, any child who is "not be responding to good evidence-based instruction" in any area is eligible for various interventions.

Most educators understand that learning differences exist along a vast continuum, that children typically develop strengths that allow them to expand their learning even though they may have some areas of difficulty, and that strategic instruction can make a large difference in what students achieve. Moreover, to view disability as a type of insurmountable deficit is a socially constructed notion that is detrimental to children and should be challenged (Reid & Valle, 2004; McDermott & Varenne, 1996).

Other lingering misconceptions included equating of special education with behavioural models of teaching featuring a single focus on rote acquisition of skills or with a legalistic model that focuses on labels and procedures that must be followed without flexibility. The CTE presented an inclusive model that described a broad view of diversity, which recognized that students have multiple and complex experiences, strengths, and identities that include interests and talents as well as ethnicity, gender, social status, family experiences, and learning differences, among others. These complex sets of experiences require that students be taught as individuals by teachers who are observant, analytic, and aware of atypical learning patterns. Quite often, teachers who are prepared to teach students with exceptional needs become more-skilful teachers of all students, because they develop deeper analytic skills and a wider repertoire of strategies useful for the many students who learn in different ways.

To instruct special needs students effectively, teachers need to understand the nature of various disabilities, which can range from mild-to-moderate to more moderate to severe. Teachers should be aware that certain conditions, such as cerebral palsy and autism, are associated with a spectrum ranging from very mild, even hardly recognizable, to very severe. For common disabilities, such as auditory or visual processing problems, teachers should at minimum possess a basic repertoire of strategies and adaptations that can help students gain access to the material they are being taught.

In addition, teachers should have some understanding of the eligibility and placement process and how to work with other professionals and parents within these processes. While it is not necessary for novice teachers to know the details of all the highly specialized tests used for

assessment purposes for all the different types of disabilities, they should be able to talk with school psychologists and parents about how a child is assessed, given the academic classroom challenges the teacher has been observing and recording. They should be able to communicate with professional colleagues about the findings of assessments and the services to be offered. They need to know where to find additional information—from research or from professional colleagues—about specific diagnoses, disabilities, and services, when it is necessary to work with an individual child, support providers and families. Teachers should be prepared to work with parents who demonstrate varied reactions to their child's learning and behavioural challenges.

Teachers need to know how to contribute to and implement Individualized Education Plans (IEPs) for students in their classrooms. They should be aware that the IEP process was developed in the United States as a way to ensure that all children have access to the general education curriculum within the least restrictive environments, and that parents are assured due process. Consistent with civil rights legislation, the legislation for children with disabilities is to ensure every childs' right to a free and appropriate public education at no cost to parents (IDEA 2004). Teachers should understand students' rights and have a working knowledge of the laws and policies in the United States associated with access to education, such as the Individuals with Disabilities Education Improvement Act (IDEA 2004), so that they can meet the spirit and the letter of the law.

The CTE authors also talked about accommodations and modifications, especially for children with specific types of disabilities. As our group formed our own consensus panel, we added to their suggestions. In Table 1, we have provided professional content knowledge specific to special education listed under six categories.

Table I: Professional Content Knowledge

| Disability awareness | Law and Policy | Curriculum and Pedagogy |
|---|---|---|
| Inclusive practices | Qualifications for services | Differentiation of instruction |
| Disability types and challenges | RTI/discrepancy models | Modifications and accommodations |
| | Legal issues and court cases | |
| Basic lesson plans and teaching skills | Laws and behavior | Access to standard and functional curriculum |

