

Preservice Teachers' Perceptions of Their Middle Level Teacher Education Experience: A Comparison of a Traditional and a PDS Model

By Suzanne Yerian & Pamela L. Grossman

Reform in middle level education and in teacher education is a relatively new dimension of the debate begun in 1986 with the publication of *The Carnegie Report*. Wedged between the widely disparate contexts of the elementary and secondary

levels, middle schools were frequently viewed as little more than temporary holding pens—areas in which early adolescents transition from children to young adults, and future high school faculty learn to teach. Few people saw the middle level as a fertile place for systemic innovation and change (Carnegie, 1989). Just as middle schools were overlooked in the first wave of educational reform, middle level teacher education was virtually forgotten until later in the decade.

In 1989, the Carnegie Council Task Force was charged with creating recommendations that would improve the development of educational experiences for adolescent youth. Their publication, *Turning*

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Points, highlighted ways in which preservice teachers could be better prepared for teaching at the middle school level. Some of these recommendations included: understanding student development through both university coursework and direct experience in schools; increasing preservice teachers' sensitivity to student differences; and learning to work in collaborative teams.

The current reforms in middle school education and in teacher education are similar in that they both emphasize close university-school contacts that would make these reforms possible. Professional development schools (PDSs), for example, are sites where university professors and school practitioners work together "for the development of novice professionals, for continuing development of experienced professionals, and for research and development of the teaching profession" (Holmes Group, 1990, p. 1). The PDS model (Abdal-Haqq, 1991; Colburn, 1993; Darling-Hammond, 1994; Dixon & Ishler, 1992; Goodlad, 1990; Grossman & McDaniel, 1990; Kennedy, 1988; Levine, 1992; Rushcamp & Roehler, 1992; Teitel, 1994; Wilbur, Lambert & Young, 1988; Winitzky, Stoddart, & O'Keefe, 1992) is organized around several principles including: reflection and research on practice; participation in learning communities; teaching and learning for understanding; attention to diverse perspectives; and alternative roles and responsibilities for both university and school faculty (Holmes Group, 1990). The collaboration of university and school faculty toward improving professional practice is central to the goals of the PDS (Abdal-Haqq, 1989; Dixon & Ishler, 1992; Grossman & McDaniel, 1990; Kennedy, 1988).

There is little evidence on the effects of PDS reforms on either middle level practice or on middle level teacher education. Past efforts to institutionalize university-school partnerships have failed, in part, because too little attention was paid to the influence of these partnerships on teachers and students (Stallings & Kowalski, 1990). Research on the influence of middle level PDS programs on preservice teachers will contribute ultimately to our knowledge of the validity of these reform efforts.

In this study we assessed the impact of a middle level teacher education program set in a PDS framework by comparing two teacher education programs—a traditional teacher education program (TEP) and a pilot PDS teacher education program for middle school teachers that ran concurrently at the same university. We evaluated the first three years of the PDS pilot preservice program by assessing the perspectives of its graduates toward their preservice training, and compared those findings against the perspectives of the graduates from the regular teacher education program during the same time period. The specific purpose of the evaluation was to explore the PDS graduates' perspectives toward the PDS middle school program, and to examine how knowledgeable the PDS graduates felt about early adolescent issues. We were particularly interested in knowing what differences might be found in the responses of the two groups of middle level preservice teachers when one group, the PDS graduates, was more consistently exposed to the

philosophy of the middle level teacher education reforms than the other group, the TEP graduates. The middle level teacher education reforms include: curriculum integration, teaming, collaboration, teaching to diversity, active participation of all students in learning, professional development of teachers, and specific knowledge of early adolescents and its practice in schools (Carnegie Council, 1989).

The specific questions for the study were developed in conjunction with the stakeholders in the PDS consortium. Our questions included: (1) How do graduates of the middle-level PDS and regular education programs feel about their teacher preparation? (2) Compared to graduates of the regular education program who are teaching in junior high or middle schools, do middle-level PDS graduates differ in their perceptions of their knowledge about early adolescents and their needs? (3) Compared to graduates of the regular education program, do middle-level PDS graduates hold different beliefs toward students with disabilities?!

