"An Effective and Agonizing Way to Learn": Backwards Design and New Teachers' Preparation for Planning Curriculum

By Nelson Graff

The past decade or so has seen increasing emphasis in K-12 schools around the country on standards and standardized testing, particularly since the advent of the No Child Left Behind law in 2001. At the same time, our knowledge about student learning has become increasingly complex, creating a potential conflict for conscientious teachers—administrators push for the kinds of teaching that translate directly into better test results, yet teachers also work to engage diverse students in the kinds of learning and thinking required for our contemporary era. This situation calls for teachers to have a sophisticated knowledge both of their content and of how to guide students in learning that content, what Shulman (1986) calls "pedagogical content knowledge." Yet some research on new teachers suggests that new teachers feel "lost at sea" when confronting the complexities of planning curriculum (Kaufman et al., 2002).

Nelson Graff is an assistant professor of English in the College of Humanities at San Francisco State University, San Francisco, California.

In the tradition of self-study and the Scholarship of Teaching and Learning (SoTL), this article describes a pedagogical approach that has met with some success in my own work with pre-service teachers. Although I began with a broad inquiry into the effectiveness of my own preparation of future teachers, I discuss here a narrow range of the knowledge, skills, and dispositions

related to effective teaching—the ability to design and plan curriculum. I suggest that using the Wiggins and McTighe "Backwards Design" framework has helped my former students develop the skills to plan curriculum.

Preparation to Plan on Entering Teaching

Research on new teachers' transitions into teaching has ranged widely, including general surveys of new teachers' sense of their own preparation (California State University, 2007; Housego, 1992, 1994; Veenman, 1984), longitudinal studies of individual new teachers' development (Bickmore et al., 2005; Bullough, 1989; Bullough et. al., 1992; Bullough & Baughman, 1995; Grossman, et al., 2000), comparisons of the feelings of preparation or the competence of new teachers who attended traditional teacher education programs versus those who gained certification through alternative means (Darling-Hammond, Chung, & Frelow, 2002; Grossman, 1990), and examinations of new teachers' attempts to practice the conceptual frameworks—particularly constructivism—they learned in their teacher education programs (Bickmore, Smagorinsky, & O'Donnell, 2005; Cook et al., 2002; Grossman et al., 2000; Smagorinsky, Cook, & Johnson, 2003; Smagorinsky et al, 2004; Valencia et al., 2006).

Despite this range of studies, and despite the overwhelming sense in a recent survey of working English teachers that what makes a teacher highly qualified is knowledge of strategies for teaching literature and writing (Dudley-Marling et al., 2006), little specific research has been done on new teachers' ability to plan instruction. Some of the little research that has been done shows some new teachers feeling confident about curriculum. Other studies show many new teachers struggling with curriculum either on a basic level—figuring out what and how to teach—or on a more conceptual level—negotiating the curriculum frameworks, pre-packaged programs, and district guidelines that they find in their new positions.

A few studies have found that new teachers feel well prepared for planning curriculum in general terms. For instance, Housego, who found weakness in new teachers' comfort "reflect[ing] on various instructional strategies" (1994, p. 369), nevertheless found that almost half of her respondents identified planning as one of the areas in which they felt most prepared. Likewise, Darling-Hammond, Chung, and Frelow (2002) found that teachers who were prepared in traditional teacher-education programs felt well prepared in "core tasks of teacher such as designing instruction and curriculum" (p. 290). And two of the four students in the study by Grossman and her colleagues (2000) were able, because of their knowledge and sense of their own competence, to adapt the materials in pre-packaged programs to suit their pedagogical goals. Both Housego and Darling-Hammond, Chung, and Frelow are reporting results of survey research, which may help to explain their general results—on average, teachers may well feel fairly well prepared for these domains of practice. Bullough found, in his longitudinal study of Kerrie (1989), that

her confidence increased over time, and her understanding of what it meant to plan curriculum changed as well, "from a concern with activities to time, with purposes taken for granted. As the year progressed, her thinking changed, however: Activities were seen in the light of purposes and student ability and interests" (p. 141).

Though the above studies show teachers feeling confident about their preparation for curriculum and planning in general, other researchers, perhaps most notably Kauffman and his colleagues (2002), have reported on new teachers' lack of preparation for curriculum planning. These authors note that new teachers in Massachusetts feel "lost at sea" with little sense of what to teach and how to teach it. According to Kauffmann et al., these new teachers feel the need for more curricular guidance and structured assistance. Grossman and Thompson (2004) similarly note that "curriculum materials . . . represent important tools for learning to teach" (p. 7) for new teachers who "had not yet developed the pedagogical content knowledge to feel confident making curricular decisions on their own" (p. 5). While other studies have been less comprehensive in their claims about new teachers' lack of preparation, they have found particular areas in which new teachers feel unprepared for designing curriculum; for instance, Grossman and her colleagues (2000) reported that new teachers struggling with teaching writing were strongly influenced by pre-packaged curriculum materials such as Jane Schaffer's "Teaching the Multiparagraph Essay." And Housego (1994) found that new teachers felt unprepared "to evaluate curriculum materials from the standpoint of current guidelines" (p. 357-358).

