



CURRICULUM MAPPING TO INTEGRATE CLINICAL EXPERIENCES IN TEACHER EDUCATION

(ÖĞRETMEN EĞİTİMİNE KLİNİK DENEYİMLERİ ENTEGRE ETMEK İÇİN
MÜFRADAT HARİTASI)

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ABSTRACT

Mapping, a tool used in K-12 environments to create curricular coherence, has been infrequently applied in the higher education setting although it is ideally suited to integrate theory and practice. This study reports on the ways curriculum mapping supported faculty in re-tooling their courses to create consistency of clinical experiences in four teacher education programs. Document analysis of the curriculum mapping process indicates that it served as a useful means to create structured opportunities for faculty to engage in developing well-defined clinical activities, along with tools that facilitate vertical and horizontal course activity sequencing.

Keywords: Clinical experiences, pre-service teacher education, curriculum design, faculty development.

ÖZ

K-12 çevrelerinde müfredat uyumu yaratmak için kullanılan bir araç olan haritalama, teori ve pratiği birbirine bağlamada uygun bir araç olmasına rağmen, yüksek öğretim ortamlarında seyrek olarak uygulanmaktadır. Bu çalışma, dört adet öğretmen eğitimi programının klinik deneyimleri arasında bir tutarlılık yaratmak için yeniden-araçlandırma dahilinde akademisyenlerce desteklenen müfredat haritalandırma yollarını rapor etmektedir. Müfredat haritalandırma aşamasının belge analizleri, bu haritalandırmanın, akademisyenler için yapılandırılmış fırsatların, gelişmekte olan iyi tanımlanmış klinik faaliyetlerine yatay ve dikey ders aktiveleri akışını geliştiren araçlar yoluyla entegre edilebilmesi için faydalı bir araç olduğunu göstermektedir.

Anahtar Sözcükler: Klinik deneyimler, hizmet öncesi öğretmen eğitimi, müfredat tasarımı, akademisyen gelişimi.

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INTRODUCTION

Across the United States, institutions of teacher education are being called upon to provide “embedded, extended clinical preparation” (American Association of Colleges of Teacher Education [AACTE], 2010, p. 16) in order to better ready teachers at the point of graduation (Cibulka, 2009; Goe, Bell, & Little, 2008). In medicine, nursing, and psychology, “clinical” (field, authentic, site-based, supervised) practice is seen as essential in the preparation of graduates, and is interwoven with students’ textbook learning. Unfortunately, in traditional teacher education, there is a critical lack of well-integrated clinical experiences, for a variety of reasons. First, direct involvement with teacher candidates in clinical experiences is generally “outsourced” to part-time faculty, graduate students, or administrative staff who have little or no training in teacher development and little voice in creating institutional change (Zeichner, 2010, p. 90). This creates a separation between the university and the schools, and between full time faculty and teachers in their clinical experience settings (Beck & Kosnick, 2002). Second, since faculty traditionally tend to work in isolation, encouraged to research and publish alone, the culture of higher education focuses on individual, rather than collective interests (Tierney, 1999). This then hinders collaborative planning, which is necessary if full-time faculty are to coordinate with part-time colleagues about teacher candidates’ clinical experiences. Third, with clinical experiences usually situated in the final semester of a program, teacher candidates may not be given sufficient time to practice and develop needed teaching skills. This can result in teacher candidates’ mastering academic course content but being ineffective in the classroom, due to insufficient opportunities to practice skills during their training (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2008). All of these factors have led to the inability of many teacher education programs to connect theory with practice (Feiman-Nemser, 2001; Hennessy & Deaney, 2009). It is clear that institutions of teacher education must address the clinical experiences components of their programs to prevent future teacher education graduates from complaining about a lack of cohesion among courses, pre-service experiences, and needed job skills (Blanton & Pugach, 2007).

Programs that successfully integrate clinical experiences are beginning to recognize the need to provide different support for teacher candidates at different phases of their program (Gabriel, 2010), and at differing levels of clinical immersion, and as occur in alternative certification programs (Smith & Evans, 2008), organizing these experiences for continuity in a focused, developmental manner. The expectations for what teacher candidates should know and be able to do gradually increase from start to conclusion of the program, rather than placing actual classroom practice only during student teaching. In addition, course, field, and program experiences consist of

repeated opportunities to scaffold and model desired practices. Each skill is expected to take time to develop, and teacher candidates are able to view and practice teaching from the very start of their program. “Effective teacher preparation programs view field experiences as an extension of coursework...as a tool for candidates to translate theory into practice and advance their learning to a higher level” (Hardman, 2009, p. 584). In addition, there are multiple pathways to evaluate teacher candidate progress, including benchmarks, rubrics for courses and field experiences, and a final program portfolio, many of which are used for program evaluation and programmatic changes (AACTE, 2010; Darling-Hammond, 2006).