Program Descriptions

The Regular Teacher Education Program (TEP)

From 1989 to 1992, the University of Washington's College of Education fifth-year teacher preparation program led to elementary (grades K-8) or secondary (grades 7-12) certification. Students who planned to teach at the middle level typically entered the secondary program.

The TEP curriculum consisted of core courses within areas of Curriculum and Instruction, Educational Psychology, Special Education, and Educational Leadership and Policy Studies. The student's field experiences were structured in progressive steps throughout the year from an initial experience of observation to a final ten-week experience in student teaching. University supervisors, adjunct faculty who themselves had been classroom teachers, visited up to 15 students at least two to three times during the quarter to observe and evaluate. Approximately 125 students were enrolled in the regular secondary teacher education program each year. Although approximately 21 secondary students per year were placed at middle schools for their student teaching, there was no explicit focus on the middle grades or on early adolescence for students in the secondary program. For example, while the Educational Psychology course covered K-12 student development, the early adolescent was not a specific topic of study. The students sometimes complained that the secondary methods courses focused primarily on high school issues.

The Middle Level PDS Teacher Education Program

In 1988, the University of Washington, the Puget Sound Educational Consortium, and the Washington Educational Association, a partnership of 14 Seattle-Tacoma area school districts and the University of Washington, received a grant from the Ford Foundation for the purpose of restructuring preservice teacher education. The outcome of the grant was the creation of the Puget Sound Profes-

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sional Development Center (PSPDC), a consortium of the university, four middle schools, and the Washington Office of the Superintendent of Public Instruction. One of the goals of the PSPDC was to pilot a middle school preservice teacher education program through the College of Education at the University of Washington that would include three major innovations (Grossman & McDaniel, 1990):

- ◆ A core seminar on teaching and learning in middle schools, team taught by university professors and middle school teachers, and integrating core classes taught in the regular teacher education program.
- ◆ A field experience, closely aligned with the core seminar, that included placement at one of the four middle school PDSs.
- ◆ On-site supervision and evaluation of the student teachers by teacher leaders designated as "site-supervisors."

Although the composition of the faculty who participated in the PDS seminar and some aspects of the curriculum changed over the three years examined by the study, the central components of the program remained the same: a core seminar, fieldwork integrated with the core seminar, and on-site supervision. Each of these components will be described briefly. For a fuller description of the PDS teacher education program, see Gehrke (1992); Gehrke, Young, & Sagmiller (1991); Grossman (1994); and Grossman & McDaniel (1990).

Core Seminar. Four required courses in curriculum and instruction, educational psychology, and educational leadership and policy studies were replaced by a twelve-credit core seminar aimed at the preparation of middle level teachers.² The seminar was taught by an interdisciplinary team of from three to five professors who represented the areas of curriculum and instruction, educational psychology, educational leadership and policy studies, and special education. A middle school teacher and a graduate assistant were also part of the team. Approximately three team members were present at any one seminar. Although the amount of time spent in the core seminar changed over the three years of the study, during the fall quarter, when the students were at the university nearly full-time, the seminar met twice a week. The teaching curriculum for the fall quarter emphasized issues related to teaching and learning at the middle level. When specific topics, such as cooperative learning or management, were discussed, teacher leaders from the four PDS schools were invited to the seminar to contribute their expertise. Throughout the year, three themes were emphasized: (1) Early adolescent development and middle level education; (2) Recommended classroom and school practices for middle grades; and (3) The integration of special education concerns into lesson planning through the participation of a special education faculty member. These themes were not necessarily emphasized in the regular teacher education program.

As the students' time in the field progressively increased from the fall through the winter and spring quarters, the seminar emphasis changed to school-based

issues and to developing unit plans within interdisciplinary teams. A team consisting of science, language arts, and social studies students, for example, developed and taught an environmental unit. In another instance, middle school educators, researchers, university faculty, and other members of the educational community held a panel discussion on current issues affecting middle level education.