Conceptual Framework

Curriculum Planning

So what knowledge and skills are required for teachers to plan curriculum effectively? It is clear that teachers must be able to negotiate the needs of the students in front of them, the institutional requirements and material circumstances of their contexts, and their knowledge of content to decide what to teach, and how and when to teach it. Kauffmann and his colleagues (2002) define curriculum in a way that may clarify this description: "a complete curriculum specifies content, skills, or topics for teachers to cover; suggests a timeline; and incorporates a particular approach or offers instructional materials" (p. 274-5), with the implication that teachers who can create their own curricula are prepared to develop timelines, plan activities, gather resources, and make decisions about both what and how to teach. They create "long-term objectives" and develop "a coherent plan to address" those objectives (p. 278); and decide "which details to emphasize and how much depth to pursue" (p. 282). Yet this knowledge is not knowledge about content alone. Drawing from Ball (1996), I recognize that "the enacted curriculum is actually jointly constructed by teachers, students, and materials in particular contexts" (p. 7), suggesting that the ability to plan goes beyond knowledge of subject matter or state standards to include knowledge of students and particular institutions.

Creating curricula, or planning, therefore requires knowledge of students and their learning, what Shulman (1986) calls "general pedagogical knowledge" and knowledge of the content to be taught, and the ability to analyze institutional constraints. For the purposes of focusing the discussion on the work I do with my students in a subject-matter methods class, I will focus on the knowledge and skills appropriate to that class, thus specific to transforming the content knowledge with which prospective teachers ostensibly enter the credential program (at San Francisco State University, candidates for the credential program must demonstrate subject matter competency before entering the program) into materials for teaching.

In describing the relationship between "content knowledge and general pedagogical knowledge," Shulman (1986) describes "three categories of content knowledge: (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular knowledge" (p. 9). As the credential program does not address subject matter content knowledge, I will focus on pedagogical content knowledge and curricular knowledge.

I will use Shulman's own description of pedagogical content knowledge as having three components:

> for the most regularly taught topics in one's subject area, . . . the ways of representing and formulating the subject that make it comprehensible to others[;] . . . the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons [and] knowledge of the strategies most likely to be fruitful in reorganizing the understanding of learners. (pp. 9-10)

And Shulman describes curricular knowledge as both "horizontal," knowledge of "the curriculum materials under study by his or her students in other subjects they are studying at the same time," and "vertical," "familiarity with the topics and issues that have been and will be taught in the same subject area during the preceding and later years in school" (p. 10).

Helping prospective teachers transform the knowledge of their academic subjects with which they enter a credential program into pedagogical content knowledge and curricular knowledge, therefore, means helping them to figure out the topics "most regularly taught" in their disciplines, useful representations of the ideas that are central to those topics, and strategies for exploring what students understand and misunderstand about those topics. This task also involves teaching new content—the horizontal and vertical curriculum of schools, with which teacher candidates have varied experiences.

Backwards Design

The backwards design framework as described by Wiggins and McTighe (1995, 2005) provides a structure with which to help prospective teachers in a content methods course to begin to transform their content knowledge into pedagogical

content knowledge and to develop sensitivity to both the horizontal and vertical curriculum as Shulman describes it. It is a framework I have applied to my own syllabi, using essential questions to guide students' reading and our discussion for each week of the class (Graff 2005) and constantly focusing discussions of pedagogical techniques on questions about transfer of learning, about *why* the techniques mattered or had value to students beyond any single instance. In what follows, I first describe the backwards design framework generally, then contrast it with traditional teaching, using an example from my work teaching the framework to demonstrate how it may help teachers develop this knowledge and skill.

In their book, *Understanding by Design*, and the workshops they lead, Wiggins and McTighe argue that teachers have for too long favored either disconnected coverage of material or hands-on activities that leave open questions about what students learn from the activities. They claim these approaches result from an overemphasis on either coverage or activities in planning and recommend, as a cure, designing instruction "backwards." Wiggins and McTighe (1998) describe the backwards design process as follows: "one starts with the end—the desired results . . . –and then derives the curriculum from the evidence of learning (performances) called for by the standard and the teaching needed to equip students to perform" (p. 8).

Wiggins and McTighe are hardly the only (or even the first) to define backwards design in this way; in a general way, their approach matches Taylor (cited in Milner and Milner, 2008, p. 18), and, in texts for English teachers specifically, Smagorinsky (2002, 2008). As Milner and Milner (2008) note in their text for pre-service teachers, the Wiggins and McTighe framework has the benefit of being both systematic and flexible. It differs from these other approaches, importantly, in its central focus on what Wiggins and McTighe call "big ideas," "a concept, theme, or issue that gives meaning and connection to discrete facts and skills" (Wiggins & McTighe, 2005, p. 5) and "enduring understandings," which are "The specific inferences, based on big ideas, that have lasting value beyond the classroom" (Wiggins & McTighe, 2005, p. 342). Using the backwards design approach involves distinguishing among three levels of knowledge, what Wiggins and McTighe (2005) discuss as "worth being familiar with," "important to know and be able to do," and "big ideas and core tasks" (p. 71).

