Subject specific pedagogy represents current efforts to integrate the learning of content with the learning of pedagogy—a goal that has attracted and eluded teacher educators for more than a century. Debate over the relationship of professional education courses and academic subjects began soon after the founding of the first U.S. normal school. One of the three curriculum models that competed for acceptance during this period was the professional treatment approach, which promoted integration of education and academics so that the goal of producing a trained teacher would be apparent in every course. For more than a decade Pennsylvania's teachers colleges tried and failed to develop a professional curriculum that combined instruction in academics with instruction in pedagogy. This failure may be attributed to several factors that continue to obscure reform and fuel debate. These factors include confusion over the meaning of professionalism; status concerns of educators; the place of teacher education in higher education; the role of national reports; and the question of research. Research on subject specific pedagogy can provide a basis for development of a more technical knowledge base in teaching, thus advancing the mission of successfully integrating subject knowledge and pedagogy. (IAH)
Introduction

Subject specific pedagogy represents current efforts to integrate the learning of content with the learning of pedagogy—a goal that has attracted and eluded teacher educators for more than a century. Debate over the relationship of professional education courses and academic subjects began soon after the founding of the first U.S. normal school. Essentially three curriculum models competed for acceptance in this early period. The most common divided courses in professional education from academic courses. Another approach, often favored by liberal arts colleges, omitted education courses, especially for the preparation of high school teachers. A third type promoted the integration of education and academics so that the goal of producing a trained teacher would be apparent in every course from mathematics to foreign languages.

This integrated model, often referred to as the professional treatment approach, re-emerged periodically as a progressive reform. The idea failed to be widely adopted in all of its previous forms including Pennsylvania's heroic attempt to reorganize the curriculum of its fourteen teachers colleges between 1920 and 1935. For more than a decade, these schools tried to develop a "professional" curriculum that combined instruction in academics with...
instruction in pedagogy. In spite of exceptional administrative support, the effort failed.²

In this history of Pennsylvania teacher education, the failure may be attributed to several factors that continue to obscure reform and fuel debate. These factors include confusion over the meaning of professionalism; status concerns of educators; the place of teacher education in higher education; the role of national reports; and the question of the research base. Given the current interest in subject specific pedagogy and the persistence of these unresolved and often unexamined issues, the question becomes are we ready for a change, even now?

The Pennsylvania Story

When the first U.S. normal schools changed to teachers colleges between 1900 and 1920, the Pennsylvania normals continued to reflect the social organization of another era. Although private ownership was unusual among state normal schools, Pennsylvania citizens had readily accepted an 1857 legislative act which set guidelines for private schools, owned by stockholders, to qualify for the title of "state" normal school and the right to license teachers. Between 1860 and 1880, small towns, sprinkled across Pennsylvania, founded the state normal schools. Public funds and state appointed trustees gradually found their ways into the
schools, but the strength of private stockholder control prevailed over the years. Consequently, the schools offered a wide variety of programs to suit their clientele. As in many western states, the Pennsylvania normals served as key secondary schools in their districts. The normal school in Slippery Rock incorporated the town's public high school until after 1920. Special courses in music, art, or business also attracted students who were, nonetheless, automatically enrolled in teaching methods courses to qualify for a state tuition aid plan. These activities transpired with little interference or direction from the state's department of public instruction. However, a series of financial scandals did attract attention and led to a 1911 legislative provision enabling Pennsylvania to buy and take control of the normals. Largely because of financial problems, one by one each normal school applied for takeover by the state.

As the last schools were purchased in 1919, national reports called for change and educators reacted. One report, the Ayre's index of public school systems served as a catalyst to reform by bestowing a low rank upon Pennsylvania. In response to the public and political criticism that followed, the governor appointed a new educational leader known for school reform in the neighboring state of New York. Superintendent Thomas E. Finegan took control immediately. Almost overnight, he transformed the
normal schools into college-level institutions with a new "professional" curriculum which required high school graduation for admission. Four vocationally oriented programs differentiated the curriculum: kindergarten-grade three; intermediate, grades four through six; rural; and junior high, grades seven through nine. Described as being of "college grade work," all courses, including the remaining general subjects such as English and mathematics, were to be taught from a "professional" point of view—that is all courses would somehow pertain to the work of the teacher. By September of 1920, school catalogs advertised the new admissions requirement and the new integrated curriculum.6