The purpose of this paper is to share results of an innovative approach addressing the need to integrate clinical experiences in teacher preparation. At one institution of higher education, curriculum mapping was used to engage faculty members in the development of an integrated clinical program. Both the process and the products developed by faculty regarding this use of curriculum mapping are of relevance to those educational settings in which field or clinical work is often disconnected from traditional class work; to those administrators in higher education looking to organize faculty working groups to redesign curricula, and to those interested in how curriculum mapping may be a useful tool in higher education.

METHODOLOGY

In order to more fully integrate clinical experiences with course activities in one school of education, four faculty teams from distinct teacher preparation programs volunteered to examine their current course sequences and clinical experience hours and activities, in order to consider changes or alternative approaches.

These faculty teams represented graduate teacher preparation programs in Adolescent/Secondary English, Learning Disabilities (LD), and Teaching English to Speakers of Other Languages (TESOL) K-12, as well as an undergraduate program in Childhood/Elementary Education. Faculty teams from each of these programs who actively participated in this re-design project ranged from 2-6 members, for a total of 14 full-time and adjunct faculty, both clinical and non-clinical. The approach to this research was to examine documents before, during and after the curriculum mapping process in order to identify the products and procedures that took place, and examine in what ways faculty integrated clinical experiences into their programs. By making these elements salient, it would be possible to later critically examine their impact on teacher candidates. As the project progressed over the course of academic year 2009-2010, the process was documented through written reflections, field notes, and presentations. All of the work samples were collected and marked with version numbers, and then analyzed according to

the changes that had been made using the principles of document analysis (Weber, 1990). Themes that emerged were color-coded and tracked over the continuum of the year-long process, in the tradition of grounded theory (Bogdan & Biklen, 1998). Analysis of these changes was focused around these research questions:

1. What changes did faculty in the four programs make to integrate clinical experiences?
2. What role did curriculum mapping play in the process?

Setting and Participants

The four teacher education programs in this study are housed within a large school of education (2,800 students) in an urban, public college that is part of a large university system in the northeastern United States. Field placement of the teacher candidates in the program is coordinated by a clinical experience director, who is primarily the interface between the college and the preK-12th grade public school partners across the city. More than 300 teacher candidates are active in some type of clinical experience, either pre-student teaching or student teaching/practicum, each semester. Additionally, most teacher candidates must work and therefore take classes on a part-time basis.

CURRICULUM MAPPING AS AN APPROACH TO PROGRAM RE-DESIGN

Jacobs (1997) developed curriculum mapping as a way for K-12 teachers and administrators to organize and sequence curriculum in the schools. The process involves asking stakeholders to report on what they actually do, then share that information within and across grade levels. As a result, gaps and redundancies are identified and maps (graphically organized information) are formed which serve as valuable guides for the teachers as well as students and parents.

Curriculum mapping has begun to be used in higher education settings, with positive results. One of the greatest affordances of curriculum mapping in higher education is the collaborative interaction that it fosters. In Uchiyama and Radin's (2009) qualitative analysis of the impact of curriculum mapping in their school of education, the collaborative practices needed in order to complete the map carried over into greater cross-departmental dialogue, research, and scholarly work, as well as greater job satisfaction. Sumsion and Goodfellow (2004), in the redesign of their early childhood program, point out that while the process of curriculum mapping at their school of education "initially evoked overtones of instrumentalism and managerialism, and thus was approached with some skepticism" (p. 342), they found that when the process was shaped and directed by faculty, it created opportunities and a structure to guide inquiry into program design.

Curriculum Mapping Phases

The process for analyzing the mapping process of the four programs was informed by the “phases” in curriculum mapping at the higher education level conducted by Bath, Smith, Stein and Swann (2004). The first phase involves faculty in brainstorming, followed by consensus building, as to the attributes they wish to see in their graduates. Next, an examination of course content occurs to see how these attributes might be addressed in individual courses. Then, the program as a whole is looked at in regards to the sequence of courses in terms of developing desired attributes. At the final phase, an investigation of what needs to be changed or modified takes place. To these phases was added a preliminary one, that of examining survey results posted by graduates of these programs to understand what areas they felt were strong or weak in their preparation, as well as a culminating phase in which the process for implementing and maintaining the curriculum map would be examined.