Their emphasis with enduring understandings, big ideas, and core tasks is on learning that *transfers*, that students can take beyond a particular lesson into new learning experiences in school and outside of school (Wiggins, 2009, personal communication). The quest for these "enduring understandings" forms a central component of the first stage of unit planning in their model, "Defining ends." Once a teacher has defined the ends, she can then "determine what evidence" would show that students had met those ends, and finally plan activities that would help students develop the skills and knowledge to produce the evidence. Wiggins and McTighe have further argued that teachers can approach planning in any order as long as they aim for coherence of all three components of their units.

Table 1 shows a contrast between the questions a teacher might ask herself in a traditional model of planning and backwards design. By "traditional planning," I mean both the kind of planning I learned to do as a new teacher and the kind my students—prospective English teachers coming often from English majors—tend to want to do.

Because of the current widespread concern with state standards, I will further illustrate this planning approach by beginning with an example from the California English/Language Arts standards. Take, for instance, this 9th grade standard under the strand "Literary Response and analysis," a strand of English teaching that would be familiar to most secondary English teachers: "3.4 Determine characters' traits by what the characters say about themselves in narration, dialogue, dramatic monologue, and soliloquy" (*Framework*, p. 232). This is a standard teachers can address when we teach almost any work of drama or prose fiction. And while it seems obvious to English teachers that we should help students develop this skill, it is easy to teach this skill without attending to the larger domains of meaning it implies. Thus, we may help students develop charts of character traits for characters in particular works of literature and test them on those character traits. We may generate test questions that ask students to list or describe character traits, or

Table 1

	Traditional Planning	Backwards Design
Stage 1	What literature do I want to (or am I required to) teach?	What enduring understandings about literacy and life inform the standards at this grade level and will engage my particular students?
Stage 2	What literary terms does this work lend itself to teaching? What activities would be fun/interesting/useful/ engaging with this literature? What standards do I address when I teach students this work?	What evidence would enable me to reliably infer that students have uncovered those understandings?
Stage 3	How should I test that students have read and understood the literature? What kinds of writing do we have to do?	What skills and knowledge do students need to develop in order to successfully produce that evidence? What resources (e.g. literature) and activities will help students develop that knowledge and those skills?

even to explain the connections between character behavior and inferences about character traits such as "What does George's treatment of Lenny (in *Of Mice and Men*) reveal about George's character?"

When I see prospective teachers moving in that direction, I ask them, "What do you want students to be able to do when they have completely forgotten everything about *Of Mice and Men* (or *Romeo and Juliet* or *Song of Solomon*)?" Using the backwards design framework, I ask students to interrogate this (and other) standards in order to frame their work as English teachers. I ask them to look for connections among the standards, *enduring understandings* that inform the standards and that will help students transfer their learning in particular classes into future classes and their lives beyond school. In this way, I am implicitly asking them to move from subject matter knowledge to pedagogical content knowledge and to consider both the *horizontal* and *vertical curricula* into which the standards for their grade level fit. Some questions I ask my students to consider when interrogating such a standard are, "Why does this matter? Why is this a standard? What understandings about literature and life make this important? How will learning this help students read and write? How do adults (and adolescents) in the world apply this skill/strategy/knowledge in their daily lives?"

My students find these questions challenging. To them, it is obvious that students should be able to describe George and Lenny, and perhaps only slightly less obvious that they should be able to infer character traits. These skills matter because they are important to reading literature, and students should know about these characters because George and Lenny are important to the novel. So I ask prospective teachers about the students who do not imagine themselves reading literature outside of school: How will this help them? How will you justify learning this to them? How will you help them see its importance?

With some effort, students come to enduring understandings such as *Literature mirrors life* or *Readers apply the same strategies to understanding stories in literature as they apply to understanding the stories of their lives*. Or they may prefer questions such as *How do we come to know ourselves and others*? Notice that these understandings or questions focus not on the particular work but on big ideas of literature and life and on connections between the particular work and other works or students' lives. Seeing the learning in this way, teachers realize that a question like "What do we know about George" will not provide good evidence that students have learned. Instead, teachers may ask students to read a new story and infer character traits about a character in that story. Or teachers may ask students to describe a character they have not discussed as a class and explain their process of inferring character traits. Depending on the wider focus of their instruction, teachers might even have students write short stories or personal narratives and explain their choices for representing characters. If teachers ask their students to do this for autobiographical narratives, they are even helping students to apply the skills of reading literature to understanding their lives.