The introduction of the new plan involved another national report—the first major Carnegie Report on teacher education. When Finegan accepted the Pennsylvania superintendency he directed a committee to develop a new curriculum that was "an expression of the judgment of the leading authorities in the country on modern normal school courses." The committee followed Finegan's wishes to the letter by seeking advice from three university professors of education including Dr William C. Bagley of Teachers College, Columbia University.7

Bagley's role as the consultant on normal school curricula for the Carnegie Foundation for the Advancement of Teaching earned him the reputation as the national expert in the field. Although the Carnegie Foundation had been
founded to establish a pension plan for college faculty, the foundation pursued an additional agenda under the guidance of its president Henry S. Pritchett. Pritchett directed the foundation's activities toward systemizing education nationally and promoting formal education for the professions. His first major success came with the publication of the 1910 Flexner Report on medical education which brought national recognition to the foundation as an authority on professional education.

Other Carnegie reports followed in the fields of law, architecture, and engineering, all with the explicit goal of educational change and standardization. Originally, teaching was not one of the occupations to be studied, but after receiving many requests from public school systems, the foundation accepted Missouri's invitation to study its teacher training program and to make recommendations for this field. Led by William Learned and several university professors including Bagley, the foundation staff conducted the research in 1913. Published in 1920, the Missouri Study recommended the old professionalized treatment model of teacher training which maintained that "as far as possible, the distinction between courses in 'special methods of teaching' and courses in the subject-matter itself should be eliminated."

Based on this recommendation, Pennsylvania offered a version of this professional curriculum for approximately
fifteen years. While the Carnegie report served as a guide to the adoption of the professional curriculum, the report also played a part in its demise. The study gained support from research universities but stirred controversy and resentment among normal school and teachers college personnel who viewed it as a broad condemnation of their work and their institutions. The president of the National Council of Normal School Principals warned his friend and colleague Bagley to avoid discussing the study at the Council's 1921 meeting. He indicated that people were still "sore" and needed time to "cool" on the subject.11 As a result of this widespread animosity, the report's curricular recommendations were pointedly ignored by other normals and teachers colleges.12 Pennsylvania's aberrant plan thus had to be implemented in isolation.

In fact, unlike the Flexner medical school recommendation, the Carnegie teacher training approach lacked an existing successful program to use as a model. It also lacked research on the characteristics of a curriculum that combines the learning of content and pedagogy. As one principal noted in a letter to Bagley prior to the report's publication, the Missouri study reflected the foundation's views rather than findings based on research.13 It is not surprising, then, that aside from changes in course titles and program goals there is no evidence that an integrated approach ever existed in Pennsylvania.
The principal of one school noted in 1920 that although the printed curriculum was different, his school had not changed. Examination of catalogs at another school indicate that each school faculty independently developed the content of courses to be taught from a professional point of view. In the descriptions written for the new catalog, courses were said to be of "college grade." Aside from the many teaching methods courses, however, exactly how the courses would be professionalized was not clear. A mathematics instructor wrote: "All of the required work in mathematics is taught from the professional viewpoint." The history department was relabeled social studies and the first year of English Composition was said to be "similar to that offered in the freshman year of any college course." Throughout the 1920s implementation of the professionalized curriculum remained elusive and controversial. A letter written by one of the principals in 1926 reveals some of the confusion surrounding the notion. In discussing several courses, John Keith noted that the movement in the professionalized subject-matter treatment will help educators "overcome the hiatus between content and method courses and at the same time lessen the need for professional subjects." His vague description of a course called Educational Biology, however, shows how little had been accomplished in six years. He observed that "we have ... pretty well come to the conclusion that the student who begins a curriculum with
the idea of becoming a teacher should have his first
directly professional course in the rich field of
Educational Biology. It is an enormously rich field and is
not at all [a] laboratory star-fish-dissecting course. It
is a course which brings together ideas from the field of
biology and masses them in such a way as to give the basis
for understanding many of the fundamental problems of
education because such a course deals with the fundamental
problems of life and education has to deal with life.16

The inability to develop and explain even one course
parallels the difficulty even the most ardent proponents
experienced in defining the professionalized curriculum. In
his 1924 book entitled The Professional Treatment of
Subject Matter, Bagley's student Edgar Randolph tried at length.
He believed that the key to understanding and implementing a
professional treatment of subject-matter was a
"professional attitude" which meant that "the teacher of
teachers shall be so sensitive to the needs of the service
and so well acquainted with the characteristic pressures
upon the public school teacher that he will consciously
shape his instruction in the interest of both."1

