School-University Partnership for Implementation of Common Core State Standards

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Abstract

The value and importance of partnerships between public schools and universities is more evident now than ever. This paper highlights the design, implementation, and initial results of a partnership between teachers and administrators from a high-needs, high-poverty high school, and university teacher education and arts and sciences faculty to address school improvement plans that incorporated Common Core State Standards (CCSS) at the preservice and in-service levels of teacher education. This effort is part of a continuing federally funded Teacher Quality Partnership project.

Keywords: School-University Partnership, Common Core State Standards, teacher education, secondary learners, Universal Design for Learning

Fairly or unfairly, teachers and teacher education programs have been criticized for the many perceived deficiencies of public schools in the United States. Much of the recent criticism is based on student test scores in national report cards (e.g., Institute for Education Sciences, 2013), which direct blame for failures at teachers and the university programs that produce them. Indeed, statistics on the efficacy of many secondary schools, in particular, are not encouraging, and are worst in high-poverty areas where the most experienced teachers tend to be the lowest in quality (Hannaway, 2011), or the newest teachers quickly move on to higher performing schools. Moreover, consider the following:

- The National Assessment of Educational Progress (Institute for Education Sciences, 2013) reported that only 34% of 8th graders tested at or above proficient in reading,
- In survey of over 1500 17-year olds, Hess (2008) found that "Nearly a quarter of those surveyed could not identify Adolf Hitler; 10 percent think he was a munitions manufacturer; fewer than half can place the Civil War in the correct half-century; only 45 percent can identify *Oedipus*; a third do not know that the Bill of Rights guarantees the freedom of speech and religion; and forty-four percent think *The Scarlet Letter* was either about a witch trial or a piece of correspondence" (p.1).

To examine the relationship between gains in student achievement and teacher preparation, (Levine, 2006) utilized national surveys of education school alumni, principals, deans, and faculty of schools of education along with visits to twenty-eight teacher education schools. Sixty-two percent of teacher education alumni reported feeling inadequately prepared for the classroom. Principals reported that teachers were being prepared well in some areas, but that a third or fewer were prepared to "maintain order and address needs of students with disabilities" and to "meet needs of students from diverse cultural backgrounds." Even fewer teachers felt ready to work with parents (21%), or to work with students learning English as a second language (16%).

At least part of the problem may be the structurally rigid nature of the secondary school classroom with regard to the processes of planning, adapting, and individualizing instruction, especially for students who learn differently.

Since the primary role of the secondary teacher has been to deliver content, classrooms often consist of teacher lectures, with few interactions between teacher and students or students with their peers, and a great deal of independent seatwork. With the advent of Common Core State Standards (CCSS), however, new as well as veteran secondary teachers must dramatically change the way they plan and teach content.

Rather than citing statistics and casting further blame on teachers, schools, and teacher preparation programs, Secretary of Education Duncan suggested that there might be an underlying systemic issue contributing to poor performance in schools:

Compared to other important professions, teacher salaries are far too low to attract and retain top college students into the field and barely sufficient for existing teachers to raise families, buy a home, and maintain a middle class lifestyle. Many teachers must work side jobs or rely on their spouses to make ends meet. Something is radically wrong with that picture. Good teachers often must leave the classroom—leave what they love most and what they do best—to acquire more responsibility, advance professionally, and increase earnings. Many simply leave the field… We need to radically change society's views of teaching from the factory model of yesterday to the professional model of tomorrow, where teachers are revered as the thinkers, leaders and nation-builders they truly are (Duncan, 2012).

He further suggested that teacher evaluation tied only to test scores creates a situation where "instead of a safety net beneath our children and teachers, test-based accountability has become a sword hanging overhead" (Duncan, 2012).

Indeed, such systemic issues may compound problems of poor student performance by contributing to low morale among teachers. The 28th annual MetLife Survey of the American Teacher indicated that nationally, only 44% of teachers reported being "very satisfied" with their jobs. This was down from 59% just three years before. About 29% of teachers said they were likely to leave teaching within five years (up from only 17% in 2009). Perhaps some of the low morale comes from only 43% of teachers believing that student achievement is likely to increase in the next five years, despite their efforts (Heitin, 2012).