And once prospective teachers have thought clearly about what it will look like for students to demonstrate understanding, as by inferring character traits in new contexts, they teach differently. They see that they need to draw on students' everyday practices of inferring personality traits and focus *not on George's or Lenny's* characteristics as much as on *how readers come to know* George and Lenny. In this way, working through this framework in a Curriculum and Instruction class, prospective teachers deepen understandings of content knowledge that they experienced as students and consider what it means to teach such knowledge, transforming it into pedagogical content knowledge.

The Scholarship of Teaching and Learning (SoTL) and Self-study

Shulman (1999) argues that in order to "take learning seriously," we must "take teaching seriously," making public and available for scholarly critique our pedagogical practices. By studying our own classrooms and our own students' learning, he argues, we not only improve our own teaching but build knowledge of teaching and learning in a wider community of scholars. In teacher-education research, this kind of investigation is often called self-study. Cochran-Smith (2005) notes a trend toward such research in teacher education: "one major development in teacher education research in the US and in many other countries has been the growth of research on practice conducted by teacher education practitioners themselves and disseminated in journals, books, and conferences across the world" (p. 221). While such research may be criticized as less generalizable or rigorous than larger-scale experimental studies, these authors and others (e.g., Huber & Hutchings, 2005; Smith, 2010) argue for its value.

Methods

Data Collection

The results for this inquiry come from a broad and very open-ended consideration of the effectiveness of the Curriculum and Instruction sequence I teach, guided by the following two research questions:

(1) How do new teachers describe their teaching lives?

(2) How well do they feel that the Curriculum and Instruction (C&I) courses in their credential program prepared them for those lives?

While these research questions were quite broad, because the backwards design framework came up frequently in these new teachers' talk about the program, I attempt to answer more narrowly constructed questions in this analysis:

(1) To what extent and in what ways has the backwards design framework been useful to new teachers in negotiating their teaching lives?

(2) What aspects of the framework and my teaching of the framework were particularly helpful?

Because my interest was in gathering feedback to understand and improve my own teaching, I cast a very broad net. I invited, by email, each of the 93 students who had graduated from the C&I classes I taught between 2004 and 2006 to participate in focus group discussions about their teaching lives and preparation. Of the 93 graduates, 8 were excluded because the email addresses I had for them were bad or they were not teaching. Of those that remained, 25 agreed to participate, and 21 eventually did participate in focus groups. In order to maximize the amount of feedback I could gather, and because some of the remaining 60 expressed a willingness to respond by email, I sent the same questions that the focus groups addressed, in open-ended form, to 17 of those teachers. Nine of them responded, giving me feedback of some sort from 30 graduates out of 85 eligible (35%). The breakdown by cohort group follows: Graduates from Fall 2004—2 (6.7% of graduates), Spring 2005—6 (26% of graduates), Fall 2005—3 (33.3% of graduates), Spring 2006—13 (38% of graduates), Fall 2006—6 (66.7% of graduates). Of the teachers who responded, 19 were women, 11 men; 24 were Caucasian, six people of color. These participants formed five focus groups, which ranged in size from three participants to seven.

Focus groups made it possible for participants to talk, in a relatively unstructured manner, about their experiences teaching and their recollections of the credential program. As Athanases and Martin (2006), citing Fern (2001) note, "because focus groups use responses and reflections shared in small cohort settings, they can uncover trends obscured by consensus in surveys and aid theorizing about phenomena" (p. 629). The sessions were divided into two halves, of about an hour each. During the first segment, I asked teachers simply to discuss their teaching lives—the ups and downs, the successes and hardships. These discussions happened without any intervention from me. I hoped, through these discussions, to learn about their teaching situations and the ways those situations differed from my own secondary teaching experience. During the second half, I asked candidates to consider their preparation as teachers, asking both what they felt well prepared to do when they began teaching and what they felt ill prepared to do, giving them time to discuss each question before moving on to the next and occasionally following up teacher comments to ask for clarification. I followed up these questions by presenting teachers with an adaptation of a survey done annually since 2004 by the chancellor's office of the California State University system, asking most of the groups simply to look over the survey and add any insights it inspired. Finally, I asked teachers to recall activities or readings from their C&I classes and express how connected those activities or readings seemed to their teaching lives, prompting them with copies of the syllabi of the courses they took.

While email responses to open-ended questions lacked the depth of the focus-group discussions, and those teachers did not receive the prompting that colleagues

in a focus group might have offered, providing teachers the option of responding by email did allow me to gather feedback from teachers from whom I would otherwise not have heard.

Data Analysis

I began by examining teachers' answers to the questions, "What did you feel particularly well prepared to do when you began teaching," and "What did you feel particularly ill prepared to do when you began teaching," coding their answers using the method of constant comparison (Strauss, 1987) and examining the remaining transcripts (more general discussions of participants' teaching lives) for corroborating evidence. What emerged from this open coding was an emphasis across focus groups on planning as an area of strong preparation. For this reason, and because I was interested in teachers' preparation in the Curriculum and Instruction classes in particular, I focused my coding for this analysis on teachers' discussions of curriculum, "what and how to teach" (Kauffmann et al., 2002). I coded as "curriculum" any comments about curriculum, lesson or unit planning, lessons, assignments/homework, or texts. I then coded these as "positive" or "negative" as regarded the teacher's sense of preparation to plan.