As part of the seminar's emphasis on the integration of students with disabilities into the classroom, each preservice teacher shadowed a regular and a special education student and wrote a case study on the school experience of each adolescent. The role of the professor from special education who actively participated in each seminar consisted of leading discussions on special education issues and prodding the other seminar faculty and members of the student cohort to consider ways of thinking about teaching and learning as they applied to special needs students. She also arranged for field trips to alternative school sites. One cohort, for example, visited a self-contained school for the deaf.

In addition to the core seminar, PDS students attended subject-specific methods courses with students from the regular teacher education program. There were approximately 14 students in each PDS cohort.

Field Experience. The four middle schools in the PSPDC, representing four school districts, provided the field sites for most of the PDS students. In a few cases, students with special certification emphases, such as English as a Second Language, were placed in non-PDS schools to gain the necessary experience for that certification. The four middle schools were in various stages of transition to the middle school philosophy and in their school-wide commitment to the PDS model. For example, while one school appeared to be more like a traditional junior high, another elected to become a PDS school site as well as becoming actively involved in outcomes-based education.

Each student was placed with a cooperating teacher or a teaching team, depending upon the organization of the school. Planning for the field experience included the teacher leaders (site-based supervisors), the cooperating teachers, and the seminar teaching team. The school-based members of the planning team coordinated the curriculum activities of the student teachers at the school sites and arranged for the cross-site school visits that occurred during the year. Periodically, the cooperating teachers would meet with the teaching team to discuss seminar and field related issues.

On-Site Supervision. In a departure from the traditional method of university-based supervision in which one supervisor evaluates a large number of students at various school sites, one teacher leader at each PDS school site was responsible for supervising a group of two to four students who had been placed at that school. Communication among the student teacher, the cooperating teacher, and the site supervisor was facilitated by their informal day-to-day contact, and through formal weekly meetings with the student teachers and their site supervisor. In addition, the

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site supervisors were responsible for finding alternative placements when the original placement failed, for orienting the student teacher to the site, and for the formal evaluation of the students' teaching. Site supervisors met monthly with faculty liaisons from the seminar teaching team to plan the curriculum and to share information about supervision. The university gave the money that would have paid for the supervision of the student teachers of that site for the school's PDS budget. The individual schools compensated the site supervisors in different ways. For example, one site supervisor was given a release period in exchange for her collaborative activities with the cooperating teachers, the PDS students, and the university faculty. In the second year of the program, the graduate student who attended the core seminar served as the cross-site supervisor. One of her responsibilities was to facilitate communication and to provide consistency across school sites.

Method

Sample

We compared three cohorts of PDS student respondents (N=30) with student respondents of the regular teacher education program (N=44) from a total pool of 103 students who had been in middle level teacher education field placements during the 1989-1992 school years. Students who had dropped out of either program were not included in the subject pool.

With the exception of the core seminar for the PDS group, the curriculum for both groups was equivalent. Although the two groups were not matched, their basic characteristics were similar. The majority of the respondents were female (PDS, 65 percent; TEP, 71 percent). Differences between the PDS and TEP groups were not significant in terms of age, educational level attained, and ethnicity.³

Questionnaire

Copies of the questionnaire were mailed to the graduates and enrolled students of both programs. Divided into seven sections, the questionnaire invited responses regarding each student's personal background, work history, teaching assignment, professional roles and responsibilities, teacher education preparation, field experience, and beliefs about teaching.⁴ A sample of students who did not return their questionnaires was called to determine if the population of non-respondents differed from those of the respondents. These students most frequently cited their lack of time or their concerns about anonymity as reasons for not responding. These concerns also were mentioned by the respondents.

The survey included a combination of Likert scales ranging from 1 (strongly disagree) to 6 (strongly agree), and open-ended questions. Data from scaled responses were coded and analyzed using an analysis of variance comparing the PDS and TEP groups. Responses to open-ended questions were grouped according to emerging themes and used to inform the findings from the survey. The items were

grouped into 14 scales based on their thematic similarity. Cronbach's alpha on the questionnaire scales ranged from .66 to .92.