Still, regardless such gloomy reports, it stands to reason that not all schools are the same and not all teacher preparation programs are equivalent, nor does each institution contribute equally to large-scale outcomes. Disaggregation of the data on teacher preparation uncovers some favorable results. For instance, a recent set of studies on "portals" for entering the teaching profession shows that teachers with some pedagogical training (those from traditional university programs and Teach For America) tend to have higher student achievement outcomes when compared to teachers who entered the profession without pedagogical training. In fact, Berry (2010) pointed out that new teachers with limited or no pedagogical training actually tended to lower student achievement scores, at least initially. Thus, the enhancement of pedagogical knowledge and experience, coupled with shifts in educational paradigms, may significantly shape the development of exemplary efforts among schools and university programs that substantively affect the performance of students. This article, then, documents the design, implementation, and initial results of one demonstration partnership intended to enhance the competence of secondary preservice as well as inservice teachers regarding the application of CCSS.

Program Development

The design team of the Secondary Teacher Education Reform Initiative of the Teacher Quality Partnership Grant (TQP) at East Carolina University (ECU) began work by recognizing the nearly unprecedented paradigm shift in U.S. schools represented by the Common Core State Standards (CCSS). To date, forty-five states, the District of Columbia, four territories, and the Department of Defense Education Activity (DoDEA) have adopted the CCSS (corestandards.org).This paradigm shift has necessitated a change in how teacher educators must prepare teachers to work in schools, beginning with a frank examination of practices by both university faculty and secondary school partners.

The primary goals of the ECU Teacher Quality Partnership (TQP) grant are strengthening both prospective and experienced teachers' knowledge and pedagogical bases, and improving student achievement. The goals are specifically addressed through new teacher induction, revisions to clinical practice, new teacher mentoring, and curriculum reform across disciplines. Within these broad goals, our research and development efforts pay significant attention to the implementation of Common Core State Standards (CCSS, 2010a, 2010b) in teacher preparation programs and partnering schools.

Other key TQP elements include the selection and use of appropriate technology applications (Technological Pedagogical Content Knowledge, or TPACK) (e.g., Schmidt, Baran, Thompson, Mishra, Koehler, Shin, & Tae, 2009), and Universal Design for Learning (UDL) (e.g.,Edyburn, 2010)to ensure new teachers are prepared to address the needs of diverse students, especially those with disabilities and those learning English as their second language.

Because the original TQP grant proposal was written for elementary and middle grades, plans for that part of the project were well defined, but activities for secondary reform were initially just sketched out. A large part of the planning process took place during spring of 2012 by a carefully constructed design team including specialists from educational foundations, educational psychology, curriculum and instruction, and special education.

Elements of the Design Model

The design team created a model that addressed five core subjects: English, mathematics, science, history, and government & civics. Each of the 21st century interdisciplinary themes was woven into this curriculum development (global awareness, financial, economic, business and entrepreneurial literacy, civic literacy, health literacy and environmental literacy) (Partnership for 21st Century Skills, 2011). Curriculum development stemmed from these core subjects and themes, while other model characteristics were dictated by promoting learning and innovation (including creativity; critical thinking and problem-solving; communication and collaboration) and information, media and technology skills (including information literacy, media literacy and technological literacy) (Partnership for 21st Century Skills, 2011;Koehler & Mishra, 2009).

Two of the most significant additional elements of the model were project-based learning and Universal Design for Learning (UDL). Project-based learning is simply curriculum focusing on holistic inquiry projects or problem-solving, rather than just lectures or textbook readings (Larmer & Mergendoller, 2010). This "beginning with the end in mind" method was very novel and exciting to many faculty members. For instance, a contributing professor from History Education described a methods course experience, where after watching a local history teacher demonstrating project based learning using the CCSS, he asked for comments. All of the pre-service teachers remained silent for a few moments until one finally spoke up, saying, "I've never seen anyone teach like that before!"

In a survey conducted by Levine (2006), principals reported that while teachers received adequate preparation in some areas, a third or fewer were prepared to (1) maintain order and address needs of students with disabilities, (2) meet needs of students from diverse cultural backgrounds, or to (3) work with students learning English as a second language. Therefore, Universal Design for Learning (UDL) was an important element of the model design because of its focus on supports for all students during planning and instruction. Edyburn (2010) explained that Universal Design for Learning is not something that happens by accident, and it is not "just good teaching." It is about a "fundamental and proactive" valuing of diversity among learners, based on learning objectives, and using technology at hand. Thus, UDL may augment performance of some students while scaffolding the tasks for others. The CCSS are relatively aligned with UDL, given the focus on outcome learning goals and flexibility in instruction, however, some of the goals stating what students will know and be able to do include inflexible means of communication. Thus, Universal Design for Learning was emphasized in the TQP secondary model to better support not only students with disabilities, but other students who also have differing learning needs (e.g., academically gifted, learners at risk for dropping out, ESL students).