Because it seemed to me I was hearing backwards design principles mentioned frequently, I also specifically noted comments teachers made referring explicitly or implicitly to the backwards design model from Wiggins and McTighe and connections to the contexts in which these new teachers were teaching. Such comments including using the terms from Wiggins and McTighe such as "big ideas" or "essential questions" or mentioning principles that we discussed related to the framework, such as beginning with the ends in mind.

Results

Teachers' comments in the focus groups suggested strongly both that they felt prepared for planning and curriculum and that learning the backwards design framework helped them to feel so. Of the 30 teachers who participated either in focus groups or by email, 26 commented in some way on their preparation for planning and curriculum. While a minority of teachers (8 of 26, 31%) who made comments about their preparation for planning suggested they felt ill prepared for it, most (18 of 26, 69%) discussed feeling prepared for planning. Of these 26 teachers, a large majority (17/26 65%) referred specifically to the principles of backwards design in their discussion of their preparation to plan, with some teachers who felt prepared to plan not mentioning it (5/18, 28%) and others who felt unprepared in practical terms mentioning it as providing useful principles for planning (4/8, 50%). Beyond their own individual planning, some teachers (8/26, 31%) discussed their ability to evaluate the materials they encountered in the schools, largely from their colleagues, but also their own materials and their own practice.

In the sections that follow, I will discuss what it meant for some teachers

to claim they felt ill prepared for the curriculum and planning they faced in the schools, what it meant for those teachers who felt well prepared and how they spoke of the backwards design framework in that regard, and what teachers said about their abilities to evaluate the materials available to them in schools and their own practice. In these sections, I quote representative comments from individual teachers, all of whose names are pseudonyms. Finally, I will draw on teachers' comments to explore what about my teaching of this framework made it, as Nancy—a teacher who felt she lacked the practical skills for planning—put it, "an effective and agonizing way to learn."

Feeling unprepared to plan—
"Good curricular theoretical know-how,"
but not enough practical advice (8/26=31%)

As has been found fairly often in research on teacher preparation (e.g, Smagorinsky et al, 2004), teachers describe a disjunction between the theory and practices they learned in the credential program and their experiences in student teaching and in their teaching lives. For example, Nancy commented, "Well, I feel like I got a lot of like really solid, um, thorough base of how, what good teaching is; however, I didn't really. I feel like last year in student teaching I wasn't practicing those techniques because I was forced to do other things, but now I'm going back to all those things." Others, like Frank, felt keenly the absence of practical strategies. He noted, "I got so much good curricular theoretical know how here but as far as management and real practical advice is concerned? I don't think I got enough of that."

Some of the comments of teachers also echoed the discoveries made by Ball (1996, 2000) and Grossman and Thompson (2004) about the importance of district frameworks and pre-packaged programs for helping new teachers who feel insecure about curriculum. Nancy, for instance, noted of her school's insistence on teaching the Jane Schaffer method, "And I want to learn, I want to learn the method and try to use it. I don't think I'm the best writing teacher, so I'm willing to give it a shot." And Dorothy discussed using the *Shining Star* series extensively with her English Language Learners. In both of these cases, as Grossman suggests, it is teachers' uncertainty about their own competence in teaching—Nancy in terms of writing, Dorothy in terms of English Language Learners—that led to their dependence on the pre-packaged materials.

Those who felt unprepared wanted specific things: a clear sense of grade-level expectations, more specific than the standards; specific strategies; even concrete ways to plan and pace their time. One email respondent noted the need for, "Successful lesson plans from experienced teachers." And David noted that "I simply don't know what an eighth grade vocabulary list versus a 10th grade vocabulary list is." This relates closely with Kauffmann and colleagues' subjects (2002), who reported not knowing what to teach at various levels. It also relates to the curricular

knowledge Shulman describes teachers needing, what students should be learning at any given grade level. Yet David also noted the challenge of such leveled lists "when you have third grade up to 12th grade reading skills and speaking skills in your 10th grade class." He continued after stating this concern, though, with a statement that speaks to how these teachers did feel prepared, in terms of the process of planning and addressing the needs of their students:

> The way I've gotten around that is I don't actually do specific vocab words. I've been pounding the idea of the three steps to contextual vocabulary: step one, you break the word apart; step two, you break the sentence apart; step three, you break the paragraph slash whole text apart, and so it's the idea of this is how you guess better.

Feeling prepared to plan—
"I can bridge the gap" (18/26 69%)

This sense of having a process by which to figure out what students needed and plan to meet those needs pervaded the comments of those teachers who felt prepared to plan. Paula, for instance, discussed adapting her instruction after discovering that her students did not know how to write an outline: "The first big writing thing was, OK, you're just going to write an outline for a paper. You're not writing the paper; you're just writing the outline. And giving them three theses to choose from, and giving them their sources and saying, OK, work with this stuff; this is a finite amount of material." Both she and Alex attributed this notion of planning to meet students' needs largely to the backwards design framework. Alex, for instance, said, "I knew the standards, but now that I know what they want, and what I want, and what the students need, I can bridge the gap." When Alex focuses on "what they [the standards] want, and what I want," he is addressing *ends*, the place Wiggins and McTighe suggest to begin planning.