Interview

Based on a preliminary analysis of the survey data and particular themes that had begun to emerge, ten students from the pool of 74 who returned their questionnaires were each asked to participate in a two-hour, semi-structured interview about their teacher preparation. The emergent themes indicated both whom we would interview and how the interview protocol would be shaped. The subjects were chosen to ensure that all of the schools and subject areas were represented. As the purpose of our study was to investigate the value of innovative components of the PDS teacher education program, as well as to gain more in-depth information about the PDS graduates and their knowledge of middle level teaching and learning, we sought to interview more PDS than TEP graduates. Eight graduates were from the PDS; two graduates had been in the TEP program. The five female and three male PDS graduates represented all four PDS sites and a cross-section of disciplines (three in English; two in English/drama; one in history; one in science; one in math). Both TEP graduates were female—one had majored in art and the other in English. Nine of the students interviewed had full-time teaching contracts—eight at the middle-level and one in elementary school. One student (an art major) worked part-time at a middle school.

Limitations of the Study

The evaluation's findings should be regarded with caution. First, although there were no significant distinctions between the two groups of students in age, educational background, and ethnicity, the PDS students were volunteers in an innovative middle-level program. The two groups may have differed in the kind of student—in terms of beliefs, prior experiences, and personal characteristics—that the PDS program attracted. Second, there may have been differences between the students who returned their questionnaires and those who did not. Third, the findings are based upon self-report data from the questionnaire and from the interviews. We did not observe graduates in their classrooms nor did we collect data from other perspectives, such as the principal's satisfaction with the students' teaching.

Findings

Perspectives on Preparation for Middle Level Teaching²

Knowledge of Early Adolescents. The PDS students from the cohorts in the first two years felt significantly more knowledgeable about early adolescents and their needs than did the TEP students from the same cohorts (Table 1).

The PDS students felt more knowledgeable about several aspects of mid-level

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teaching: specific instructional strategies, the role of specialized teachers, an integrated curriculum, and meeting the needs of students with disabilities. The responses from the open-ended questions and the interviews supported the survey findings. The PDS students felt more knowledgeable and better prepared to teach at the middle level:

I feel like I was more prepared than some of my friends who went through the regular program...integrating the courses with a middle school focus was much more relevant...there were things to fix, but overall, I'm much better off. (I:27)

I knew what to expect from middle school kids because we had spent a lot of time learning about adolescent development. (I:42)

The relatively positive attitudes expressed by the PDS students toward the knowledge they had gained about middle level teaching emerged from the data in other ways. A significant finding from the survey that was supported by the

Table 1
PDS and TEP Students' Knowledge of Early Adolescents
and Feelings about Their Middle School Preparation

	PDS			TEP			F	Significance level
	n	M	SD	n	M	SD		
Early adolescent issues	19	5.16	.83	31	2.87	1.14	57.46	p<.001
Philosophy of middle level education	19	5.26	.73	31	2.87	1.28	54.91	p<.001
Integrated curriculum	19	4.63	.90	31	3.10	1.19	23.33	p<.001
Dealing with diversity	19	4.74	1.10	31	4.06	1.37	3.31	NS
Specific middle level teaching strategies	19	5.16	.765	31	3.03	1.56	30.58	p<.001
Separate certification programs for middle level.*	30	5.07	1.20	40	3.98	1.58	9.99	p<.01
Heard different ideas about teaching from my professors and teachers at school.*	30	4.47	1.20	40	4.68	1.31	.46	NS
Courses I took at the university had little to do with my fieldwork	19	3.00	1.41	31	4.15	1.12	14.36	p<.001

Unless noted, the figures in this table are for the '89-'90 and '90-'91 cohorts only. Few students from the third cohort had had school experience when the questionnaire was administered.

interview data was that relatively more PDS graduates than TEP graduates felt that their university coursework was connected to the work they did in the field (PDS, $M=3.00$; TEP, $M=4.15$; $p<.001$). The PDS students perceived themselves to be better able to make connections among ideas presented in class and events taking place in the schools.