An emphasis on UDL in secondary classrooms can be very different than in elementary and middle grades classrooms. For this reason, we added not only emphasis on UDL, but an additional emphasis on Content Enhancement Routines, which have been empirically validated to promote learning, understanding, and remembering of critical content for high school students (Boudah, Lenz, Schumaker & Deshler, 2008; Boudah, Lenz, Bulgren, Schumaker & Deshler, 2000; Deshler, Schumaker & Woodruff, 2004).

The design team developed a two-part model, incorporating model design elements, as shown in Figures 1 and 2.Figure 1 shows the four major model partners: teacher education faculty, secondary teachers, arts and sciences faculty, and instructional coaches. University partners included faculty from Arts & Sciences and Teacher Education (history/social studies, English, math and science education). Based on our desire to address student needs from all populations, we also included faculty specialists in the areas of English as a Second Language, Universal Design for Learning, educational technology, and secondary literacy.

Figure 1: Relationships between Reform Team Members

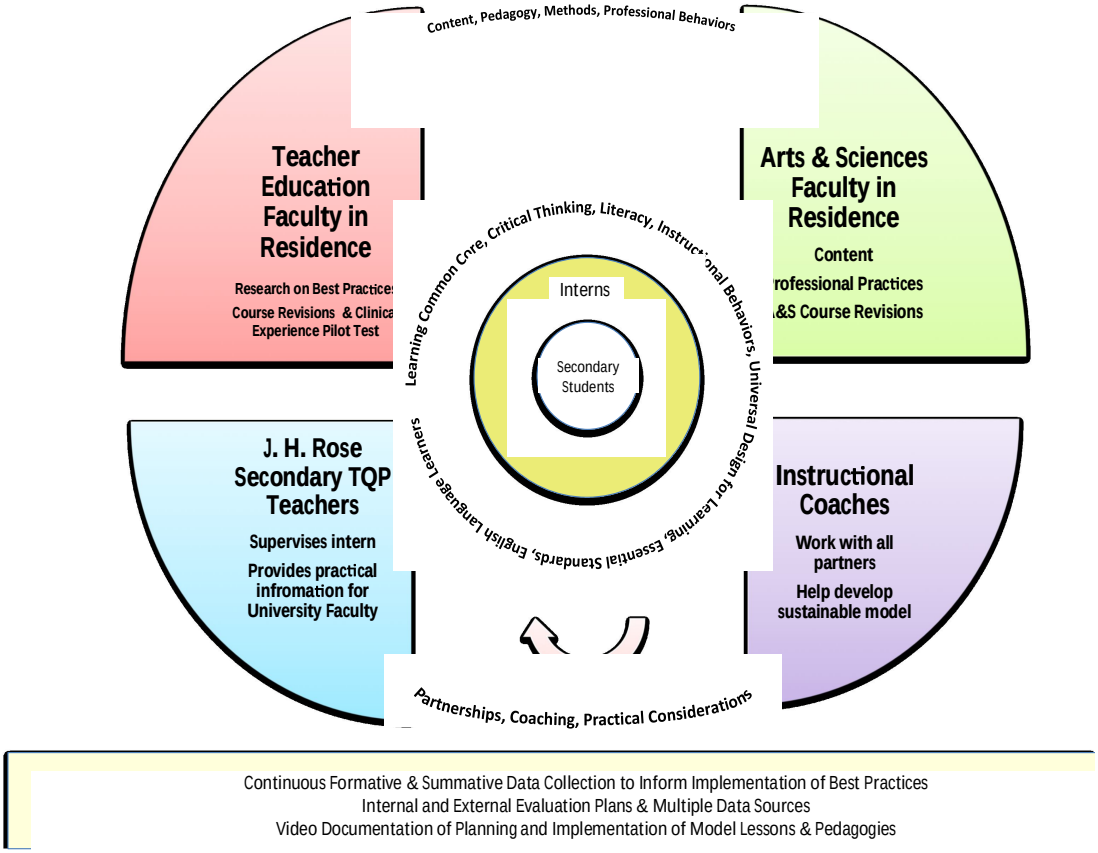
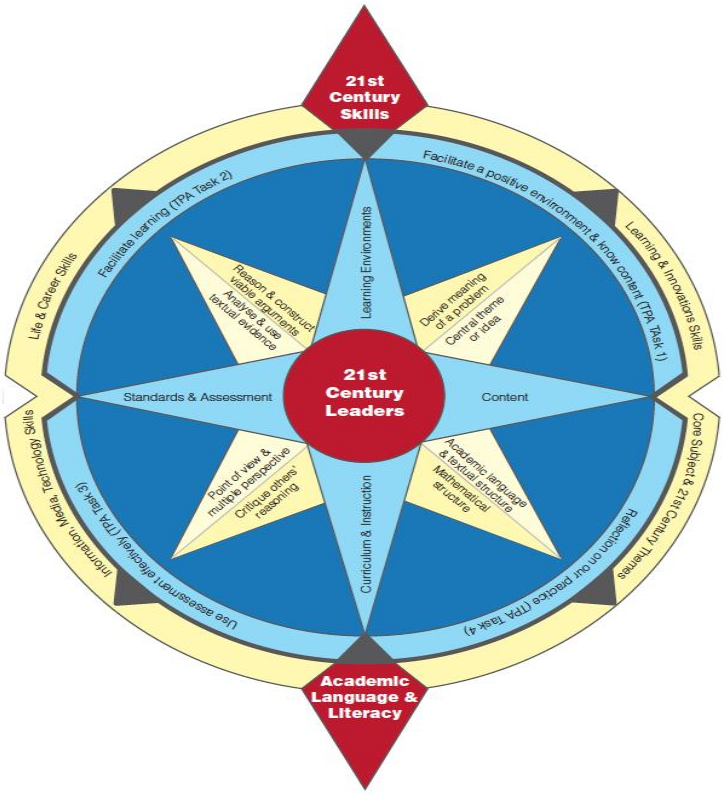