FINDINGS

Phase 1-Identifying End-of-Program Outcomes

Faculty working groups began by attempting to codify the knowledge, skills, and dispositions they wished to see at the conclusion of their programs. This was an iterative process that took place face-to-face and online over a period of a few months, as participating faculty worked both in their respective program areas as well as across programs. In generating these specific, desired outcomes, faculty worked to answer the question: What should our teacher candidates know and be able to do in a classroom at the mid-program mark and at the end of their program? (See Table 1)

Table 1. Sample Faculty-Identified Desired Mid-and End-of-Program Performance Indicators

By mid-program, teacher candidates are able to:	By the end of the program, teacher candidates are also able to:
Plan a lesson for a particular group of learners	Plan a differentiated lesson
Develop a week-long unit of connected lessons	Develop a month-long unit of connected lessons
Collaborate with other teacher candidates to design instruction for a particular learner	Collaborate with school-based personnel to design instruction for a particular learner

Phase 2-Analysis of Course Content and Activities

This phase involved faculty in retrieving syllabi for every section of every course offered in the program, and comparing and analyzing their

content, looking for gaps and redundancies. Each course was examined in light of the desired course outcomes, the clinical (field or lab-school) based activities that would support those desired outcomes, the specialized professional association (SPA) standards it would address, and 2-3 technology competencies that would also be met, a school-wide graduation requirement. In some cases, one syllabus had been used across several sections of a course, but in other cases it was found that each section of a course had been using a different syllabus. Therefore, the task of tying clinical experiences to courses became a wider one, that of aligning syllabi. Faculty then spent time working on individual courses, and came back to their program groups to share their re-worked course syllabi. Gaps and redundancies were highlighted and eliminated, and the areas considered weak from the end-of-program teacher candidate surveys, such as readiness to work with English language learners, students with learning disabilities, working with technology, and collaborating with colleagues and families, were addressed through targeted clinical tasks now written into the syllabi.

Phase 3-Program Scope and Sequence

After the faculty members within a program had re-worked their individual courses into “anchor” syllabi, which would be replicated across sections of a course, the ideal sequencing of courses was discussed. In this phase, consideration was made regarding how these clinical activities could spiral in nature, building in complexity and challenge across the program. In Sumsion and Goodfellow’s (2004) curriculum mapping of an early childhood education program, once specific skills were outlined for each course, they were then organized by whether the skill would be: (1) Assumed; (2) Encouraged; (3) Modeled for students; (4) Explicitly taught to students; (5) Required for students to demonstrate; or (6) Evaluated (p. 333). Some examples appear in Table 2.

Table 2. Examples of Developmental Tasks for Clinical Experiences

Phase 1 of Program	Phase 2 of Program	Phase 3 of Program
Observe a parent-teacher conference	Participate in a parent-teacher conference (alone if teacher of record)	Develop a parent-involvement component to unit of study
Teach a single activity to a group or class, as planned by the cooperating teacher	Teach a single activity to a group or class, as planned independently	Teach a complete lesson to a class, as planned independently

Phase 4-Reviewing the Completed Map

In this phase, faculty were able to put back together into their maps the horizontally, aligned sections of their courses with associated clinical experiences and the vertically, articulated course sequence with progressive expectations for skill development. By examining program courses before and after the mapping project, it was clear that there had been other substantial changes made as well (See Table 3).

Table 3. Examples of Pre-to Post-Program Changes from Curriculum Mapping

Original Sequence of Courses	Post Re-Design Curriculum Map
Courses allotted fieldwork hours without defining the tasks associated with those hours	Set activities and tasks described which would occur in clinical settings for each course.
Observation of teaching first done in student teaching/practicum course	Observation of teaching to be conducted prior to student teaching/practicum.
Possibility for teacher candidate to be enrolled in a course without being simultaneously in field experience	No possibility for teacher candidate to be in a course without related field experience; every course has fieldwork hours.
Focus on special education, parent and community involvement, and collaborative teaching practices weak or inconsistent across program	Targeted field and course activities to address these areas of practice.

