EASTERN CONNECTICUT STATE UNIVERSITY
EDUCATION UNIT'S
CONCEPTUAL FRAMEWORK

Introduction and Overview

Eastern Connecticut State University has a long tradition in teacher preparation that has focused on continuous evidence-based teacher education to improve student achievement. Eastern Connecticut State University's Education Unit is founded on a conceptual framework that is research-based and regularly evaluated and revised to reflect changes in philosophical underpinnings, national trends, state regulations, curriculum development, and the needs of public schools in Connecticut and the nation. The first section of this document describes the development of the conceptual framework. It then presents the vision and mission of the institution and the Unit and articulates the Unit's philosophy, purposes, and goals together with knowledge bases, including theories, research, the wisdom of practice, and education policies. Also, candidate proficiencies are clearly articulated and aligned with the expectations of the institutional, state and professional standards. The final section of the document presents the assessment guidelines for determining candidate proficiency.

Development of the Conceptual Framework

The Education Unit's conceptual framework is a living document, which began as a statement of goals of the Education Department and the Health and Physical Education Department in 1992 and was further refined in 1996 and 2001 in order to address the new demands, challenges, and changes, particularly brought by technological advancements and diversity in PK-12 schools. In 2001, the Unit developed a conceptual framework that represented four major themes: diversity, learner-centered instructional methods, constructivism, and infusion of technology. This was submitted to National Council for Accreditation of Teacher Education (NCATE) as a precondition document. The document was thoroughly revised throughout 2002, and was shared with colleagues in arts and sciences departments and the public schools, which have a professional development relationship with Eastern Connecticut State University. Because their comments were carefully considered in the development and refinement of the conceptual framework, it is a product of collaborative efforts among faculty members in the Education Unit as well as colleagues in arts and science and PK-12 schools. Based on feedback received from members of the Unit and school partners, the conceptual framework was revised in 2008 to make it clearer, more concise, and to continue to be measurable. To address the new changes taking place at the Unit, the University, and public schools in Connecticut and the nation, the conceptual framework was further revised and accepted by the Education Unit on October 24, 2013. The new revision reflects the following changes:

- Adaptation of the University's new mission statement and strategic planning (2013-2018)
- Refinement of the Unit assessment system and data collection
- Adaptation of new theories, standards, and technology, and references associated with them

In order to make it widely available, the revised conceptual framework is frequently circulated to all the faculty members in the Unit including adjunct faculty members, colleagues in the arts and sciences, and PK-12 schools as well as teacher candidates enrolled in all programs.

The Vision and Mission of the Institution and the Unit

Eastern Connecticut State University's mission is firmly grounded in a vision of and commitment to learning environments in which *all* learners have access to educational opportunities and experiences that enable them to achieve their highest potential. It states:

> The mission of Eastern Connecticut State University, the state's designated public liberal arts university, is to provide high quality undergraduate and select graduate programs to a diverse population of talented students. Eastern's inclusive residential campus, outstanding faculty, emphasis on teaching excellence and exceptional facilities raise students' aspirations and cultivate engagement, inquiry, integrity and social responsibility. In the traditional arts and sciences, as well as in pre-professional programs that are grounded in the liberal arts, Eastern students apply theory in practical settings. Faculty research, scholarship, creative work, and community engagement inform teaching and learning, advance knowledge and enrich the liberal arts curriculum. The University is committed to serving the state of Connecticut and the nation by preparing its students for their future personal, professional and public roles, as leaders in both their communities and professional fields
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> (*Eastern Connecticut State University Strategic Plan 2013, p. 4*)

Consistent with the University's mission as a liberal arts institution, the School of Education/Professional Studies and Graduate Division builds on a strong foundation in liberal arts and offers a variety of academic programs and experiences for students to acquire the skills, knowledge, attitudes, and values necessary for successful performance in the professions. As a community of scholars and teachers, the Education Unit is committed to providing an excellent educational opportunity for *all* students to meet the challenge of a complex and rapidly changing society in the 21st Century. Both the University and the Education Unit emphasize a student-centered learning environment and the need to foster intellectual integrity, academic rigor, cultural diversity, and social responsibility. In this tradition, the Unit has developed the following mission:

> The mission of the Education Unit at Eastern Connecticut State University is twofold: to prepare reflective, responsive professional educators with evidence-based teaching skills and strategies to support students in their learning and development in a global community and to advocate for best practices for all students in diverse educational environments. The Unit is committed to:
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> - Building knowledge upon students' experience, which leads to learner-centered practice;
> - Instilling an appreciation of individuality and multiculturalism within a national and global context;
> - Creating and adapting general education environments for all learners, including those with exceptionalities;
> - Developing open-minded, reflective problem solvers who are lifelong learners;
> - Student-centered, teacher-facilitated instruction and authentic assessment that integrate traditional and technology-enhanced approaches; and
> - Advocacy for children.

The Unit's Philosophy, Purposes, Goals, and Professional Commitments

Eastern's academic program provides students with a strong foundation in the liberal arts and a solid knowledge of an academic discipline or preparation in a profession. Students are encouraged to make connections across the curriculum and to achieve an effective balance between individual and collaborative efforts. Current technologies are incorporated in teaching, learning, and research activities. The Education Unit believes that a strong professional preparation program with emphasis on liberal arts education, solid content and pedagogical knowledge, progressively complex clinical experiences in diverse PK-12 school settings, student-centered environment, and positive dispositions such as caring, compassion, and a desire to grow, prepares educators who can contribute positively to achieve the goals of PK-12 schools as well as advance the field of education by promoting educational change for the welfare of students. Both through formal course work and clinical experiences teacher candidates are prepared to work in diverse public school settings and are ready to make a difference in the lives of PK-12 students. Consistent with Dewey (1916, 1938), the Unit is committed to preparing teachers who can work as change agents in an increasingly complex and diverse society.