I guess I think about a lot of...all the different things we learned about in the [PDS]. Everytime I plan a unit, I think what can I bring into it this time. [In the PDS] I got confused a lot and I think that's good. We were presented with a lot of different philosophies...and I'd have to revise my thinking. They really taught us to...think about what we were doing, to keep reevaluating and being able to back up what we were doing and know what our goals were. I'm continually reevaluating what I do all year long and I keep the students filled in on...why I'm making changes and what the goals are. (I:4)

In contrast, the TEP graduates' comments on the survey tended to be critical of their teacher preparation for its lack of attention to middle level teaching, a finding that emerged from the interview results as well. The TEP graduates felt that they had gained most of their knowledge about middle level teaching from practical experience rather than from the teacher education program. They stated that the program's emphasis had been too focused at either the high school or elementary level, and as a result, they did not feel prepared to teach in middle schools. For example, when asked how well her TEP program had prepared her for middle level teaching, one interviewee who was teaching in a middle school replied:

It didn't... They talk about each of the three age groups, and I know they separate the elementary school teachers from the 7 through 12, but the middle school kid is a whole different ball of wax...it's a tough three years to teach to. Having a little more exposure to middle school behaviors, ideas, and values—that would be something I would emphasize if I were queen of the program. (I:32)

The PDS students were not entirely positive about what they had learned in the middle level PDS program. Some of the comments noted in the open-ended section of the survey included: (1) There was not enough information on middle level management techniques; (2) The core seminar was poorly organized; (3) Team teaching was poorly modeled; (4) Their coursework assessment did not reflect the innovative techniques that they were taught to use with the pupils in their own classrooms; (5) There were tensions with cooperating teachers who did not agree with the PDS philosophy; and (6) Some cooperating teachers did not provide the PDS students with opportunities to use the ideas they had learned from the middle level PDS program. Both the TEP and PDS groups felt that there were too many demands placed upon them toward the end of the program when they were teaching nearly full-time and completing their university course work.

Efficacy as teachers. Although the PDS and TEP students were generally positive in their beliefs about their own efficacy as teachers and as decision makers,

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there were significant differences in several areas (Table 2). Both groups felt positively that they could ensure that their students achieved at high levels, but the TEP students were less certain than PDS students that they could significantly affect student achievement by trying different teaching methods (PDS, $M=5.40$; TEP, $M=5.02$; $p<.05$). Compared to TEP students, PDS students were more likely to recognize the contribution of other teachers and specialists in the school building to their own teaching effectiveness (PDS, $M=5.07$; TEP, $M=4.24$; $p<.01$).

One PDS graduate who found a job teaching third and fourth grades at an elementary school stated that she found the middle level focus of the PDS helpful, particularly in writing and math, but felt that her effectiveness at teaching to the lower levels of elementary students had come less from the PDS, and more from her summer teaching experiences with elementary students.

We had to do the writing process where we edit and rough draft...and just brainstorm.... So that was good. The math was interesting.... They really taught us how to work with manipulatives, which is important. I was lucky because the other teachers at my grade level don't tend to use math. I guess the classes where you [learn] how to teach subject matter...were useful. I didn't see any use for them at the time.... It would have been nice to have some hands-on experience working in the elementary school setting. They call the sixth grade in middle school, elementary...it's nothing like having [a class] in an elementary school. It's totally different. I think you should have experience at primary, intermediate, and middle school. (1:6)

Table 2
PDS and TEP Student Beliefs about Middle Level Classrooms
and Their Own Teaching Effectiveness

	PDS			TEP			F	Significance level
	n	M	SD	n	M	SD		
Getting through to the most difficult student.	30	4.17	1.34	41	4.18	1.30	1.69	NS
Affecting significant student achievement by trying different teaching methods.	30	5.40	.62	41	5.02	.82	4.41	$p<.05$
Making a difference in student lives.	29	4.90	.90	38	4.60	.97	1.56	NS
Little I can do to ensure that students achieve at a high level.	30	1.60	.72	40	1.85	.92	1.51	NS
School staff contribute to my teaching effectiveness.	29	5.07	1.16	37	4.24	1.21	7.84	$p<.01$

Valuing different sources of knowledge. Although the survey results indicated that both the PDS and the TEP groups felt that they heard different ideas about teaching from their professors versus the teachers in the field, how those differences were viewed varied. In response to the open-ended questions in the questionnaire, 31 percent of the PDS students (N=29) stated that they appreciated the “variety of perspectives” (S:53) expressed during the seminar. Several respondents mentioned in particular their appreciation for the middle school teacher’s contributions to the seminar discussions.