Phase 5-Implementation and Maintenance

This phase involved curriculum change proposals, continuing meetings with program faculty, and information provided to teacher candidates to communicate the changes that had been proposed in order to ensure that the curriculum maps were followed. Several tools developed as by-products of the mapping process were intended to support the move towards integrated clinical experiences (See Table 4). With these supports, changes made to the curriculum could be implemented and maintained over the next few years, and have a positive impact on teacher candidate classroom readiness.

Table 4. Tools to Support Integration of Clinical Experiences

Product:	Principles guiding faculty working teams:
Common lesson planning format and spiraled assignments	Course and clinical experiences consist of repeated opportunities to analyze, view and perform desired practices. Using a common lesson planning format ensures that teacher candidates will have multiple opportunities to develop their skills in instructional design.
Anchor syllabi with defined clinical tasks	Clinical experiences are not seen as tangential, but rather, essential to the teacher candidate's development. Full-time and adjunct faculty both centralize clinically-based activities in their courses. Exit competencies must be clearly articulated for each course in terms of knowledge and teaching skills. These syllabi are then replicated across sections to maintain consistency across multiple course sections.
Modified observation rubric for pre-student teaching	Teacher candidates are observed teaching well before student teaching/practicum and receive feedback through video and live observation.
E-Portfolio	There are ongoing ways to evaluate teacher candidate progress, including benchmarks, rubrics for courses and field experiences, and a final program portfolio, many of which are used for program evaluation and programmatic changes.
Online supervisor orientation and website	Regular communication, both online and face-to-face, is necessary among program faculty teaching courses, conducting clinical supervision, clinical experience directors, and school site personnel, as well as clear expectations for what the clinical supervisor will emphasize and reinforce when making observation visits.

DISCUSSION

These programs' redesign initiative supports the value of curriculum mapping as a simple yet powerful organizing framework that can lead to the improvement in clinical experiences for teacher candidates. Faculty members formerly unsure of how their course "fit" into the sequence of experiences of teacher candidates or how their course's assigned clinical hours led to teaching skills, are beginning to more clearly see connections between their course activities and teacher candidate program outcomes, thus heightening each faculty member's sense of obligation to one another and to the teacher candidate's developing skills. The map itself becomes a program's anchor, and as long as mapping can become a habit, it can support program coherence.

Working across traditional program boundaries afforded extensive opportunities for cross-departmental collaborations and an exchange of ideas. Particularly relevant was the involvement of both TESOL and Learning Disabilities program faculty, who have specialized knowledge of the populations (ELLs and children with special needs) for whom teacher candidates need greater training.

The challenges to curriculum mapping are and will continue to be the lack of time and resources for full and adjunct faculty members to meet together, and the demands of higher education which tend to pull faculty towards individual agendas rather than collective ones. One side benefit of curriculum mapping is the collaboration that can ensue as faculty meet together and share observations and ideas for improving their courses. Curriculum mapping develops essential products—those that can guide instruction; yet the mapping process itself builds a community with a central goal: preparing teacher candidates to be successful in their classrooms. Results of this project are in line with those of Uchiyama and Radin (2009) and who also noted that curriculum mapping was a process that facilitated faculty collaboration. Sumsion and Goodfellow's (2004) demarcation of teacher skills in each activity on a continuum from being introduced, practiced, to mastery is an area that was not fully addressed in these program's revisions, but are an important lens through which faculty may assess the purpose of their assignments. Often, teacher candidates are assessed on skills that were never developed, or are assumed to have skills that were never taught.

RECOMMENDATIONS

For teacher preparation programs looking to ensure greater consistency of experience for teacher candidates' in terms of the scope, depth, and type of clinical activities, faculty may choose to structure the process of program re-design using curriculum mapping. If so, they may wish to consider:

1. Elicit volunteer faculty within particular program areas, rather than mandating the process from the top-down. Encourage the participation of clinical faculty, cooperating teachers, or school-based personnel who regularly interact with the program.
2. Begin by simply sharing what clinical and course activities currently exist by laying out syllabi and walking through what a teacher candidate would experience by going through the sequence of course and clinical activities. Consider what activities are repeated purposefully and grade upwards in complexity, which activities are simply redundant, and which activities never take place.