| | | |
|---|---|---|
| Disability characteristics<br><br>History of special education<br><br>Attitudes about disability<br><br>Issues of diagnoses/assessment<br><br>Issues of second language and diagnoses<br>developing individual programs<br><br>Issues of cultural differences and special needs<br><br>Recognizing challenges such as auditory processing problems, etc. | Federal laws IDEA/ADA<br><br>Problems with school/disability/laws/finances<br><br>Politics around disabilities<br><br>Resources for parents<br><br>Rights of parents<br><br>Issues of social justice<br><br>Federal, state, local policies and resources for parents | Transition services<br><br>Assessment for achievement<br><br>Instructional strategies for children who struggle<br><br>Content expertise<br>teach reading and math (and other PCK) to struggling students<br><br>Progress monitoring<br><br>Issues of technology teaching - using technology for teaching and adaptive technology for access.<br><br>Curriculum and pedagogy and issues of diversity with students with disabilities<br><br>Keeping a child with disabilities motivated and interested in school. |
| Professionalism | Behaviour | Child Learning & Atypical Development |
| Morality and ethics<br><br>Moral decision making<br><br>Awareness of abilities and attitudes around disability | Positive behaviour supports<br><br>Replacement behaviours<br><br>Peer relationships and connections | Developmental milestones<br><br>Issues of diagnostic assessment<br><br>Understanding and addressing development: |

| | | |
|---|---|---|
| | | Fine motor |
| Communication with parents about sensitive topics | Family relationships | Gross motor |
| | | Sensory |
| | Moral development | Cognitive |
| | | Play and social interaction |
| Collaboration with colleagues | Violence and abuse | Speech/language |
| | | receptive/expressive |
| | Legal issues | pragmatic speech |
| Appreciation of differences how to focus on strengths | | Moral |
| | Behaviour plans and strategies | Psycho-social |
| | | Balancing confidence and challenge |
| Keeping accurate records | Charting behaviours | |
| | | Know how to work with learning challenges: |
| Understanding for the complexity of care | Developing child/adult relationships | Memory |
| | | Sequencing |
| | Developing safe environments and communities | Comprehension |
| | | Organization, etc., |

*Teacher Habits and Dispositions*

Developing inclusive practices also requires that teachers work closely with other professionals. The necessary collaboration skills (between general and special education teachers) are complex, sometimes requiring teachers to communicate about serious educational issues that require debate and disagreement. This may concerns over individual students include whether they are being appropriately placed within broader school practices, school placement policies, curriculum or teaching policies, and/or issues related to the quality of services provided in special education or in other parts of the school program. Teachers need to know how to raise questions and issues in a professional manner, seek appropriate information about student performance and school practices and bring that information to the table for discussion and take action. They need to know how to move the conversation forward, and take steps to resolve conflict. They need to help create school environments that support equity and progress for all students.

Although the CTE did not focus on habits of mind, the Committee did put the project into a larger historical context, examining how other professions developed their professional identity. The initial reports were based on the view that education as a field is constantly under development and has struggled in the same way that many other fields have struggled to refine and/or redesign their professional identity. For example, in the early 20th century, the medical profession went through the process of setting standards for its professional community: According to the Flexner Report (Flexner, 1910), in a study of medical schools in North America conducted between 1908 and 1910, it was argued that medical education ought to be academic and deeply rooted in university research and teaching in the sciences, rather than remain the kind of field-based, ad hoc apprenticeship system that was prevalent during the 19th century.

In an effort to learn from both the successes and the failures of other fields, the CTE examined *Preparation for the Professions Program* research that was underway at the Carnegie Foundation (Carnegie Foundation, 2009). This program was a series of two- and three-year studies, which constitute a systematic, programmatic, and comparative study of the role of higher education in building professional understanding for the professions of law, engineering, medicine, nursing, and the clergy.

**Teaching as a Profession**

Lee Shulman once said, "Teacher education can be viewed as a field that sits at the intersection of other professional fields such as the Humanities and Philosophy. Teaching, like philosophy and religion, has elements of a vocation or a calling, as it has considerable connections to the world of values and humanities as well as connections to the sciences and mathematics. On the other hand, there are times when all teacher educators find themselves thinking about the science of teaching. Broadly constructed, teaching is a kind of technology, which has rules and principles, and which also claims a knowledge base. The work contained in the CTE reports grew out of a sense that, although teaching may be a calling, teaching has a base of verifiable evidence or knowledge that supports the work. Because the teaching profession is also principled and systematic, it shares some aspects of the engineering profession. At another level, teaching reflects a body of tradition, precedence, and organized experience, and in that sense, it is akin to the law." (CTE minutes).