The core theme of the Unit's philosophy and conceptual framework is constructivist learner-centered epistemology with emphasis on inquiry, reflection, and collaboration (Kleickmann et al, 2013; Null, 2004; Richardson, 2003; Windschitl, 2002). Surrounding this core are six critical strands—content knowledge, pedagogical knowledge, integration of knowledge, infusion of educational technology, diversity, and professionalism**.** All of these strands are deeply interconnected with institutional, state, and national standards including *Connecticut Common Core of Teaching* (CCCT), Interstate New Teacher Assessment and Support Consortium (INTASC) principles, National Board for Professional Teaching Standards (NBPTS) core propositions, and national professional organization standards developed by the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD)/National Association for Sport and Physical Education (NASPE), Association for Childhood Education International (ACEI), Council for Exceptional Children (CEC) and its Division for Early Childhood (DEC), International Reading Association (IRA), International Society for Technology in Education (ISTE), National Association for the Education of Young Children (NAEYC), National Council for the Social Studies (NCSS), National Council of Teachers of English (NCTE), National Council of Teachers of Mathematics (NCTM), and National Science Teachers Association (NSTA). The conceptual framework, which is graphically shown in Figure 1, focuses on the preparation of educators who are knowledgeable, reflective, analytical, enthusiastic, and caring about the welfare and education of all children. Provided below are the knowledge bases, including theories, research, the wisdom of practice, and education policies embedded in the Education Unit's conceptual framework.

Knowledge Bases Including Theories, Research, the Wisdom of Practice, and Education Policies

The knowledge bases for the Education Unit's conceptual framework include both theoretical and empirical research, discipline inquiry, and wisdom of practice as reflected in Eastern Connecticut State University and the Unit's mission statement. As shown in Figure 1, the Unit's conceptual framework is founded on constructivist learner-centered epistemology with emphasis on inquiry, reflection, and collaboration.

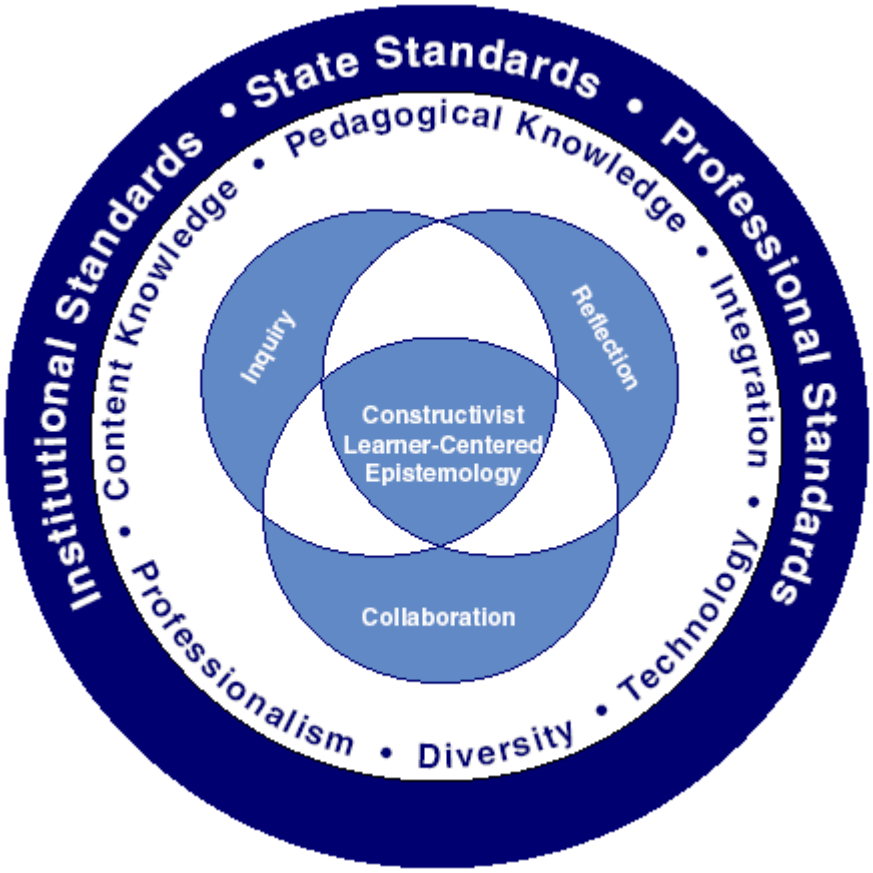

Figure 1. Eastern Connecticut State University Education Unit's Conceptual Framework

Constructivist Learner-Centered Epistemology

Constructivist learner-centered epistemology, an educational focus in the last century, continues into the 21st Century. This epistemology is grounded on progressive philosophy of John Dewey (1916, 1938), cognitive and developmental perspectives of Jean Piaget (1961, 1973), and sociocultural views advanced by Lev Vygotsky (1930/1978, 1962). According to this philosophy, "construction of knowledge is self-regulated; learners construct theories about the world that are challenged by external events which lead to changes in those personal theories" (Kroll & LaBoskey, 1996, p. 63). According to Mosenthal and Ball (1992), learning is "the autonomous act of constructing and revising knowledge of the subject matter" and teaching is "the act of guiding the learner in inquiry that leads to the (re)construction of knowledge" (p. 348). This construction and reconstruction of knowledge is not possible without inquiry, reflection, and collaboration on the part of the learner as well as the teachers**.** Specifically, Holt-Reynolds (2000) states, "the constructivist pedagogies that are increasingly part of teacher education course work and expectations emerge from an intellectual world where knowledge is seen as created rather than received, mediated by discourse rather than transferred by teacher talk, explored and transformed rather than remembered as a uniform set of positivistic ideas" (p. 21).