Figure 2 is an attempt to consolidate all of the conceptual elements of curriculum reform addressed. In Figure 2, the middle of the compass represents the central focus of the TQP secondary reform project and East Carolina University's vision of teacher candidate development: teacher leaders. The cardinal directions on the compass are aligned with the Partnership for 21st Century Skills (2011), and they include learning environments, content, curriculum and instruction, and standards and assessment. The beige sides of the ordinal directions represent literacy standards for reading, writing, listening, and speaking, while the yellow sides reflect the standards for mathematics. The outer circle contains elements drawn from the Framework for 21st Century Learning that represent the skills, knowledge, expertise, and literacy needed by today's leaders. The inside blue circle lists all of the edTPA[1]tasks (AACTE, 2013) ECU students are required to complete.

[1]Stanford University partnered with the American Association of Colleges for Teacher Education to develop and share the Teacher Performance Assessment, now known as the edTPA. Through edTPA teacher preparation programs can "access a multiple-measure assessment system aligned to state and national standards – including Common Core State Standards and the Interstate Teacher Assessment Support Consortium (InTASC) – that can guide the development of curriculum and practice around the common goal of making sure new teachers are able to teach each student effectively and improve student achievement" (about edTPA, http://edtpa.aacte.org/).

Figure 2: The New Directions Compass Rose for ECU Secondary Teacher Education Reform



Activities

To begin to operationalize the secondary partnership model, we held a series of focus group interviews with teachers in a high-need urban high school, as well as discussions with the district's key administrators and the principal of the high school. The high school participants eagerly volunteered to become our project partners. Immediately following, in the summer of 2012, an institute was designed for all participants. University faculty from teacher education and arts and sciences, veteran high school teachers, and instructional coaches from partnering high schools met in content area teams. Specifically, this included teams from English education, history education, math education, and science education as well as teachers in those disciplines from the partnering high school. Faculty from ECU's College of Arts and Sciences also supported each of these teams. We formed a fifth team of COE faculty who would provide foundational support to the efforts of the other four teams during and after the institute, as consistent with the key elements of the model. This fifth team included university faculty from English as a New Language (ENL), literacy supports, Universal Design for Learning, and instructional technology.

The first part of the institute was devoted to intensive professional development in Common Core State Standards and 21st Century Learner goals. Pearson Professional Development representatives led this part of the institute, and assisted content area teams in selecting instructional units that they would develop. These activities were held in a neutral location, away from the respective campuses of all partners.