Drawing from various professions, Shulman (1998) articulated a structure for defining a profession by looking at *six commonplaces* shared by all professions:

(a) *service* to society, implying an ethical and moral commitment to clients;
(b) a body of *scholarly knowledge* that forms the basis of the entitlement to practice;
(c) engagement in *practical action*, hence the need to enact knowledge in practice;
(d) *uncertainty* caused by the different needs of clients and the non-routine nature of problems; hence the need to develop judgment in applying knowledge;
(e) the importance of *experience* in developing practice, hence the need to learn by reflecting on one's practice and its outcomes; and
(f) the development of a *professional community* that aggregates and shares knowledge and develops professional standards.

Most relevant was the conclusion that all professions have a body of scholarly knowledge that forms the basis of the entitlement to practice. Other implications included the importance of developing modes of thought and analysis that enable people to think like a lawyer, a doctor, or an engineer. For example, to think like a lawyer, one needs to be able to present evidence to support a position; to think like a doctor, one needs to be able to analyze a problem and put forth an evidence-based solution.

We believe to think like a teacher is to be willing and able to make a moral decision. This does not refer to a person's being religious. It does not necessarily relate to a teacher's decision to talk to children about personal issues or get involved with family matters. Teachers are faced with a multitude of moral decisions daily, whether deciding a special education placement or deciding to put students in a homogeneous or heterogeneous reading group. Research tells us that those decisions can affect a child's self-esteem and ability to learn (Ireson & Hallam, 2009; Oakes, 1995; Oakes, & Guiton; Robinson, 2008; Takako, 2010), as well as the child's life in general, and so teachers making such decisions are making moral decisions.

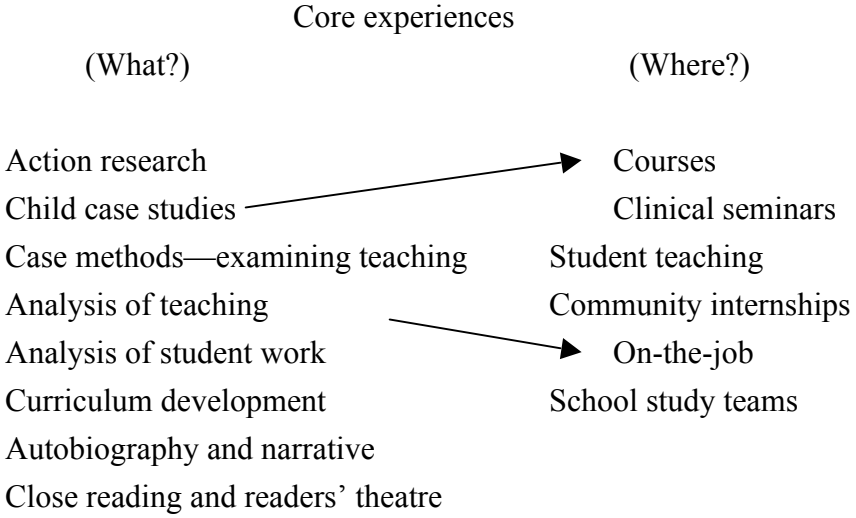
We believe special education teachers in the US need more instruction in philosophy and moral decision-making. Ultimately all professionals (a) understand and value the interests of clients (rather than just doing what is expedient or convenient; (b) can apply many different kinds of knowledge about clients, contexts, and content; (c) will seek out more information and knowledge in the face of dilemmas; (d) can weigh and balance the likely consequences of alternatives when making decisions; (e) will reflect on one's experience for the sake of continuous improvement; and (f) can access the knowledge and experiences of other professionals in solving problems and improving the quality of practice. Habits of mind are important (Sockett, 1993; Sockett, 2008).