Eastern's teacher candidates learn about, and are able to apply, the principles of all major development theories (e.g., Bandura, 1986; Ormrod, 2012; Piaget & Inhelder, 1969). However,

they acquire a particularly in-depth understanding of constructivist theory – a belief system that, arguably, best informs developmentally appropriate practice. By the end of the program, students are able to articulate and apply both Piagetian theory and the social-cultural perspectives of Vygotsky. Teacher candidates are prepared to make classroom decisions and navigate teaching situations based on these theoretical frameworks. They are able to design and implement activities and materials and to create classroom environments, which encourage students to actively construct knowledge. Candidates acquire an ability to scaffold student learning and social interactions, through question asking, modeling, hint giving, verbal elaboration, and encouragement (Trawick-Smith, 2013).

The teacher preparation program prepares teacher candidates to create school communities in which PK-12 students learn through active, collaborative inquiry. Faculty demonstrate constructivist approaches in their own teaching using simulations, role playing, guided observation of students and teachers, individual and group projects, open-ended questioning, and journaling. Teacher candidates also come to understand constructivism by applying the theories and philosophies of constructivism to their analyses of the learning during their multiple field placements. The Education Unit recognizes the need for teacher candidates to experience diverse classrooms to enable students to actively engage in "error-filled experimentation" (DeVries, 2004), without risk, and analyze these experiences to create meaningful learning opportunities. These meaningful clinical experiences help all candidates to cope with teaching dilemmas/ethical issues (Katz & Raths, 1992) and develop sophisticated epistemology (Schömmer & Walker, 1995) to refine their teaching beliefs (Nicol, 1999).

Surrounding the constructivist learner-centered epistemology are six critical strands in the profession that are woven through all experiences and courses and tie the program together in a coherent whole.

1. Content Knowledge (CNK)
2. Pedagogical Knowledge (PDK)
3. Integration of Knowledge (INT)
4. Technology to Transform Teaching (TTT)
5. Diversity (DIV)
6. Professionalism (PRF)

Content Knowledge (CNK). Lee Shulman, past president of the Carnegie Foundation for the Advancement of Teaching and an emeritus professor at Stanford University, has argued that teachers require both content and pedagogical knowledge in teacher preparation programs. According to Shulman (1986), content knowledge is the knowledge gained by understanding facts, concepts, procedures, and structures of the discipline. Therefore, teachers need to be competent in the content they are teaching. In Windschitl's (2002) words: "Although all instructional approaches require some knowledge of subject matter to be taught, constructivist approaches, in which children's varied interests and experiences in relation to a subject are involved, demand an even more extensive content background" (p. 148). This belief (Ball, Thames, & Phelps, 2008) that a good constructivist teacher is, first and foremost, a learned one is instrumental in shaping the disciplines of inquiry in the teacher preparation program at Eastern.

Teacher candidates at Eastern gain expertise in their field by majoring in content areas (e.g., arts, biology, English, health and physical education, history, mathematics, psychology, sociology) primarily in the School of Arts and Sciences. All teacher candidates in the Unit are expected to

demonstrate a depth of competence and understanding of the structure of the discipline in a particular content area. Additionally, they are also expected to develop skills that are essential for critical thinking and problem solving, and dispositions required for an education professional. Indeed, the University's mission as a liberal arts institution supports a broad knowledge across domains in the courses required in the Liberal Arts Core (LAC). This aligns well with the categorization and specialization of content knowledge critical for enhancing the quality of teaching (Ball, Thames & Phelps, 2008) Throughout each program, teacher candidates get opportunities to develop an in-depth conceptual understanding of the content, make interdisciplinary connections, develop an appreciation of multiple perspectives of content knowledge, become enthusiastic about their discipline, and become involved in the professional community of educators with a desire to learn and grow professionally.

Pedagogical Knowledge (PDK). Pedagogical knowledge includes both pedagogical content knowledge and professional knowledge. Shulman (1986) defines pedagogical content knowledge as the knowledge of subject matter as it pertains to teaching. It includes "the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations" (p. 9). When a piece of content knowledge is represented with manipulatives to help students understand the content, then the content knowledge embedded in the form of manipulatives is pedagogical content knowledge. Pedagogical knowledge also includes professional knowledge such as teachers' ability to understand and implement pedagogical techniques such as "cooperative grouping, effective instruction, questioning and discussion strategies" (Mosenthal & Ball, 1992, p. 347). Shulman and other educators contend that the development of pedagogical knowledge for a constructivist student-centered learning environment depends on a multitude of factors including a deep and flexible understanding of content knowledge (Katz & Raths, 1992; Nicol, 1999; Windschitl, 2002), and professional experiences that marry a focus on content with a focus on student learning (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). Reciprocally, the quality of pedagogical knowledge held by teacher candidates very much depends on reflective and deliberate practice of pedagogy that is rooted in formal learning experiences of content (Kleickmann et al, 2013). Both kinds of knowledge interact with each other in teaching.