Having [a middle school teacher] there, a real teacher coming from a full day of school and coming to our seminars and being able to talk about what happened that day in the classroom—everything she said [was] worth gold. (I:22)

The TEP students, in contrast, tended to see faculty and teacher differences of opinion more negatively. Only two students out the 40 TEP respondents stated that they appreciated their “exposure to different experts” (S:33). The TEP graduates appeared to be more strongly influenced by their experiences in schools. More TEP graduates than PDS graduates (PDS, 59 percent; TEP, 75 percent) wrote about their field experiences on the open-ended section of the survey. One student, who felt that her TEP coursework experience had been too theoretical and unrelated to practice, explained in an interview that, “The majority of my learning took place once I started teaching” (I:32).

Beliefs and knowledge about middle level classroom and teaching practices were also acquired from cooperating teachers and supervisors. Students in both groups felt positively about their supervisors. The PDS group, however, felt significantly more positively that their middle level site-supervisors were more accessible, more knowledgeable, and easier to approach for advice than did the TEP group of their university supervisors (Table 3).

Open-ended comments and interview findings from the PDS students sug-

Table 3
PDS and TEP Students’ Perceptions of Their Supervisors

	PDS			TEP			F	Significance level
	n	M	SD	n	M	SD		
Was very accessible.	30	5.27	1.39	40	4.55	1.28	5.02	p<.05
Felt comfortable asking for advice.	30	5.23	1.52	40	4.45	1.50	4.62	p<.05
Never had time to give feedback.	29	2.07	1.77	39	2.13	1.38	.03	NS
Respected supervisor's knowledge.	30	5.43	1.25	39	4.33	1.24	13.25	p<.001

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gested the importance of having a middle level teacher supervisor on-site who knew the students and the school routine, and who could offer additional emotional support and a different perspective on daily teaching dilemmas from that of the cooperating teacher:

[The site supervisor] was a teacher right there on campus...that makes a huge difference. I saw her every day. It wasn't like she was a stranger coming from the [university] that came to evaluate me.... Sometimes I had a couple of problems getting along with my cooperative teacher....we had some bumpy times at first, and [the site supervisor] was real supportive because she knew him so well. She had taught with him for years. So that was one of the best things [the PDS] thought of [was] the site supervisor to be there with you. (I:42)

Cooperating teachers were viewed positively by both groups (Average means: PDS, 5.02; TEP, 5.20). There were no significant differences between the two groups in their perceptions of their cooperating teachers.

Integration of Special Education Perspectives

There were several significant differences between the two groups in their experiences with special education staff and students, and in their knowledge about special education in general (Table 4).

Compared to TEP students, PDS students felt more knowledgeable about students with disabilities (PDS, M=3.95; TEP, M=3.00; $p < .01$), and felt they had

Table 4
PDS and TEP Students' Perceptions of Special Education

	PDS			TEP			F	Significance Level
	n	M	SD	n	M	SD		
Knowledge of students with disabilities.	19	3.95	1.08	31	3.00	1.00	9.99	$p < .01$
Knowledge of role of specialized teachers.	19	4.05	1.35	31	2.61	1.15	16.24	$p < .001$
Easily include special education students into regular lessons.*	30	3.90	1.56	39	3.62	1.41	.62	NS
Supervisor's help in integrating special education students into the regular class.*	30	3.87	1.72	33	2.18	1.07	22.28	$p < .001$

Unless noted, the figures in this table are for the '89-'90 and '90-'91 cohorts only. Few students from the third cohort had had school experience when the questionnaire was administered.

received helpful advice on integrating special education students in a regular setting (PDS, $M=3.87$; TEP, $M=2.18$; $p<.001$). These findings contrast, however, with comments made by the PDS graduates regarding what they had lacked in their preparation to teach basic skills. For example, one graduate who felt very positive about her experience in the PDS and her preparation on adolescent issues, felt that too much of her teacher preparation time had been spent on content methods and not enough time on basic skills:

I feel like I am trying to teach these kids and some of them barely know how to decode. I don't know how to teach them to read, and I feel like I'm not doing them any good. That wasn't the PDCs' problem...it was the program as a whole. I think that as middle school teachers, we at least need to know how to teach kids to read. I plan on taking courses in reading just so when I go back next year I will know what I'm doing...I believe wholeheartedly in mainstreaming kids, but I wish I had more experience in dealing with how to work with low level kids and higher level kids in the same class. (I:42)

In spite of these discrepancies, the PDS students' attitudes toward their university coursework and its contribution to teaching students with disabilities remained generally positive (Average mean of the special education scale: PDS, 3.92; TEP, 2.82).

Most TEP and PDS graduates had had special education students in their classrooms (PDS, 88 percent; TEP, 92 percent). Of those, fewer TEP than PDS graduates who responded to the question stated that they had modified their curriculum for special needs students (PDS, 100 percent; TEP, 74 percent), or that they were interested in attending an IEP (Individual Education Plan) meeting in the future (PDS, 33 percent; TEP, 23 percent). Few students in either group stated that they had attended IEP meetings in the past year (PDS, 13 percent; TEP, 11 percent). Relatively more TEP students than PDS students, however, indicated that they talked regularly to their school's special education teacher (PDS, 19 percent; TEP, 52 percent). Students in both groups felt somewhat positively about their ability to easily include a special education student into regular lessons (PDS, $M=3.90$; TEP, $M=3.62$; NS), although the TEP students felt less prepared for working with special education students in a regular setting (PDS, $M=3.87$; TEP, $M=2.43$; $p<.001$), and more focused on class management.

[The TEP] didn't help me in the classroom because if you're dealing with low-end kids, especially in the middle school...if you haven't got your management skills down, you won't make it. (I:14)

Discussion

These findings suggest that the middle level PDS model we have described has had a positive effect on the attitudes toward teaching and learning of the preservice teachers we studied. The PDS graduates felt better prepared for middle level

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teaching in terms of their knowledge about early adolescents and of working with students with disabilities.

This program was unique in its emphasis on preparing teachers to work in middle schools. This emphasis, as much as the collaboration between the field and university, may have positively affected students' perceptions of their knowledge of early adolescence and middle level issues. The responses of the TEP graduates suggest the need for teacher educators to consider offering specific preparation for prospective middle school teachers. While this feature does not require a PDS model, the middle school teachers and principals who contributed to the program design felt strongly about the inclusion of issues specific to early adolescence and middle level education. Without the collaboration of the middle school and university faculties that was made possible by the PDS program, the middle school component of the program may have been less emphasized. In the eyes of the PDS graduates, the middle level teachers who participated in the program as core seminar and site supervisors were a positive component of the students' experiences at the university and school sites.

The PDS program's autonomy from the regular secondary strand appeared to enhance the program's effectiveness in preparing knowledgeable middle level teachers. Although candidates who wanted to teach at the middle level were accepted into the TEP program, the TEP did not focus on the middle level. Given prevailing traditional attitudes toward preadolescent education, and few advocates for a middle level focus, the issues central to middle level education may be unintentionally dropped from secondary programs if they are not taught in separate strands. Losing the middle level piece of the curriculum may be particularly problematic in subject-specific methods courses where students tend to focus on high school content.

Another benefit to having a separate middle school strand was the contribution to the program of various people who were genuinely interested in middle level education. These individuals, who often had long and successful careers in middle schools, became positive and vivid role models for students in the program. Many students who were not wholly committed to middle school careers in the beginning of the year became so over time.

There was evidence that the graduates' attitudes were affected by the level at which they eventually found work. The PDS graduates who were surveyed had volunteered for a teacher preparation program that had a middle school focus. Now employed in middle schools, they felt generally positively about their teacher preparation. Many secondary preservice teachers, however, expect to teach in high schools. If the orientation toward teacher preparation is toward high school, as was the case in the TEP, then the TEP graduates who were working at the middle school level may have felt particularly keenly their lack of specific knowledge about adolescents.