Most of those who explicitly mentioned the backwards design framework did so in terms of the process it gave them for planning instruction, noting as one email respondent did, "I need to know what I want my students to know and why I want them to know it before I teach it to them." This focus, on not only what students need to know but why they need to know it is at the heart of the backwards design framework, and it is this knowledge of what is important for students to know and be able to do that led David, as he claims above, to focus not on specific vocabulary words but on the process of inferring the meaning of new vocabulary words encountered in context. David and others also talked about the importance of students knowing why they were studying English and why they were learning particular skills or information.

Other teachers commented on the long-term focus that forms a key part of the backwards design framework. Paula, for instance, noted the usefulness of "This idea of having a bigger picture that you wanted to get to from a day to day thing."

And she explained the consequence of this planning in her classes: "I got positive feedback from the kids about how organized I seemed and I always seemed to think I knew where I was going, so they thought that they knew where they were going." Likewise, Mary contrasted her ability to plan for the long-term with the other newcomers at her school: "I felt very confident that I had a good framework for [unit planning], and a good starting point, whereas I've seen other teachers who are just treading water every day and trying not to drown and don't really know what to do tomorrow." Those other teachers more closely match the teachers with whom Kauffmann and colleagues (2002) talked. Ella and Amy discussed their confidence in building units and the impact that had on their teaching. Ella commented, "I spent all of last summer building units, and my year this year has been so much better." In contrast to the teachers with whom Kauffman and colleagues (2002) worked, then, candidates from this program felt generally well prepared to plan and generate the bulk of their own curriculum.

Feeling prepared to go beyond simply planning—
"It made me think a lot about using assessments in my planning" (8/26 31%)

A skill that goes beyond the basics of planning and leads toward becoming a reflective educator is the ability to make decisions based on the systematic collection of evidence. The orientation toward using that skill is central to the backwards design framework, but only three new teachers—Mike, Anthony, and David—spoke specifically about assessing their own teaching and using assessment to guide their teaching. Mike noted, "I feel really well prepared to evaluate my first year after I'm done with it. I've got a lot of really great like strategies for taking a look at the stuff that I was able to put together and, in a hurry, when I was tired, and make better for next time," and he followed this comment with the one above, that taking a look at his teaching "made [him] think a lot about using assessments in [his] planning." Both Anthony and David made similar comments, noting as well that they realized their teaching was not going as they wanted it to and that they had the tools—through backwards design—to improve it. Anthony describes making his judgment about the need to revise his teaching based on student learning: "I found myself kind of just burning through stories and novels, but then I found that the students were not picking up on the big ideas that I was hoping that they would pick up on."

While others did not discuss using assessments in their planning or evaluating their own work, they still used what they had learned from the backwards design framework to evaluate the quality of materials available to them from their colleagues. David, Charles, Mary, and others also referred to their evaluation of curriculum materials whether theirs or others in terms of the kinds of teachers they wanted to be. Mary and Charles framed these comments in terms of evaluating materials used commonly in their teaching environments as coming from an instructional

paradigm that they saw as ineffective, the transmission model of teaching: Mary commented, for instance, "I knew what I had to do in order to not be the worksheet teacher."

Reflecting on the teaching and learning of backwards design—"An effective and agonizing way to learn"

The new teachers' comments above make clear what they took from learning the backwards design framework into their teaching—the knowledge of a process for lesson and unit planning, an emphasis on the importance of understanding both what students would learn and why, and a conceptual framework for evaluating both their own teaching and the curricular materials they encountered in the schools. Of all the comments they made, though, the one that has haunted me has been Nancy's comment calling backwards design "an effective and agonizing way to learn" because it so neatly sums up my own sense from teaching the framework, that it has a tremendous amount to offer and that prospective teachers struggle with it. Although I did not ask the focus groups to discuss my teaching specifically, I want to reflect on what about my teaching of the framework may have been effective, and what parts of it prospective teachers seem to have found challenging. In describing this, I will be drawing largely on my recollections of the classes, with some reference both to other research on teacher preparation and to the new teachers' comments during the focus groups.

Smagorinsky and his colleagues (2003) describe the importance of program coherence for prospective teachers' concept development, referring to the varying definitions of constructivism that candidates in credential programs experienced. A similar coherence in the C&I classes helped to make the teaching of backwards design effective. One teacher noted, "It helped to have you always asking, 'Why are you doing this?'" That question, and the focus on the teachers' goals for student learning informed discussions of long-term planning, unit planning, and daily lesson planning. Because we began the semester with this concept, investigating the "big ideas" behind the California ELA standards and relating those big ideas to the teaching of literature, reading, writing, and language, candidates had constant reinforcement of the need to focus on ends and to think about the meaningful connections among choices of content, activities, and students' lives. That this perspective is echoed so widely suggests that this emphasis made its way into new teachers' notions of good teaching.