Teacher candidates at Eastern learn pedagogical knowledge in courses taught in the Education Unit. The pedagogical knowledge helps teacher candidates to decide how they plan, evaluate, reflect, and adjust their teaching. The course work, clinical experiences, and student teaching emphasize the development of pedagogical knowledge in their chosen content area, which assures that teacher candidates at Eastern are able to integrate knowledge of human development, classroom management, structure of content knowledge, effective instruction, and student assessment as outlined in the *Connecticut Common Core of Teaching* and specialized professional associations' expectations of a teacher. Consistent with dispositions required for constructivist learner-centered classrooms, teacher candidates at Eastern are expected to appreciate individuality and demonstrate flexibility in planning, teaching, assessing, and adjusting their instruction.

Integration of Knowledge (INT). A large amount of literature is available in the area of knowledge integration (Evering, 2012; Heywood, Parker & Jolley, 2012), including a taxonomy of learning that integrates traditional learning domains with integrated critical learning processes (Shulman, 2002). In our conceptual framework, integration of knowledge is viewed in three

different forms. First, for teachers to be well prepared, it is important that they can integrate content knowledge and pedagogical knowledge (Ball, Sleep, Boerst, & Bass, 2009). Second, teacher candidates should be able to understand interdisciplinary connections in order to help PK-12 students construct relationships in knowledge across all content areas (Brand & Triplett, 2012). Third, it is essential that teacher candidates connect theory and practice through clinical experiences. They must have the opportunity to implement learning theories, principles, and skills they learn at the university setting in PK-12 schools (Lynch, 2012; Sela & Harel, 2012).

The Unit emphasizes all three forms of integration. As mentioned above, the integration of content knowledge and pedagogical knowledge is at the heart of Eastern's professional teacher preparation program. In the same way, the Unit believes that any form of human knowledge is fundamentally interconnected. Team learning and team teaching are the primary modes of instruction in many of our teacher education courses. Candidates are required to design lessons and units that strongly demonstrate their understanding of interdisciplinary connections among various content areas (e.g., English, history/social studies, mathematics, and science). Finally, integration of theory and practice is an integral part of Eastern's teacher preparation program. All candidates at Eastern are required to apply educational theories and practices that they learn in their college course in diverse PK-12 classrooms during their clinical experiences.

Of particular emphasis in recent years is our commitment and integration of an evidence-based approach to teaching and assessment of learning (Groccia & Buskist, 2011). This focus germinated in part from Connecticut's educational reform effort CALI (Connecticut Accountability for Learning Initiative) that emphasizes among other aspects a scientific research-based intervention (SRBI) model, akin to the national RTI (Response to Intervention) process. While our candidates are fully prepared to intentionally plan and administer a variety of assessments and to engage in reflective evaluations, we make a distinct effort to emphasize data literacy as a step beyond assessment, holding with Mandinach and Gummer (2013), that teacher candidates must be able to organize, summarize, interpret, and apply data to inform classroom decision-making. This ability is one of the most critical skills needed by new teachers to improve learning.

All these experiences not only help enhance our candidates' understanding and appreciation for educational theories in practice, but also narrow the gap between theory and practice. All teacher candidates at Eastern have the opportunity to reflect upon the critical value of integration in human life and how it helps students to be intrinsically motivated to learn the content and tools of inquiry in various disciplines. As a result, they develop an appreciation of how different disciplines are connected to each other, how theory drives practice, and how practice informs theory, even though at times integration is difficult.

Technology to Transform Teaching (TTT). Prominent in educational technology's curricular foundations is the seminal work of Papert (1993) on the use of computer programming to enhance critical thinking and social interactions in the classroom. Subsequently, other educators have advanced the field of educational technology even further infusing both information and communication technologies in research and practice that call for a transformative approach to teaching (Thomas, Herring, Redmond & Smaldino, 2013). Research within particular disciplines and curricular applications of various technologies emphasize developmentally appropriate instruction and expound the value of productivity tools effectively scaffolded and used by students to construct their own knowledge and research (Coiro, Knobel, Lankshear, & Leu,

2008; Holmes & Gardner, 2006; International Society for Technology in Education, 2012; Roblyer & Doering, 2012; Solomon & Schrum, 2007**)**.

The Unit heavily emphasizes the infusion of educational technology in curricular planning and design, instructional practice and assessment. Teacher candidates are encouraged and supported to utilize their content and pedagogical knowledge to develop creative learning experiences for students that use multiple digital tools in innovative and collaborative ways. Teacher candidates are prepared to use and to model for their students effective ways to use digital information resources for research and shared learning in a connected global learning community. Most critically, teacher candidates understand the need to practice and advocate for digital citizenship and responsibility in the school communities at large. The Education Unit includes specific technology-related coursework and supports each faculty member to infuse appropriate technology in instruction and candidate activities.