3. Designate a lead faculty member on each course, to avoid multiple sections of a course having disparate activities. Retreat to redesign or modify the clinical activities for each course.
4. Meet again as a program faculty and again lay out syllabi and “walk through” the redesigned clinical activity sequence. Continue in this phase until faculty are satisfied that key skills will have a chance to spiral and develop, and that all courses are connected to clinical practice.
5. Once changes are made, continue to monitor and revisit the curriculum maps periodically. Making them available to all new students, school-based mentors, and adjunct faculty will also help support the consistency of these experiences for teacher candidates.

CONCLUSION

Further research into the quality, quantity, and type of clinical experiences that lead to teaching skills needs to be conducted. Not enough is known about what teacher candidates need to do in terms of direct teaching and observation to build sufficient capacity to teach in today’s K-12 classrooms. More research into clinical supervision is also needed, since so many universities invest significant financial resources into hiring clinical supervisors. Also, the nature of feedback that might be most beneficial to build teacher candidate expertise, what type of foci supervisors preparing today’s teachers should have, and how to mentor clinical supervisors should be explored. How clinical experiences lead to improved K-12 student outcomes is the ultimate question, and one that teacher education programs should be prepared to answer.

REFERENCES

- American Association of Colleges of Teacher Education. (2010). *The clinical preparation of teachers: A policy brief*. Washington, D.C.: AACTE. Retrieved from http://www.aacte.org/pdf/Government_Relations/Clinical%20Prep%20Paper_03-11-2010.pdf.
- Bath, D., Smith, C., Stein, S., & Swann, R. (2004). Beyond mapping and embedding graduate attributes: Bringing together quality assurance and action learning to create a validated and living curriculum. *Higher Education Research and Development*, 23, 313-328.
- Beck, C., & Kosnick, C. (2002). Professors and the practicum: Involvement of university faculty in preservice practicum supervision. *Journal of Teacher Education*, 53(1), 6-19.
- Blanton, L. P., & Pugach, M. (2007). *Collaborative programs in general and special teacher education: An action guide for higher education and*

- state policymakers*. Washington, D.C.: Center for Improving Teacher Quality, Chief State School Officers.
- Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research for education*. Needham Heights, MA: Allyn & Bacon.
- Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2008). *Teacher preparation and student achievement*. Albany, NY: Teacher Policy Research, SUNY-Albany.
- Cibulka, J. G. (2009). *Meeting urgent national needs in P-12 education: Improving relevance, evidence, and performance in teacher preparation*. National Council for Accreditation of Teacher Education. Retrieved from http://www.ncate.org/public/062309_TeacherEdRequirements.asp
- Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055.
- Gabriel, R. (2010). The case for differentiated professional support: Toward a phase theory of teacher development. *Journal of Curriculum and Instruction*, 4(1): 86-95.
- Goe, L., Bell, C., & Little, O. (2008). *Approaches to evaluating teacher effectiveness: A research synthesis*. Washington DC: National Comprehensive Center for Teacher Quality. Retrieved on June 18, 2009, from <http://www.tqsource.org/publications/EvaluatingTeachEffectiveness.pdf>
- Hardman, M. (2009). Redesigning the preparation of all teachers within the framework of an integrated program model. *Teaching and Teacher Education*, 25, 583-587.
- Hennessy, S., & Deaney, R. (2009). "Intermediate theory" building: Integrating multiple teacher and researcher perspectives through in-depth video analysis of pedagogic strategies. *Teachers College Record*, 111(7), 1753-1795.
- Jacobs, H. H. (1997). *Mapping the big picture: Integrating curriculum and assessment K-12*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Smith, E., & Evans, C. (2008). Providing effective mentoring for alternate route beginning teachers. *The Teacher Educator*, 43, 249-278.
- Sumsion, J., & Goodfellow, J. (2004). Identifying generic skills through curriculum mapping: A critical evaluation. *Higher Education Research and Development*, 23, 329-346.
- Tierney, W. G. (1999). Faculty productivity and academic culture. In W. G. Tierney (Ed.), *Faculty productivity: Facts, fictions, and issues* (pp. 39–54). New York, NY: Falmer Press.

- Uchiyama, K. P., & Radin, J. L. (2009). Curriculum mapping in higher education: A vehicle for collaboration. *Innovations in Higher Education, 33*, 271-280.
- Weber, R. P. (1990). *Basic content analysis* (2nd ed). Newbury Park, CA: Sage Publications.
- Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college- and university- based teacher education. *Journal of Teacher Education, 61*(1-2), 89-99.