The same teacher who noted the helpfulness of thinking about the question "Why are you doing this" hinted at one of the reasons new teachers may have found this way of learning agonizing when she wrote, "I didn't finish the course with answers." Because this approach does not emphasize "best practices" but instead deciding the best practices for the particular purposes of the teacher in a particular context, teachers may have felt there were too many questions and not

enough answers, as suggested by one new teacher's request for "Successful lesson plans from experienced teachers."

From my own memory of teaching the class, though, there is another reason candidates found this process agonizing. Sal commented, in his focus group, about his memory of "grappling with so much . . . the central question . . . what the heck is an essential question." The kind of thinking this framework asks of teachers was new to them and requires a deep understanding of their content of a kind not necessarily emphasized in their previous coursework. This deep understanding and interrogation is a necessary part of developing what Shulman describes as "pedagogical content knowledge" (1986, p. 9). Shulman notes, "The teacher need not only understand *that* something is so; the teacher must further understand *why* it is so" (p. 9). Even candidates who had majored in English as undergraduates and who had established their subject matter competency through course work struggled with the deep understanding of literature, reading processes, composing processes, and language necessary to make decisions about what understandings and inquiries are central, and many of the candidates had established their subject matter knowledge by a mostly-multiple-choice examination, so they were missing this deeper understanding entirely and struggled against their lack of rich experience with English when they had to wrestle with essential questions and big ideas.

Conclusion

These results must be considered preliminary for any number of reasons. I was working with a relatively small pool of teachers from a single credential program, all in English. Investigations with more teachers in a variety of credential programs and a variety of disciplines would be necessary to more rigorously support the value of the backwards design framework. Also, the free-flowing nature of the focus group discussions left me without the opportunity to closely investigate teachers' ideas and experiences. Likewise, despite the connections among teachers' senses of their own preparation, teacher self-efficacy, and teacher performance (Darling-Hammond, Chung, & Frelow, 2002), the comments of these teachers reflect their thoughts about what they do—or those thoughts they were willing to express among their colleagues and in front of their former teacher. Research that follows the teachers into the schools and examines not only their practice in the schools but the consequences of that practice for student learning will provide an important follow-up to this research.

Despite these flaws, the results and the study itself raise implications for teacher educators to consider. First, they reflect the value for teacher educators of talking to our former students and hearing from them what worked and did not work about our classes. I had my own sense that backwards design was a useful concept for future teachers. That it remained with graduates of the program into their first years of teaching reinforces that sense. That these comments about backwards design

arose in general focus group discussions about new teachers' lives and their sense of their own preparation suggests the power of the concept in new teachers' lives.

These results also suggest the value of backwards design—an approach which has become widespread—in preparing prospective teachers to plan instruction. They further demonstrate that the emphasis on beginning with desired outcomes inherent in the backwards design approach is helpful to new teachers in providing a process both for designing instruction and for evaluating curricula—one's own and others'. And the emphasis on interrogating the *whys* behind what we teach provides new teachers a way to balance a standards-based curriculum with an emphasis on the learning that English teachers really value.

Finally, these results suggest an opportunity for teacher educators focused on improving our preparation of teachers. While it is certainly true that the effects of individual courses may be magnified or mitigated by programmatic factors, interrogating our individual courses for their potential impact on particularly important skills for new teachers can be empowering for teachers who want to focus more on our own curriculum than program structure.

Note

I am very grateful to the teachers who took time out of their busy lives to share their thoughts about teaching and their preparation and to the anonymous reviewers of this manuscript for feedback that led to significant revisions.

References

Athanases, S. Z., & Martin, K. J. (2006) Learning to advocate for educational equity in a teacher credential program. *Teaching and Teacher Education 22*, 627-646.

Ball, D. L. (2000). Bridging practices: Intertwining content and pedagogy in teaching and learning to teach. *Journal of Teacher Education 51*(3), 241-247.

Ball, D. L. (1996). Reform by the book: What is: or might be: The role of curriculum materials in teacher learning and instructional reform. *Educational Researcher 25*(9), 6-14.

Ball, D. L., & Feiman-Nemser, S. (1988). Using textbooks and teachers' guides: A dilemma for beginning teachers and teacher educators. *Curriculum Inquiry 18*(4), 401-423.

Bickmore, S. T., Smagorinsky, P., & O'Donnell-Allen, C. (2005) Tensions between traditions: the role of contexts in learning to teach. *English Education 38*(1), 23-52.

Bullough, R. V. Jr. (1989). *First-year teacher: A case study*. New York: Teachers College Press.

Bullough, R., with Baughman, K. (1995). Changing contexts and expertise in teaching: first-year teacher after seven years. *Teaching & Teacher Education 11*(5), 461-477.

Bullough, R. V., Jr., Knowles, J. G., & Crow, N. A. (1992) *Emerging as a teacher*. New York: Routledge.