Diversity (DIV). Bronfenbrenner's (1995) ecological model furnishes a useful framework for the study of diversity in educational settings. His ecology for human development and later studies (Anderson & Stillman, 2013; Larkin, 2012) support a systematic study of the complexity of diversity and a concomitant acknowledgment of the complexity in conceptual change needed to continually support the learning and well being of all students. Other seminal work has paved the way for understanding diverse ways of learning, including multiple intelligences (Gardner, 1999), cognitive learning styles (Ormrod, 2012) and other psychobiological aspects of learning. The knowledge base that supports the Education Unit's commitment to diversity in the classroom also includes research and writing on multicultural perspectives (Banks & Banks, 1995; Gorski, Davis & Reiter, 2012; Trawick-Smith, 2013), culturally responsive teaching (Gay, 2002, 2010; Villegas & Lucas, 2002), gender (Jobe, 2003; Split, Koomen, & Jak, 2012; Taylor & Lorimer 2003), and developmentally appropriate classrooms, human exceptionality, and at-risk and advanced students (Bredekamp & Copple, 1997; McLaren, 2007; Rury, 2005).

The Unit is fully committed to the belief that teacher preparation programs must include strong emphasis on the development of knowledge, and ability to integrate that knowledge to support the learner for a diverse learning community. Consequently, diversity is addressed throughout all components of the graduate and undergraduate teacher education program. The Education Unit's conception of diversity includes the variables of race, ethnicity, color, national origin, age, sex, sexual orientation, religion, socioeconomic status, language, culture and exceptionalities (including learning and physically disabled and gifted) in education. The Unit views education to "make a difference in the lives of children, regardless of background, and to help produce citizens who can live and work productively in increasingly dynamic and complex societies" (Fullan, 1993, p. 36). To that end, the Unit embraces an inclusive approach to learning and teaching that mandates working equitably and sensitively with all students, and respecting diversity as it affects the individual learner.

The Unit's programs also focus on the integration of children with special needs within *regular* classroom settings. Two fundamental assumptions underlie this theme: special services should be delivered, whenever possible, within regular classrooms and teachers should play a primary role in the process, and developmentally appropriate practices and those that support the learning and development of children with special needs are interrelated, mutually supportive, and, in many cases, the same. Adapting to the instructional needs of all students is integrated into all courses in the Education Unit.

Professionalism (PRF). Professionalism is deeply associated with the values of democratically ordered classrooms and education settings, consensual decision making, and collaborative practices (Dewey, 1916; Goodlad, Sirotnik, & Soder, 1990; Fullan, 1993). Teaching from a professional perspective is essentially an inquiry-based, reflective, and collaborative activity (Schon, 1987; Windschitl, 2002) within a sociocultural context. A professional not only knows content and pedagogical knowledge but demonstrates enthusiasm, habits of mind, and a sense of caring. Caring has to do with the individual learner – his/her strengths, needs, and affect - in harmony with cognitive growth. Caring teachers ensure that learning occurs for all students. They facilitate learner investigation, focusing on learner strengths, attitudes, and the further development of knowledge and abilities. The affective function of instruction pertains to emotion – motivation, moral/esthetic sensibilities, and capacity for feeling concern, attachment/ detachment, sympathy, empathy, and appreciation.

This strand represents the Unit's belief that educators and teacher candidates must demonstrate the qualities and dispositions expected of professionals. Teacher candidates are required to be motivated, have excellent communication skills, and to collaborate with all school personnel to improve learning and teaching in classrooms. Importantly, they are expected to maintain a high standard of ethical conduct in all their interactions with students, colleagues, family and other school professionals. As outlined in INTASC principles and the *Connecticut Common Core of Teaching*, teacher candidates at Eastern are expected to develop an ability to create and organize positive classroom environments that maximize learning while promoting independence, social competence, and a positive self-concept. They are expected to regularly reflect on their own professional practice, seek guidance from colleagues and mentors for their own personal and professional growth. Eventually, our teacher candidates are expected to take leadership roles in advocating for educational change, guided by their own research and practice.

Candidate Proficiencies, Including a Description of Their Alignment with the Expectations in Professional, State, and Institutional Standards

As stated in the knowledge base of this conceptual framework, the teacher preparation program at Eastern Connecticut State University uses six criteria/critical strands to assess candidates' proficiencies. These strands are content knowledge, pedagogical knowledge, integration, technology, diversity, and professionalism. These strands are broken down into several proficiencies/competencies so that candidate performance can be accurately measured.

1: Content Knowledge (CNK)

1.1 Candidates/Graduates demonstrate in-depth understanding of content knowledge including central concepts, principles, skills, tools of inquiry, and structure of the discipline(s) by engaging students through meaningful questions and learning experiences.

2: Pedagogical Knowledge (PDK)

2.1 Candidates/Graduates are able to formulate developmentally appropriate learning goals and objectives for students based upon knowledge of subject matter, students, the community, curriculum goals (both state and national), and theories of human development, and to plan and implement instructional activities which foster individual and collective inquiry, critical thinking, and problem solving to facilitate learning for all students in a safe and nurturing environment.

2.2 Candidates/Graduates use methods, activities, and grouping arrangements appropriate for lesson goals and objectives in an environment that is conducive to learning.

2.3 Candidates/Graduates conduct learning activities in a logical sequence and respond to the developmental needs, interests, ability, and background of students to promote their development of critical thinking, independent problem-solving, and collaborative inquiry.

2.4 Candidates/Graduates use multiple forms of assessment to evaluate student learning and modify instruction as appropriate to ensure the continuous intellectual, social, ethical, and physical development of the learner.