The findings suggest that university faculty and middle school teachers in the

core seminar were able to positively influence the PDS graduates' attitudes toward the inclusion of special education students into the regular school curriculum by deliberately weaving special education issues throughout the preservice curriculum. While not specifically related to the PDS model, this finding suggests the importance of integrating issues related to educating special education students into the regular teacher education curriculum.

The fact that the PDS program was collaboratively planned and taught by university and middle school teachers helped reduce the dissonance student teachers have typically reported that they experience when working partly in the field and at the university. While different perspectives among university and school faculty still existed, the differences were confronted openly in the seminar setting. For the PDS graduates, the open dialogues may have made the middle school philosophy more explicit, and the teaching and learning tensions less threatening. The PDS core seminar seemed to model for students the complexities of collaboration and the diversity of perspectives that often characterize school reform efforts. For the TEP students, the segregation of courses and professors by curricular area, and by university and school sites, may have created fewer opportunities for them to observe collaboration across educational levels. For the TEP students, instances of collaboration seemed to be associated with some cooperating teachers, and with some schools, but with no unifying point of reference.

The program developers assumed that a preparation program that focused exclusively on the middle school knowledge base and on explicit pedagogical modeling of effective strategies for the middle school level would positively influence the perspectives of preservice teachers toward current middle school reforms. Although our study did not look at whether the PDS graduates were better middle school teachers than the TEP group, anecdotal evidence from interviews of the subjects who were teaching indicated that their feelings about the value of their specific teacher preparation experiences may have affected how they approached and implemented the curriculum, how they worked within the educational community, and where they stood with regard to the nature of teacher and student roles. Whether the changes in the graduates' attitudes led to increased student achievement are questions we have left for a future study. Our findings indicate, however, that students appreciate the emphasis on the middle school level.

Conclusion

The various calls for teacher education reform aimed at the middle level have resulted in little evidence on how such reforms are received. Studies such as this indicate that middle level teacher preparation may make a difference, particularly to those graduates who find themselves teaching in the middle grades. That a middle level program existed within a larger teacher preparation program suggests a

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specific program strand can be successfully integrated into a broader framework. The PDS program's emphasis on middle level issues and the involvement of middle level teachers did not lead to reconstructing the existing TEP program. Our findings suggest real implications for the feasibility of such a middle level strand, if the middle level focus can be protected. Including middle level issues within an established program does not ensure they will be taught.

Middle level teacher education is the neglected stepchild of middle school reforms. The middle grades are a critical time in a student's life, when serious decisions such as dropping out, for example, or taking additional math and science courses, may seriously affect the student's future opportunities (Carnegie, 1989). Preparing teachers who are knowledgeable and effective with this age group is an important piece in the reform efforts.

Many reforms call for middle level practices to be implemented and available to all students. The success of this reform rests upon the ability of teacher preparation programs to prepare teachers who possess both the knowledge and the commitment to middle level teaching. Future research needs to be done on whether teachers who are prepared to teach at the middle level are actually better teachers when they are employed at the middle level. The success of middle school reforms may ultimately depend upon these findings.

Notes

1. For the purposes of this paper, the term "graduate" will refer to any student who was in or had graduated from the TEP or the PDS programs.
2. As the program evolved from the first to the third years, the number of credits for the core seminar changed.
3. Both groups were predominantly Caucasian. Ten of 30 PDS students, compared to only one TEP student, were preparing for elementary certification. Eighteen PDS students were preparing for secondary certification and two PDS students were preparing for K-12 certification. Thirty-eight TEP students were preparing for secondary certification; four TEP students were preparing for K-12 certification.
4. The questionnaire was based upon two sources: the 1990 and 1991 teacher surveys created by the Center for Research on the Context of Secondary School Teaching at Stanford University, and innovative practices being used in the PDS seminar.
5. Research questions 1 and 2 are combined in this section and separated by themes. The graduates' perceptions of their knowledge about early adolescents and their feelings about their middle level teacher preparation are entwined and difficult to separate by question.

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