**Developing Signature Pedagogies**

Many of these professions use what might be referred to as signature pedagogies. In law school, students are expected to read and analyze cases, and are often introduced to the Socratic Method. The Socratic Method is a form of inquiry and debate between individuals with opposing viewpoints based on asking and answering questions to stimulate critical thinking and to illuminate ideas when answering questions and building arguments. In medical schools, case pedagogies and clinical routines are frequently used.

As part of the discussion on curriculum, the reports included suggestions about pedagogy and assessment strategies. In each of the domain-specific chapters, the CTE made recommendations about how knowledge could be enacted in a curriculum. The reports provided suggestions about teacher learning and development, curriculum development and assessment in teacher education. The group was unanimous in their belief that there were core experiences that helped teacher educators develop the capacities and dispositions teachers need to teach children. Since these experiences—that is, teaching—could be made public; the opportunity to develop consistency across the profession was enhanced. Some of the core pedagogies and experiences discussed in the reports included the following: (a) action research, (b) cases, including child case studies and cases of teaching and learning, (c) analyses of teaching, including videotaped samples with artifacts, as well as commentaries and other print analyses,(d) analysis of student work and learning, and (e) the development of curriculum, such as unit plans and lesson plans.

There are a number of sites for this learning, from courses and clinical seminars to student teaching, research internships, community-based internships, and residencies:



**The Nature of Knowledge: CTE Defining a Knowledge Base**

The discussion of what constitutes a profession sets the stage for predicting and addressing various epistemological controversies associated with the development of a knowledge base. Although education is similar to other professional fields, it is also distinct in many ways. For example, an ongoing and important goal in education is to investigate and re-evaluate the nature of knowledge with regard to instruction. By the very nature and structure of the CTE reports, as well as others, a particular point of view about the nature of knowledge was articulated. Specifically, the reports were based on the "premise that the essential knowledge for beginning teachers can be conceptually organized, represented and communicated in ways that encourage beginners to create deep understandings of teaching and learning" (Barnes, 1989, p.17). Furthermore, these understandings could be both meaningful to teachers and publicly defensible.

The CTE authors (Darling-Hammond, Bransford, et al., 2005) provided an extended discussion about the nature of knowledge with regard to teachers' learning. If teaching is a moral calling and a technology or science, as well as a body of tradition and precedent and organized experience, ambiguity is bound to create disagreements about priorities and process. With regard to the knowledge base in teacher education, some might argue, for example, that teaching relies heavily on moral judgment and other similar abilities. In contrast, others might argue that teaching can be counterintuitive, such as when a teacher must allow for wait time in order to draw ideas out of children, rather than provide answers. Still others believe teachers need knowledge preparation, but have different perspectives on what types of knowledge are important and necessary (Cohen & Ball, 1999; Barnes, 1989; Good & Brophy, 1994). On one end of the spectrum some might support a constructivist approach to knowledge acquisition and development, while others emphasize the development of expert knowledge. Cohen and Ball described these two positions in terms of capacity. They suggested that those who associate themselves with expert knowledge believe that capacity denotes a finite set of knowledge, skills and commitments that are necessary to produce good instruction. Others emphasize the construction of new knowledge and skills in practice. Cohen and Ball stated that

> *...though much instruction lies somewhere between these two poles, they represent two quite different conceptions of the relationship between knowledge and practice, and thus instructional capacity. Roughly speaking, the first view envisions capacity as a storehouse that contains fixed resources needed for instruction. On the second view,*

> *however, capacity is envisioned as a source and creator of knowledge and skills needed for instruction.* (p. 6).