3: Integration of Knowledge (INT)

3.1. Candidates/Graduates demonstrate how different concepts, themes, and principles are interconnected within and across the discipline(s) and promote connections between content knowledge and pedagogical knowledge to help students learn concepts, principles, skills, tools of inquiry, and structure of the discipline(s) they teach.

3.2. Candidates/Graduates demonstrate an ability to integrate learning theories and other pedagogical knowledge in their clinical experiences and student teaching.

4: Technology to Transform Teaching (TTT)

4.1. Candidates/Graduates integrate appropriate digital and non-digital technology throughout their courses and clinical experiences to support student learning.

5: Diversity (DIV)

5.1. Candidates/Graduates demonstrate their ability to support the diverse needs of students in terms of exceptionalities, race, ethnicity, gender, culture, and socioeconomic status.

6: Professionalism (PRF)

6.1. Candidates/Graduates collaborate with cooperating teachers, other teachers, school administrators and other school professionals, parents, families, and communities in a professional and ethical manner to help students reach their maximum potential.

The majority of proficiencies listed above are knowledge and/or skills. It is important to note that dispositions are integrated throughout these proficiencies. All of these six critical strands and associated proficiencies/competencies are aligned with institutional, state, and national standards including the standards of CCCT, INTASC, NBPTS, and NCATE. Table 1 presents this alignment.

Table 1. Alignment of Unit's Conceptual Framework with State and Professional Standards

Eastern's Conceptual Framework	CCCT	INTASC Principles	NBPTS Propositions	NCATE Standards
CNK	Domain 1	Principle 1, 7	Proposition 2	1a, 1b, 1e
PDK	Domains 2, 3, 4 & 5	Principle 1-10	Proposition 1, 2, 3	1b, 1c, 1d, 1e, 1f, 1g, 3a, 3b, 3c
INT	Domains 1 &3	Principle 1, 4, 7,	Proposition 1, 2, 3	1a, 1b, 3a
TTT	Domains 4 & 6	Principle 6	Proposition 4	1a, 1b, 1e, 3c
DIV	Domains 3, 4, 5, & 6	Principle 3, 5, 7, 8	Proposition 1, 3, 4	1g, 3c, 4a, 4b, 4c, 4d
PRF	Domains 3, 4, 5, & 6	Principle 7, 9, 10	Proposition 3, 4, 5	1g, 3c, 4d

In addition to the alignment shown in Table 1, faculty in their respective disciplines have aligned these six critical strands with specialized professional association standards, namely AAHPERD/NASPE, ACEI, CEC/DEC, IRA, ISTE, NAEYC, NCSS, NCTE, NCTM, and NSTA. These strands have also been aligned with major professional publications associated in these respective fields, for example early childhood education (Bredekamp & Copple, 1997), elementary education (Crawford & Burris, 2002), physical education (NASPE, 1995a, 1995b), science (NRC, 1996), history/social studies (NCSS, 1994), mathematics (NCTM, 2000), and reading/language arts (NCTE/IRA, 1996; IRA, 2003). These six strands are also reflected in courses taught in the Unit including clinical experiences and student teaching. Each teacher preparation program at Eastern Connecticut State University is fully aligned with the conceptual framework.

A Description of the System by Which Candidate Performance is Regularly Assessed

At Eastern, candidate performance is regularly assessed using assessment tools and techniques at different transition points. The data collected through these assessment tools and techniques are analyzed, synthesized, interpreted, and reported to improve programs and the Unit. Table 2 depicts the assessment system currently in place, with five transition points: entry/pre-admission, mid-point/pre-student teaching, student teaching, exit/certification completion, and post-certification. The transition points consist of both formative and summative evaluation methods. Table 2 shows that the Unit has a clear and coherent assessment system to evaluate candidate proficiencies.

Table 2. Unit's Assessment System Schema

Transition Point	What (critical strand) is assessed?	How is it assessed?	Who assesses, analyzes, and monitors?	How are results used to improve programs/Unit?
Entry/Pre-admission	• CNK • DIV • PRF	• Cumulative undergraduate GPA of 2.70 (B-); 3.0 beginning in Spring 2014 • Passing scores on PRAXIS I • Passing scores on PRAXIS II for graduate secondary certification candidates • Three letters of reference • Interview with faculty/advisor (candidates' initial dispositions assessment) • Entry survey of candidates	Committee on Admission and Retention in Education (CARE) Research and Assessment Faculty	Candidates are not admitted to the program unless they meet these assessment standards. The system allows the Unit to maintain standards.
Mid-point/Pre-student teaching	• PDK • INT • TTT • DIV • PRF	• Maintenance of minimum cumulative GPA of 2.70 (B-) throughout coursework; 3.0 beginning in Spring 2014 • Grades of "C" or higher in all education courses • Passing scores on required lesson and unit plan assessments • Clinical experience evaluation by Cooperating Teacher and University Supervisor • Passing scores on Praxis II exams in elementary and secondary programs • Satisfactory scores in dispositions assessment (all initial and advanced candidates)	Course Instructors, Program Coordinators, and the Committee on Admission and Retention in Education (CARE) Research and Assessment Faculty	Candidates are given feedback and weak areas are strengthened in courses.
Student Teaching	• CNK • PDK	• Student teaching evaluation by Cooperating	Cooperating Teacher, University Supervisor, Course	Student teaching results and cooperating