The third through fifth weeks of the summer institute were spent on the ECU Campus. First, university and school-based content area teams in the four primary disciplines of math, science, English/language arts, and social studies engaged in developing exemplary instructional units for their disciplines, incorporating CCSS and performance tasks. Each model unit began "with the end in mind." That is, instead of planning from a textbook, high school teachers and university professors chose final and interim performance tasks that guided lesson planning. Each unit was based on CCSS as well as North Carolina Essential Standards (NCES) that would be taught by the teachers at the partner high school.

There were five discipline area groups at work, and specialists who circulated across working groups to assure each group was able to include unit components that addressed UDL, ESL, literacy supports, and TPACK (or use of appropriate technologies).

Afterward, teacher education faculty spent two weeks by and across discipline areas revising courses for secondary teacher education majors, including instructional modules that addressed unit planning, using the model units as exemplars. Model units and teacher education instructional units were vetted internally and externally prior to implementation in teacher preparation courses and discipline specific courses at partner high schools.

First, teacher education faculty addressed senior year core courses. A total of approximately 1089 preservice teacher education students would complete redesigned classes integrated according to Common Core State Standards. This would include at least thirty-two sections of seven courses. Second, in English education, approximately 225 preservice teacher education students would complete seven senior and junior level methods courses that reflect CCSS. Third, in social studies education, over 150 preservice teacher education students would complete six senior and junior level methods courses that reflect CCSS. Fourth, in math education, approximately 66 preservice teacher education students would complete two senior and junior level methods courses that reflect CCSS. Last, in arts & sciences, approximately 66 preservice teacher education students would complete two senior and junior level courses that reflect CCSS, with tentative plans for work on a fourth course.

In the fall, as the partner high school teachers implemented their model units, the ECU secondary teacher education faculty, as well as Arts and Sciences faculty provided assistance and collected information and artifacts from those teachers. The feedback from teachers and their students further informed secondary teacher education faculty thinking on how to teach planning, instruction, and assessment in their methods courses.

Project Evaluation

The initial project evaluation included a number of documents, artifacts, and other forms of data. First, peer evaluations took place after model units (based on CCSS and 21st century skills) were drafted by the content area teams during the Curriculum Development Institute. These peer evaluations were conducted informally through discussions and the use of a rubric that included items from the Tri-State Quality Review Rubric (Achieve.org, 2013). This rubric has been used to check the alignment of lesson plans and units to the CCSS. Additionally, all of the model units were sent out to external reviewers from Pearson Professional Development.

Second, instructional materials and course syllabi were collected from secondary teacher education faculty to assess how unit planning modules had been revised after the Curriculum Development Institute. Third, teacher candidate-developed units were compared with those created by previous teacher candidates taught by participating university faculty prior to the partnership efforts. Fourth, syllabi from courses previously taught by secondary high school teachers were compared to newly revised syllabi from participating teachers. Fifth, participating high school teachers also provided student work products from delivery of the newly created model units. Collectively, these materials showed the difference between how instructors had previously taught and how they were teaching after the Curriculum Development Institute.

Sixth, video interviews were conducted with teacher education faculty, high school teachers, and high school students in which participants discussed the differences noted since the Curriculum Development Institute. Additional video footage is still being collected in both the high school and in ECU secondary content courses that demonstrate CCSS, project-based teaching, and the integration of instructional technology in the delivery of content.

Seventh, pre and post Curriculum Development Institute assessments measured participant knowledge of CCSS and 21st Century Skills, Project Based Planning, Universal Design for Learning, instructional technology, and literacy supports.

Outcomes

Knowledge Questionnaire

In planning the first two weeks of the Institute, the Pearson representatives assessed the knowledge of all participants, at our request. They discovered that of the 24 Institute participants, only 42% had read the CCSS and the appendices for their content area.

In the same questionnaire, they asked about days spent in particular topics of professional development over the last academic year (2011-12). Respondents noted that they had participated in professional development regarding the following:

- Response to intervention (8%)
- English Language Learners (4%)
- Differentiated instruction (34%)
- Common Core – Mathematics (34%)
- Common Core – Language Arts (52%)

Even those reporting a few days study in any of those areas reported they had had little follow-up training in learning to implement what they had learned. For example, 59% reported receiving some professional development in the area of technology integration, yet 64% reported no follow-up training in the implementation of the techniques.