The CTE took a common ground approach with regard to these positions, hoping to avoid their reports being considered as naïve, clandestine, rigid, or fixed. Committee members agreed that knowledge is constructed in action, but they also agreed that some knowledge and skills—some *big ideas*—can be organized, articulated and then used by teacher educators as a place to begin a discussion. The committee was tasked with articulating knowledge and skills and making suggestions about how this knowledge could be effectively used to develop curriculum that supports teacher learning.

Although the CTE's reports were based on the premise that essential knowledge for beginning teachers can be conceptually organized, represented and communicated, they did not want to represent that knowledge as fixed and immutable. They felt that knowledge depends on perspective, it is relational, contingent, partial, and situated, but that to engage in useful conversations about curriculum, it is necessary to agree on some basic foundational knowledge to move the discussion about professional expertise forward.

**CTE on Aims of Education**

As a prerequisite for making decisions about what teachers need to know, it is important to consider how the knowledge and curriculum recommendations are situated within the various perspectives on the aims of education. John Goodlad (1984) identified four functions of schools: academic, vocational, social/civic and personal. In his conception, the academic function involves the development of intellectual skills and knowledge; the vocational function prepares people for work; the social function prepares people to be citizens, and the personal emphasizes the development of the individual. In a similar conceptualization, Kieran Egan (1997) criticized what he described as the traditional categorization of three broad aims (knowledge, society or the individual) represented respectively by Plato, Durkheim, and Rousseau. The CTE members believed the aims of education overlapped, and that although all were important, providing social justice and equal opportunity were also highly important goals of public education in American society.

In the 2008 Handbook of Teacher Education, Sockett (2008) provides an analysis of four articulations of distinctive moral and epistemological positions on teacher education: they are, in his words, "models of practice and therefore for practice." In his chapter, he defines, and then

describes, these models including, the scholar -professional, the nurturer-professional, the clinician-professional, and the moral agent-professional. In Sockett's view, the CTE's recommendations would fall within the clinician-professional because in that model, the teachers' adaptive expertise is emphasized, with the moral purposes of education focused on social purposes, such as social justice, with socialization as the aim. And, there is a strong belief in the integrity of educational research as a social science including the significance of the scientific method.

**Avoiding the Perception of a Core Curriculum**

There is an old maxim that warns, "When you try to make something everything, you make it nothing." It would be impossible to develop curriculum recommendations for every type of teacher, field, or context. Instead, the CTE addressed important considerations that influenced curriculum decisions across many categories. While much work had previously been done to articulate the knowledge base for teachers (Christensen, 1996; Howsam, 1976; Murray, 1996; Reynolds, 1989; Smith, 1983) and set standards for teaching (INTASC, 1992; NBPTS, 2000; NCATE, 2002), the matter of how this knowledge might be effectively represented in teacher education curricula (whether in traditional or alternative settings) had not been addressed adequately. The goal of the CTE was to move beyond listing facts, while avoiding overwhelming readers with years of history on teaching, teacher education and epistemology in order to communicate the complexity. The committee sought to understand and articulate how standards and other conceptions of the knowledge base might shape teacher education curriculum in both traditional and alternative settings in a way that is practical and useful to teacher educators.

A discussion of curriculum that embraces clarity, precision and focus, rather than comprehensiveness, might conjure up visions of a "core curriculum" in teacher education. It was not the goal of the reports to develop a single curriculum for traditional university programs. The goal was to build on prior discussions of the knowledge base to make recommendations for curriculum development in teacher education, not to develop inflexible guidelines.

Much debate has occurred around the notion of what *curriculum* actually represents (Apple, 1990; Beyer & Apple, 1988; Clandinin & Connelly, 1990; Cuban, 1992; Eisner, 1992; Jackson, 1992; Pinar, Reynolds, Slattery, & Taubman, 1995; Tanner & Tanner, 1995). The term curriculum can be used to describe what is actually enacted in the classroom. It can also be used to describe the set of courses, ideas, activities, and experiences that individual institutions might

adopt in performing their work. The term curriculum can further be used to refer to the central ideas that people think ought to be in the enacted curriculum. Given different institutions serving different missions and different students in different contexts, one could not imagine a core curriculum that would be the same in every detail for every institution, but one might imagine a set of core ideas that are addressed as the curriculum is enacted at the ground level.