	• INT • TTT • DIV • PRF	Teacher and University Supervisor • Impact portfolio, SRBI project in the student teaching seminar	Instructors, and the Coordinator of Educational Experiences Research and Assessment Faculty	teacher feedback are used to improve courses, programs, and the Unit.
Exit/ Certifi-cation completi on	• CNK • PDK • INT • TTT • DIV • PRF	• Passing scores on PRAXIS II in all programs • State of CT Reading Test for ECE and ELE • Successful completion of the Exit Portfolio for ECE • Completion of undergraduate degree and a major other than education with a minimum of 2.70 GPA; 3.0 GPA beginning in Spring 2014 • Successful completion of capstone portfolio for advanced candidates; Successful completion of Ed Tech portfolio for advanced Ed Tech candidates • Satisfactory scores in dispositions assessment (all initial and advanced candidates) • Exit survey of candidates	Certification Officer Research and Assessment Faculty	Data on certification completion are used to improve programs.
Post-certi-fication	• CNK • PDK • INT • TTT • DIV • PRF	• Graduate Survey • Employer Survey	Research and Assessment Faculty	Graduates' strengths and weaknesses are considered to make changes in courses, programs, and the Unit.

Conclusion

The Education Unit's conceptual framework at Eastern Connecticut State University is a living document that guides the Unit in providing direction and vision to all of its programs, including curriculum development, implementation, and evaluation. The faculty adheres to a constructivist learner-centered epistemology that emphasizes inquiry, reflection, and collaboration, which are all interwoven with content knowledge, pedagogical knowledge, integration, technology, diversity, and professionalism. It is clearly aligned with institutional, state, and national professional standards.

References

Anderson, L. M., & Stillman, J. A. (2013). Student teaching's contribution to preservice teacher development: A review of research focused on the preparation of teachers for urban and high-needs contexts. *Review of Educational Research, 83*(1), 3-69.

Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching--What makes it special? *Journal of teacher education, 59*(5), 389-407.

Ball, D. L., Sleep, L., Boerst, T. A., & Bass, H. (2009). Combining the development of practice and the practice of development in teacher education. *Elementary School Journal, 109*(5), 458-474.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood-Cliffs, NJ: Prentice-Hall.

Banks, J. A., & Banks, C. A. (Eds.). (1995). *Handbook of research on multicultural education*. New York: Macmillan.

Brand, B. R., & Triplett, C. F. (2012). Interdisciplinary curriculum: An abandoned concept? *Teachers and Teaching: Theory and Practice, 18*(3), 381-393.

Bredekamp, S. & Copple, C. (Eds.) (1997). *Developmentally appropriate practice in early childhood education programs*. Washington, D.C.: NAEYC.

Bronfenbrenner, U. (1995). Developmental ecology through space and time: A future perspective. In P. Moen, G. Elder, & K Luscher (Eds.) *Examining Lives in Context: Perspectives on the Ecology of Human Development*. Washington, DC: American Psychological Association.

Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (Eds.). (2008). *Handbook of research on new literacies.* Mahwah, NJ: Erlbaum.

Crawford, P. A., & Burris, K. G. (Eds.) (2002). *It's elementary! Special topics in elementary education*. Olney, MD: Association for Childhood Education International.

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). State of the Profession: Study Measures Status of Professional Development. *Journal of Staff Development, 30*(2), 42-44.

DeVries, R. (2004). What is constructivist about constructivist education? *The Constructivist*, *15*, 1-26.

Dewey, J. (1916). *Democracy and education*: *An introduction to the philosophy of education*. New York: Macmillan.

Dewey, J. (1938). *Experience and education*. New York: Macmillan.

Evering, B. (2012). Relationships between knowledge(s): Implications for "Knowledge Integration". *Journal of Environmental Studies and Sciences, 2*(4), 357-368.

Fullan, M. (1993). *The meaning of educational change*. New York: Teachers College Press.

Gardner, H. (1999). Intelligence reframed: Multiple intelligences for the 21st Century. New York: Basic Books.

Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice* (2nd ed.). New York: Teachers College Press.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116.

Goodlad, J. I., Sirotnik, K. A., & Soder, R. (Eds.). (1990). *The moral dimension of teaching*. San Francisco: Jossey-Bass.

Gorski, P. C., Davis, S. N., & Reiter, A. (2012). Self-efficacy and multicultural teacher education in the United States: The factors that influence who feels qualified to be a multicultural teacher educator. *Multicultural Perspectives, 14*(4), 220-228.

Groccia, J. E., & Buskist, W. (2011). Need for evidence-based teaching. [Article]. *New Directions for Teaching & Learning, 2011*(128), 5-11. doi: 10.1002/tl.463

Heywood, D., Parker, J., & Jolley, N. (2012). Pre-Service Teachers' Shifting Perceptions of Cross-Curricular Practice: The Impact of School Experience in Mediating Professional Insight. *International Journal of Educational Research, 55*, 89-99.

Holmes, B., & Gardner, J. (2006). *E-learning concepts and practice*. London, UK: Sage Publications.

Holt-Reynolds, D. (2000). What does the teacher do? Constructivist pedagogies and prospective teachers' beliefs about the role of a teacher. *Teaching and Teacher Education, 16*(1), 21-32.

International Reading Association. (2003). *Standards for reading professionals*. Newark, DE: Author.

International Society for Technology in Education. (2012). *ISTE Standards for students resources*. Retrieved from http://www.iste.org/docs/pdfs/nets-s-standards.pdf?sfvrsn=2

Jobe, D. A. (2003). Helping girls succeed. *Educational Leadership, 60*(4), 64-66.