Confusion caused by such vague descriptions was
exacerbated by the ambiguity surrounding the word
professional. A term that continues to evade a conclusive
definition, professional had many connotations
ranging from a synonym for paid worker to a college educated
public servant. As Larson explained, by 1920 professionalism had "become an ideology--not only an image which consciously inspires collective or individual efforts, but a mystification which unconsciously obscures real social structures and relations."18 In education the term was equally ambiguous, inspirational, and pervasive. However, as Pole noted, its pervasive acceptance in various forms by various factions helped to explain why the concept of professionalism "was so limited an instrument of substantive policy."19

Reaching far beyond its occupational origins, the appeal of professionalism addressed a mix of the aspirations, fears, and goals of both the reformists and those targeted for reform. The Carnegie Foundation's leadership viewed the professional approach in teacher education as a positive step toward their goal of structured, technical, and standardized training for all professions.20 In Pennsylvania, educational administrators promoted the new curriculum and certification requirements as a major step to professional status for the state's educators. In the September 1921 issue of the state's education journal, Principal John Keith proclaimed that the raised standards would go far to "make teaching a real profession."21 The state's administrators supported better pay and training for a professional teaching force, but they also expected professional teachers to be subordinate and nonunionized. During this era an entire school of Pennsylvania teachers was dismissed for the unprofessional activity of forming a chapter of the American Federation of
Teachers (AFT). In a 1920 letter one normal school principal warned a colleague against hiring a teacher known to be "infected with some of the ideas of the AFT" because this meant she was "far from being dependable and loyal"—two professional traits for teachers. Nonetheless, the notion of a professional curriculum apparently appealed to teachers who, as both Cremin and Tyack point out, often accepted and cooperated with the plans and goals of other interest groups in hope of raising their own status.

Ultimately, other status concerns ended the quest for a unique professional curriculum. Teacher educators had good reason to worry about their status as it related to their place within the nation's educational hierarchy. With the spread of the public high school, the normal schools had faced the possibility of extinction as superfluous secondary schools. The first normals to attain college status, initially a mid-western trend, had to fight university resistance to gain the right to grant degrees. The successful move to teachers college status meant survival but with the new title the colleges faced a new dilemma: how to maintain their distinct mission of training teachers while becoming fully recognized as colleges.

Although the Pennsylvania schools did not have to battle their entry into higher education, the same issues plagued them. President Lester Ade of West Chester State Teacher College noted that "in order to be recognized as
colleges these new institutions must set up standards that will give them recognition by the traditional colleges. The newcomer in the college field cannot set aside college conventions and expect recognition and approval."

Ade suggested that the answer was to maintain their teacher training mission just as schools of law or medicine, but to standardize entrance requirements, faculty teaching load, content of courses, academic preparation of faculty, etc., so that they "square with college standards."

The Pennsylvania teachers colleges gradually adopted many of these features. In addition to admitting only high school graduates, faculty teaching load was reduced and efforts made to hire instructors with more advanced degrees. Less substantive college influences were also apparent. Administrative staffs began to include a dean of instruction, deans of men and women, and a bursar. "Semester hours" were calculated to qualify for a "major" and, like the colleges, campus residence requirements went into effect.

By offering a vocationally oriented course of study, however, the Pennsylvania schools were out of line with the revered and widely adopted college curriculum that divided subjects by department. While Pennsylvania continued on an independent path, education associations such as the American Association of Teachers Colleges pressed for further uniformity among teacher training institutions. The
greatest pressure to adopt traditional college curricula, however, came from the accreditation power of the Association of Colleges and Secondary Schools of the Middle States and Maryland, organized in 1887 as the College Association of Pennsylvania. The annual publication of the association's list of accredited high schools in the region grew in importance in the 1930s. The president of Indiana State Teachers College explained the reason for its importance at a 1935 meeting. He noted that accreditation as a Middle States college had not "been a very serious problem in the past because the number of graduates in the secondary curriculum was small, but as this group of graduates increases, . . . the matter will become more complicated." The complication was that high schools would not hire teachers college graduates. High school teachers educated at teachers colleges were marked as a "minus" by Middle States investigators. No more than one-fourth of a high school's teachers were permitted to have state teachers college degrees in accredited districts. And, high school graduates from nonaccredited public schools were being forced to take the College Board Exams to get into regional colleges.