**The Problem with Big Ideas**

One of the most difficult challenges in developing curriculum recommendations in teacher education is deciding how to represent the vast amount of knowledge necessary for beginning teachers. How could such a large body of knowledge be represented in a short, reader-friendly report? If the reports took a common ground approach to the controversies surrounding the perspectives on constructivism versus expert knowledge, how could this perspective be properly represented? Questions arose about how to present a balanced view, while also making clear recommendations about priorities. For example, in educational psychology, should teachers know Jean Piaget's five stages of development, or should they have a basic understanding of children's development? Should teachers be able to explain Jerome Bruner's theories on enactive, iconic and symbolic representations, or should they be able to come up with alternative ways to think about transformation and representation? These are the types of questions that perplex teacher educators as they strive to balance theory and practice and develop meaningful experiences for teachers. These tensions are exacerbated by the reality that whether or not it is agreed that all teachers should understand the big ideas, many teachers were expected to pass state licensure exams that required teachers to know, for example, Jean Piaget's five developmental stages in order. And, while some people, such as those who decide what teachers should know in teacher education, may grumble at some of these standardized exams, some of those tests were probably, in part, an unintentional consequence of stipulating that there is a knowledge base in teacher education.

The intention of the CTE was to articulate the big ideas in the eight domain areas as part of a conceptual framework, and to allow for flexibility in the details. So what is a *big idea* and how can it be useful? The problem with big ideas is that they often sound so simplistic when they are written down. However, big ideas are actually key concepts that many experts in the field would agree are fundamental to understanding the discipline. As Bruner (1960) has argued, "the curriculum of a subject should be determined by the most fundamental understanding that can be achieved *of the underlying principles* that give structure to that subject" (p. 31, italics added). Bruner asserted that "understanding fundamentals makes a subject more comprehensible" for

three reasons. First, it allows students to generalize and make sense of later information—by studying fundamentals, students begin to develop a working sense of the entire field. Second, knowing how material fits into the field can aid students' memory. Third, investigating key ideas is deeply motivating to students: "The best way to create interest in a subject is to render it worth knowing" (p. 31).

Most educators believe that big ideas, or *generative topics*, have qualities that can lead to rich inquiry and exploration. The most engaging big ideas are "accessible and interesting to students, excite the teacher's intellectual passions, and easily connect to other topics both within and outside the particular domain" (Wiske, 1997, p.64). Wiggins and McTighe (1998) suggested that big ideas can be framed as questions that focus on the curriculum, noting that

> *these types of questions cannot be answered satisfactorily in a sentence—and that's the point. To get at matters of deep understanding, we need to use provocative and multilayered questions that reveal the richness and complexities of subjects. We refer to such questions as 'essential' because they point to the key inquiries and core ideas of a discipline*. (p. 28).

The most powerful big ideas are concepts, topics, problems or issues that are not easily grasped or quickly understood. Indeed, one might argue that the very power of big ideas is that they *are* complicated, rich, multilayered, and sometimes sources of disagreement and conflict within a field.

Using big ideas as a structure for these reports, however, did not mean that there was no need for teachers to recognize the names of important educational researchers, such as Lev Vygotsky and John Dewey. Those two men, for example, identified, named, and explained complex ideas, which can help teachers organize their ideas about teaching. By learning specific information about the field of education, teachers can systematically reflect on teaching, develop good arguments, and articulate fluently in the language of the field. It allows them to communicate ideas with colleagues and parents, and it helps them bring tacit knowledge about their practice to the surface. If the system expects teachers to know names and dates, then teacher educators need to build that into their programs.