When asked about the three topics that would most benefit them during the institute, 100% chose "Overview of Common Core State Standards (CCSS) for ELA" as their first choice. Following closely, a large majority noted that an overview of CCSS in Science, Math and History/Social Studies would be beneficial. In addition, the preferred methods for receiving PD in the selected topics were face–to-face workshops with follow-up days (41%), and embedded professional development in the classroom (modeling, coaching) (27%).

At the conclusion of the first week of the institute, all institute participants completed an online questionnaire that included specific knowledge and disposition items regarding the institute and its content. Six high school teachers, nine ECU faculty, and three school and district administrators completed the questionnaire. Most participants reported that, before the institute, they had heard of CCSS but knew little about them, or at least had an emerging understanding of CCSS. By the end of the institute, however, most participants indicated that they felt very knowledgeable about CCSS.

Finally, institute participants were asked two open-ended questions about what they liked best and least about the institute. Respondents overwhelmingly appreciated the opportunity to collaborate with colleagues within and outside their institutions. Respondents strongly indicated that they least liked the amount of lecture time, particularly when it seemed unclear or in conflict with other information presented.

Teacher Unit Development

During the second part of the summer institute, teachers and school administrators worked with ECU teacher education faculty to redesign regular and advanced high school classes to reflect CCSS. Changes were made in freshman English, world history, AP biology, AP environmental science, AP government, and freshman math. This constituted changes in at least seventeen sections of courses affecting the education of approximately 469 students (about 31% of the student body) during the first semester of the school year.

Teacher education faculty also reviewed units developed by classroom teachers. Based on preliminary analysis, teachers were still developing competence with regard to integrating CCSS in meaningful ways. For instance, in many of the units reviewed, teachers were developing competence with regard to clearer alignment of classroom activities with specific standards that produce direct, observable evidence of mastery or attainment of objectives/standards. Teachers were also developing competence with regard to employing appropriate pedagogical practices that support student comprehension when texts are complex, particularly practices that embody elements of Universal Design for Learning.

ECU Reform Outcomes

Course redesign has occurred in secondary teacher education, as well as in Arts and Sciences courses. Following are highlights of initial efforts by area.

History. In history education, one professor completely revised five methods courses to reflect CCSS. This immediately affected over 150 history education students, and this number will continue to grow. The professor has also created a "unit generator" that incorporates all of the design principles of the revision process, and continues to use it in his classes. The generator assures that the teacher candidates address all applicable CCSS and 21st Century components in their unit development.

In addition to this work, the history education professor has experimented with a "lab school" model. He has taught his methods courses in the high school, and has partnered with a history teacher who was able to explain her instructional decisions during the classes observed by teacher candidates. The model had some very positive outcomes, as documented by interviews with his students, documents with unit analysis maps and lesson plans, and video of interns and master teachers.

In addition to work on a "unit generator," a member of the faculty in the ECU history department has changed a foundational course. A second member of the history department has since joined project activities, and their work intersects strategically with the work of the history education program.

At the high school, three sections of the world history course were changed, and two sections of the AP government course were changed through the implementation of a model unit from the summer institute, as well as through interactions with the history education lab methods course. This affected over 150 high school students.

Science. Science education faculty completely revised the way that they teach unit and lesson planning, based on the pedagogy derived from the summer institute. This affected how they teach junior and senior level methods courses. It has also affected their MAT students in science education. For instance, faculty reported that they now spend a great deal of time teaching their students to use culminating and interim tasks to build instructional units, although some students still struggle with this. They have built modules into their courses that emphasize CCSS, explain the use of UDL, and require UDL to be evident in lesson and unit planning.

In addition, a science education faculty member worked intensively with a faculty member from the biology department, as well as a team of science teachers from the partner high school and their instructional coach. This led to several initiatives and the collection of artifacts that will be used on the TQP secondary resources website. In addition, the chair of the biology department at ECU has been spending time in science classrooms at the partner high school, working directly with students, providing students with experiences that help them understand what it means to be a scientist.

English. The English education faculty completely revised junior and senior level methods courses, as well as a number of other courses. A participating member of the faculty has continued to revise her introductory courses to incorporate the CCSS, and to demonstrate a number of instructional strategies learned through project activities. In addition to revising their courses and unit development modules (for methods courses) ECU faculty in English education have continued to work with English teachers at the partner high school to further CCSS unit development and implementation. Both of the English education instructors in the department report that they continue to use culminating and interim performance task planning in their unit development sequence with methods students.