An additional threat to the legitimacy of the teachers college came from graduate school admissions officers who continued to question teachers college courses and graduates. Adding to the admissions dilemma, several major studies between 1927 and 1936 indicated that teachers
college students consistently scored lower than liberal arts students on intelligence and achievement tests. In response to these external pressures, Pennsylvania's teachers colleges revised their own admissions requirements to set up specific subject requirements similar to college admission standards. They also revised their curriculum to follow the liberal arts model with two years of general academics.

In relinquishing the four year vocational orientation, the schools' presidents rationalized that they were not trying "to get away from the professional point of view." They were "merely meeting the criticism of the liberal arts colleges that the amount of professional work compared to the content is excessive." One teachers college president observed that the first two years would differ from the junior college model because they would be "in a professional institution, in a professional atmosphere, and the students will receive something of the professional character of the courses." In spite of these protests, by 1937 the Pennsylvania teachers college curriculum was similar to undergraduate programs in higher education across the United States.

In summary, the Pennsylvania schools were pressured first to accept the professional approach and then to give it up. Although the idea held some appeal, especially to those interested in achieving professional status, the recommended curriculum suffered from an inadequate research
base. No one knew how to define, describe, or explain it. Nonetheless, Pennsylvania educators suspended their disbelief, plunged in, and hoped for the best. Their efforts were not entirely futile. Although an integrated curriculum never materialized, the schools did reap the benefit of quickly redefining themselves as college level institutions through the new approach. The Carnegie Foundation also furthered its mission in spite of the failure of its recommended teacher training curriculum. The gradual capitulation to the more common college model and to accreditation processes ironically served the foundation's general quest for standardized, uniform, and advanced training in the professions.

The recent reform movement bears some startling similarities to these past efforts. Many current changes emerged from the influence of national reports—presented and favored by the Carnegie Foundation and by research universities. As with the 1920 Missouri study, the current reforms met resistance from the schools targeted for change and many recommendations received criticism for representing special interests rather than research findings. Again, the reform agenda has brought debate, frustration, and suspicion. Burdened by self-doubt—derived in part through their backdoor entry into higher education—many state universities again felt pressured by national report constituencies and accreditation agencies. A combination of concern over the
teaching occupation's professional status and the place of teacher training in higher education has again lent support to the adoption of untested or controversial approaches.

These recommended approaches include collaboration with the arts and sciences, an increase in the coursework devoted to subject areas, cuts in education courses, and alternate certification routes. In the midst of these curriculum controversies, the notion of an integrated approach to content and pedagogy has re-emerged with a legacy of failure and misunderstanding. Growing out of recent studies on how a teacher thinks, the thrust of the research on subject specific pedagogy is to reveal processes that teachers should know in order to help students learn subjects such as algebra or biology. In addition to factual content, the subject's conceptual frameworks and modes of inquiry have been identified as types of subject matter knowledge which deserve attention. Related issues involve the teacher's beliefs about the field of knowledge and the ways in which students learn the subject and/or misconceive it.

The research on subject specific pedagogy is important because it could truly alter our understanding of the task of teaching and therefore of how we must reorganize teacher education. Are we ready for such a change? Probably not. But we can still learn from the past by recognizing that most reform recommendations and conflicts are rooted in philosophical perspectives. To avoid another failed attempt to integrate subject and pedagogy we can hold both our hasty recommendations and
status concerns in check while placing our hopes and resources into research. With a better understanding of our past, we can look to the future of subject specific pedagogy as a real possibility for a more technical knowledge base in teaching.

NOTES


5. The fourteenth school, Cheyney State Normal School, followed a different development because of its history as a school exclusively for blacks. It was brought into the state system in 1920.


11. John Keith to William Bagley, 8 January 1920, Correspondence of President's Office. Special Collections, Indiana University of Pennsylvania Library, 1914-40 (hereafter cited as Correspondence).

12. Lagemann, 187.

13. John Keith to William Bagley, 8 January 1920, Correspondence.

14. John Keith to Dr. Coulter, 21 December 1920, Correspondence.


16. John Keith to George Hilliard, 5 January 1926, Correspondence.

17. Randolph, 128-129.


23. David Felmley to John Keith, 26 July 1920, Correspondence.


31. Proceedings, 10 July 1936.