California State University. (2007). Teacher preparation report shows California grads are ready to teach. Retrieved June 8, 2007, from California State University Public Affairs Website, http://calstate.edu/pa/news/2007/TeacherEval.shtml

Clift, R. T., & Brady, P. (2005). Research on methods courses and field experiences. In M.

Cochran-Smith & K. M. Zeichner (Eds.) *Studying teacher education: The report of the AERA Panel on Research and Teacher Education* (pp. 309-424). Mahwah, NJ: Lawrence Erlbaum Associates and Washington, DC: American Educational Research Association.

Cook, L. S., Smagorinsky, P., Fry, P., Konopak, B., & Moore, C. (2002) Problems in developing a constructivist approach to teaching: one teacher's transition from teacher preparation to teaching. *The Elementary School Journal 102*(5), 389-413.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: how well do different pathways prepare teachers to teach? *Journal of Teacher Education*, *53*(4), 286-302.

Dudley-Marling, C., Abt-Perkins, D., Sato, K., & Self, R. (2006). Teacher quality: the perspectives of NCTE members. *English Education 38*(3), 167-188.

Graff, N. (2005). Essential questions for future teachers. *Big Ideas, 1*(3). <www.bigideas.org>

Grossman, P. L., & Richert, A. E. (1988). Unacknowledged knowledge growth: A re-examination of the effects of teacher education. *Teaching & Teacher Education 4*(1), 53-62.

Grossman, P., & Thompson, C. (2004). *Curriculum materials: Scaffolds for new teacher learning*. Stanford, CA: Center for the Study of Teaching and Policy. <http://depts.washington.edu/ctpmail/Reports.html>.

Grossman, P., Valencia, S., Evans, K., Thompson, C., Martin, S., & Place, N. (2000). *Transitions into teaching: learning to teach writing in teacher education and beyond*. Albany, NY: National Research Center on English Learning and Achievement. CELA-RR-13006. <http://cela.albany.edu/transitions/index.html>

Housego, B. (1992). Monitoring student teachers' feelings of preparedness to teach. *Journal of Education for Teaching 18*(3), 259-273.

Housego, B. E. J. (1994). How prepared were you to teach? Beginning teachers assess their preparedness. *The Alberta Journal of Educational Research, XL*(3), 355-373.

Huber, M. T., & Hutchings, P. (2005). *The advancement of learning*. Stanford, CA: The Carnegie Foundation for the Advancement of Learning.

Kauffman, D., Johnson, S. M., Kardos, S. M., Liu, E., & Peske, H. G. (2002). "Lost at Sea": New teachers' experiences with curriculum and assessment. *Teachers College Record 104*(2), 273-300.

Kelting-Gibson, L. M. (2005). Comparison of curriculum development practices. *Educational Research Quarterly, 29*(1), 26-36.

Milner, J. O., & Milner, L. F. M. (2008). *Bridging English* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

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

Shulman, L. S. (1999). Taking learning seriously. *Change, 31*(4), 10-17.

Smagorinsky, P. (2002). *Teaching English through principled practice*. Upper Saddle River, NJ: Prentice Hall.

Smagorinsky, P. (2007). *Teaching English by design: How to create and carry out instructional units*. Heinemann.

Smagorinsky, P., Cook, L. S., & Johnson, T. S. (2003). The twisting path of concept development in learning to teach. *Teachers College Record, 105*(8), 1399-1436.

Smagorinsky, P., Cook, L. S., Moore, C., Jackson, A., & Fry, P. G. (2004). Tensions in learning to teach: accommodation and the development of a teaching identity. *Journal of Teacher Education, 55*(1), 8-24.

Smith, M. B. (2010). Introduction: Ending the solitude of citizenship education. In M. B. Smith, R. S. Nowacek, & J. L. Bernstein (Eds.), *Citizenship across the curriculum* (pp. 1-12). Bloomington, IN: Indiana University Press.

Snow, C. E., Griffin, P., & Burns, M. S. (Eds.) (2005). *Knowledge to support the teaching of reading*: *Preparing teachers for a changing world*. San Francisco: Jossey-Bass.

Strauss, A. S. (1987). *Qualitative analysis for social scientists.* New York: Cambridge University Press.

U.S. Department of Education. (n.d.). *New no child left behind flexibility: Highly qualified teachers*. < http://www.ed.gov/nclb/methods/teachers/hqtflexibility.html>

Valencia, S. W., Place, N. A., Martin, S. D., & Grossman, P. L. (2006). Curriculum materials for elementary reading: shackles and scaffolds for four beginning teachers. *The Elementary School Journal, 107*(1), 93-120.

Van Der Valk, T. (A.E.), & Broekman, H. (H.G.B.). (1999). The lesson preparation method: a way of investigating pre-service teachers' pedagogical content knowledge. *European Journal of Teacher Education, 22*(1), 11-22.

Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research, 54*(2). 143-178.

Wiggins, G., & McTighe, J. (2005). *Understanding by design* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.