Katz, L., & Raths, J. (1992). Six dilemmas in teacher education. *Journal of Teacher Education*, *43*, 376-385.

Kleickmann, T., Richter, D., Kunter, M., Elsner, J., Besser, M., Krauss, S., & Baumert, J. (2013). Teachers' content knowledge and pedagogical content knowledge: The role of structural differences in teacher education. *Journal of Teacher Education, 64*(1), 90-106.

Kroll, L. R., & LaBoskey, V. K. (1996). Practicing what we preach: Constructivism in a teacher education program. *Action in Teacher Education, 18*(2), 63-72.

Larkin, D. (2012). Using the conceptual change model of learning as an analytic tool in researching teacher preparation for student diversity. *Teachers College Record, 114*(8).

Lynch, J. C. (2012). Community, difference, and voice in teacher education. *Teacher Education Quarterly, 39*(1), 77-97.

Mandinach, E. B., & Gummer, E. S. (2013). A systemic view of implementing data literacy in educator preparation. *Educational Researcher*, *42*(1), 30-37.

McLaren, P. (2007). *Life in schools: An introduction to critical pedagogy in the foundations of education (5th ed.)*. Boston: Pearson Education.

Mosenthal, J. H., & Ball, D. L. (1992). Constructing new forms of teaching: Subject matter knowledge in inservice teacher education. *Journal of Teacher Education, 43*(5), 347-356.

National Association for Sport and Physical Education. (1995a). *Moving into the future: National physical education standards: A guide to content and assessment*. Boston: McGraw-Hill.

National Association for Sport and Physical Education. (1995b). *New standards for beginning physical education teachers.* Boston: McGraw-Hill.

National Council for the Social Studies (1994). *Curriculum standards for social studies: Expectations of excellence*. Washington, DC: Author.

National Council of Teachers of English/International Reading Association. (1996). *Standards for the English language arts*. Urbana, IL: Authors.

National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Reston, VA: Author.

National Research Council. (1996). *National science education standards*. Washington, DC: National Academy Press.

Nicol, C. (1999). Learning to teach mathematics: Questioning, listening, and responding. *Educational Studies in Mathematics, 37* (1), 45-66.

Null, J. W. (2004). Is constructivism traditional? Historical and practical perspectives on a popular advocacy. *The Education Forum, 68*, 180-188.

Ormrod, J. E. (2012). *Human learning* (6th ed.). Boston, MA: Pearson

Papert, S. (1993). *The children's machine*: *Rethinking school in the age of the computer*. New York: Basic Books.

Piaget, J. (1961). The genetic approach to the psychology of thought. *Journal of Educational Psychology, 52 (*6), 275-281.

Piaget, J. (1973). *To understand is to invent: The future of education*. New York: Grossman Publishers.

Piaget, J. & Inhelder, B. (1969). *The psychology of the child.* (Helen Weaver, Trans). New York: Basic Books.

Richardson, V. (2003). Constructivist pedagogy. *Teachers College Record, 105*(9), 1623-1640.

Roblyer, M. D., & Doering, A. H. (2012). *Integrating educational technology into teaching (6th ed.)*. Boston: Pearson.

Rury, J. L. (2005). *Education and social change: Themes in the history of American schooling*. Mahwah, NJ: Lawrence Erlbaum.

Schömmer, M., & Walker, K. (1995). Are epistemological beliefs similar across domains? *Journal of Educational Psychology, 87*, 424-432.

Schon, D. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.

Sela, O., & Harel, M. (2012). The role of teacher education in introducing action research into the education system: A case study of an education college. *Current Issues in Education, 15*(2).

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15* (2), 4-14.

Shulman, L. S. (2002). Making Differences: A Table of Learning. *Change*, *34*(6), 36-44.

Spilt, J. L., Koomen, H. M. Y., & Jak, S. (2012). Are boys better off with male and girls with female teachers? A multilevel investigation of measurement invariance and gender match in teacher-student relationship quality. *Journal of School Psychology, 50*(3), 363-378.

Solomon, G., & Schrum, L. (2007). *Web 2.0: New tools, new schools.* Eugene, OR: International Society for Technology in Education.

Taylor, D., & Lorimer, M. (2003). Helping boys succeed. *Educational Leadership, 60*(4), 68-70.

Thomas, T., Herring, M., Redmond, P., & Smaldino, S. (2013). Leading change and innovation in teacher preparation: A blueprint for developing TPACK ready teacher candidates. *TechTrends: Linking Research & Practice to Improve Learning, 57*(5), 55-63.

Trawick-Smith, J. (2013). *Early childhood development*: *A multicultural perspective.* Boston: Pearson.

Villegas, A. M., & Lucas, T. (2002). *Educating culturally responsive teachers: A coherent approach*. Albany, NY: State University of New York Press.

Vygotsky, L.S. (1930/1978). *Mind in society*: *The development of higher psychological processes.* (Edited by M. Cole, V. John-Steiner, S. Scribner, & E. Souberman), Cambridge, MA: Harvard University Press. (Original work published in 1930).

Vygotsky, L.S. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Windschitl, M. (2002). Framing constructivism in practice as the negotiation of dilemmas: An analysis of the conceptual, pedagogical, cultural, and political challenges facing teachers. *Review of Educational Research, 72* (2), 131-175.