However, it is also true that in some courses, or in alternative programs, the content may not be compartmentalized into what students might traditionally learn, as in, for example, an

educational psychology course. Nevertheless, there is something that happens in the moment-by- moment performance of classroom life that brings these pieces together.

**Special Education Perspectives**

Special education has traditionally focused on remediation of deficits, as opposed to educating differences and embracing exceptionalities, perhaps leading educators to shy away from embracing disability under the frame of social justice or diversity in American education. However, given the numbers of children identified as having disabilities and the many problems teachers face today in classrooms dealing with behavior problems and learning difficulties associated with emotional disturbances, hyperactivity, and autism, among other disabilities, it is surprising that the NAE's Committee on Teacher Education's publications did not include chapters dedicated to teaching children with disabilities and containing strategies for dealing with issues of inclusion and professional collaboration. We believe that the next major text developed to provide recommendations on teacher education curriculum also needs to address cultural and linguistic diversity, as well as intellectual and physical diversity, in considerable depth.

**Conclusion: Adding Special Education Content for Inclusion**

As part of the discussion on curriculum, the CTE reports included suggestions about effective pedagogy and assessment strategies in teacher education. The reports presented research evidence about core experiences and knowledge that help teacher educators develop the capacities and dispositions teachers need to teach children. One goal was to outline signature pedagogies for teacher education that related to specific content areas. Some of the pedagogies and experiences that were discussed in detail included (a) action research, (b) cases, including child case studies and cases of teaching and learning, (c) analyses of teaching, including videotaped samples with artifacts, as well as commentaries and other print analyses, (d) analysis of student work and learning, and (e) the development of curriculum.

Given increasing full inclusion and cultural and linguistic diversity, novice teachers need to be better prepared to teach children with disabilities. All novice teachers need to be provided with specific strategies for teaching children with disabilities and for dealing with issues of inclusion and professional collaboration. These strategies should be included in the next major text developed to provide recommendations on teacher education curriculum, so that novice teachers are enabled to become more skillful teachers for all children.

## Appendix

In this appendix, we have included some useful web sites and suggested professional development activities to help educators provide useful materials and activities for students.

*Special Education Teacher Preparation Web Sites*

AACTE American Association of Colleges of Teacher Education http://www.aacte.org/
AERA American Educational Research Association
http://www.aera.net/
AERA Panel of Research on Teacher Education
http://www.aera.net/newsmedia/?id=763
CEC Council for Exceptional Children: Teacher Education Division.
http://www.tedcec.org
CCTC California Commission on teacher Credentialing
http://www.ctc.ca.gov/
CTE Committee on Teacher Education
http://www.naeducation.org/About_CTE.html
NAE National Academy of Education
http://www.naeducation.org/
NBPTS National Board for Professional Teaching Standards http://www.nbpts.org/
NCATE National Council for the accreditation of teacher education http://www.ncate.org/
NCTAF National Commission on Teaching and America's Future http://www.nctaf.org/
NRC National Research Council (education) http://www7.nationalacademies.org/dbasse/
TEAC Teacher Education Accreditation Council
http://www.teac.org/
USED Department of Education
http://www.ed.gov/index.jhtml

*Professional Development Activities for a Doctoral Course in Teacher Education Policy and Practice*

The products of these activities may be presented in the form of oral presentations, posters, written reflections or general class discussions.

1. In small groups, doctoral students reflect upon their own experiences in special education teacher education programs, thinking about what content they were missing and what content was especially important to them when they were teaching in schools.

2. In groups, doctoral students design a special education teacher education curriculum and explain why the curriculum content they chose was important and necessary.
3. In small groups, doctoral students would be given syllabi and curriculum frameworks from various special education programs to evaluate.
4. The class would be divided into debate teams. Each team would prepare to debate the topic: Should the special education curriculum be part of the general education curriculum?
5. As a class, pre-service teachers evaluate existing content specific pedagogies in inclusive sites and suggest ways that teachers could better meet the needs of children in those schools.

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