English education instructors now also require that their students include a UDL component in each of their lessons, and they discuss UDL integration during conferences with students about their lessons. One of the English education professors reported that his courses looked very different: "For the first time in twelve years, there is a thoughtful and methodical planning sequence that the students are asked to participate in. This allows multiple occasions for professors to provide feedback before the final unit is presented." Moreover, one English professor remarked, "I am a better, more prepared methods instructor because of my experiences with TQP and my collaboration with high school teachers. My scaffolding of the unit planning experience is far richer! I have been unequivocally excited to be part of this important effort."

At the partner high school, there have been many changes in English classes, as a result of TQP activities. Collaboration between an English instructor from ECU and one from the high school proved very successful. The two developed several instructional units to implement across the academic year. They also worked in partnership with an English education intern in one high school class. In addition, as a result of her participation with the secondary TQP education reform project, an instructor in the English department at ECU taught an introductory course with a focus on teaching strategies and metacognition. They developed an online resource page with strategies to use in the classroom. They discussed their "pins" (education strategies) at the beginning of most classes, and students developed projects based on an instructional strategy.

Math. ECU faculty from the math education program designed web-based instructional materials based on implementation of model units implemented by math teachers at the partner high school.

Specialist Team. The ECU COE instructional technology specialist supported instructional technology implementation by both ECU faculty and teachers at the partner high school. A special education faculty member also collaborated with the partner high school to support UDL efforts. A foundations faculty member completely redesigned her senior level Learning, Motivation, and Assessment course and a MAT course to include modules on CCSS, UDL, and greater emphasis on diversity and assessment.

Discussion

In summary, evaluation survey data, school and university artifacts, and interviews with high school teachers and university faculty indicate:

- a significant increase in knowledge and ability to apply CCSS and Essential Standards to performance tasks and content;
- better understanding of Universal Design for Learning (UDL) concepts and how to incorporate them into curriculum;
- significant changes have occurred in teacher preparation courses at the university;
- appreciation for the development of and recognition of the value of strong working relationships between teachers, administrators, instructional coaches and local university faculty.

Designing Impactful Partnerships and Professional Development

While there may be clear areas where school improvement is sorely needed, when those areas are addressed, educators are typically criticized and put on the defensive (Knight, 2011). As a result, some teachers may become quite jaded and say things like, "I don't want to get on this bus; I'll just wait for the next one to come along, because another one always does." In other words, when reform efforts repeatedly fail, many take the stance that if they just wait a while, this one will soon end and another will begin. By contrast, a far more effective way to improve teacher education may be to increase collaboration between public school personnel and university content area specialists (Berry, 2010). Such collaboration became a key ingredient of ECU's secondary TQP project efforts, including the intentional nurturing of partnerships in a positive atmosphere conducive to creative production. According to Flint (2013, p.117), "bringing people of any age around to new ways of thinking requires that teachers… be patient, have a low need for control, a sense of humor, and the ability to quickly establish a mutually trusting relationship within an environment of psychological safety. Students have not always encountered such an environment in the past, so may come to us with fear, mistrust, or apathy from prior educational encounters and it is our job to invite them to learn in new ways."

In our approach to planning and conducting collaborative reform activities, we created and maintained a positive learning atmosphere that recognized all members as contributing to school and university improvement (NCATE, 2010). In addition, making the effort to create safe spaces helped prevent teacher participants' feeling threatened or their current work criticized. Moreover, by creating parity among the working partners during the learning and reform processes, we implemented a type of "instructional capacity building" (Simmons, 2011), allowing all participants to work and learn together toward a common goal.

We further encouraged both high school and university professionals to envision their classrooms as "learning labs," where they could use new learning to inform their own practice throughout the duration of the project. These collaborative and creative efforts were bolstered by ongoing professional development and coaching during the school year, as well as implementation and follow-up on products created during the summer institute.

ProjectsCurrentlyin Development

The ECU College of Education (COE) has already implemented several checkpoints at which our students develop materials that are uploaded to the electronic system (TRACDAT) aligned with the requirements of edTPA. Secondary students store a great deal of formative evaluation information in this repository. Secondary faculty are able to compare last year's submissions with this year's, after the implementation of their course reforms. The COE also aligns programs to requirements of accrediting bodies such as SACS and NCATE (now CAEP). There are also periodic reviews of student portfolios (now edTPA) by the North Carolina Department of Public Instruction. During the next evaluation in the seven-year cycle, we anticipate significant changes in the competencies of secondary teacher candidates as a result of our program efforts.

Faculty redesign teams are working with IT to create a resource website that will be used by secondary education faculty to support the revisions they've made to their course syllabi and, thereby, the work of their students in developing their professional knowledge in the areas of planning, instruction, and assessment. Many video examples, instructional items and artifacts of past work will be included.

A "unit generator" built a member of the ECU teacher education faculty continues to be revised and improved. It includes all facets CCSS implementation, including UDL. It is being used in a history education class, as well as other versions in other secondary education methods courses. The history education professor also has been teaching his methods students at the partner high school, working closely with a participating history teacher to teach his teacher candidates a way of presenting history that they have not experienced. These experiences are being video recorded.

Plans are currently in place for specific assistance to newly hired teachers during a one-time new teacher induction program presented by ECU faculty as well as local school coaches. ECU faculty members are providing teacher coaching throughout the first years of teaching. These new teachers carry with them the benefits of the revised teacher education curriculum and methods processes they experienced in their senior year at ECU.

During the summer institute, four Professional Learning Communities (PLCs) were launched, formed between ECU Arts and Sciences faculty, ECU secondary teacher education faculty, and faculty and instructional coaches at the participating high school. These groups have been meeting, with topics for each group identified during the first meetings, primarily by the high school faculty. The high school principal set aside priority time and resources during the school day to embed this work into school-wide improvement efforts.

Final Thoughts

Any success attributed to this project is based on these important elements: a) an up-front commitment by university faculty and classroom teachers, as well as an on-going, honest relationship; b) intensive and extensive efforts; c) building level support; d) financial resources (Boudah, Logan, & Greenwood, 2001). University educators first had to communicate a clear commitment to teachers in order for teachers to volunteer, independent of administrative commitment, and buy-in to the potential benefits of their commitment, given the historical skepticism toward university collaboration and research. It was essential that university educators were flexible about schedules and agendas, as well as which challenges to address within the school. Likewise, it was important for teachers to provide honest feedback about process, as well as their commitment to implement classroom interventions.

Intensive and extensive efforts included classroom demonstrations and coaching, as teachers tried out new techniques, consultation and debriefing during planning periods or after school hours. Still, the most intensive work occurred during group sessions where conversation facilitated contextualized interventions for classrooms. Furthermore, these formal and informal meetings occurred over an extensive period of time, across several months and over the course of more than a single school year.

Principal support was critical to result of this collaborative effort. At the outset, the school principal granted the university "outsiders" access to teachers and classrooms. Later, he participated in group meetings, and at multiple points in time, facilitated release time, opened building space, and validated teacher involvement in all aspects of the effort.

Intensive and extensive collaborations do not occur without cost. Grant funding provided capital for myriad activities, partial faculty salaries, purchasing or creating instructional materials, and other incidentals. Without the money, the intensive and extensive efforts described are not as likely to have occurred. Furthermore, without at least an initial infusion of funding, the level of collaboration involved probably cannot be easily replicated or scaled up in the future.

Finally, collaborations among teacher education, arts and sciences faculty, and public high school teachers are too far and few between. Indeed, survey data and video interviews from the participants of this collaboration indicate that none had previously experienced the rich interactions that result when university faculty work at-length and on equal footing with public school teachers and instructional coaches for the good of all of all students. In all honesty, intensive, extensive, and collaborative efforts may be impractical for many university educators, given other demands of their positions, and threatening for teachers who are uncomfortable with the risk of opening their classroom doors to an outsider. Nevertheless, these kinds of efforts may be just kind of assistance from which schools can benefit most.

Typical approaches to instructional change through professional development that is not well-matched to teacher needs, nor provides any collegial or on-going support are clearly insufficient for effectively addressing larger or more complex challenges that may exist, especially in high schools. Secondary instructional improvements must be anchored in teacher study groups where teachers can collaboratively and more effectively address the challenges of their practice in a more structured fashion with peers and university partners. Moreover, at a time of competition for limited resources in schools (i.e., when schools are asked to do more with less), schools must find efficacious and cost effective ways to improve teacher performance and student outcomes. Clearly, one option is through partnerships with university educators (Boudah, Logan, & Greenwood, 2001).

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