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ABSTRACT

This paper reports the development and validation of an instrument to measure teachers' beliefs about teaching related to the behaviorist and constructivist learning theories. The development process included two phases. The first involved the collection of qualitative data from inservice teachers to ensure that the survey items were grounded in practice as well as theory. The second involved testing the survey with 137 inservice and 61 preservice teacher samples and collecting colleague ratings for a subset of the inservice teacher sample (75 individuals) to establish construct validity. Examination of factor pattern matrices for both samples combined with the researchers' own theory and experience led to the decision to condense the 27 items into four factor-based scales. Scale statistics and correlations with colleague ratings provide initial estimates of the scales' reliability and validity and establish their adequacy for use in subsequent studies. Discussion focuses on lessons learned in the survey development as well as directions for further development and its employment in future studies. (Contains 15 references.) (Author/SM)

Can We Change Teachers' Beliefs?
A Survey about Constructivist and Behaviorist Approaches

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Abstract

This paper reports the development and validation of an instrument to measure teachers' beliefs about teaching related to behaviorist and constructivist learning theories. The development process included two phases. The first involved the collection of qualitative data from inservice teachers to insure that the survey items were grounded in practice as well as theory. The second involved testing the survey with both inservice (n=137) and preservice (n=61) teacher samples and collecting colleague ratings for a subset of the inservice teacher sample (n=75) to establish construct validity. Examination of factor pattern matrices for both samples combined with our own theory and experience led to the decision to condense the 27 items into four factor-based scales. Scale statistics and correlations with colleague ratings provide initial estimates of the scales' reliability and validity and establish their adequacy for use in subsequent studies. Discussion focuses on lessons learned in the survey development as well as directions for further development and its employment in future studies.

Accountability of Teacher Education Programs

During the 1980's and early 90's the school improvement spotlight was focused primarily on K-12 education. At first popular change efforts such as the effective schools and quality schools movements worked on organizational development issues like a clear school mission, principal leadership, school climate and discipline, and home-school relations. Recently, with recognition that improvement efforts must impact teaching and learning in classrooms, the focus has shifted to the quality and development of teachers. Lawmakers, school boards, and parents are demanding accountability from schools and teachers. In turn, demands are increasing for teacher education units to set higher standards and measure the impacts of their programs on preservice and inservice teachers.

The National Council for Accreditation of Teacher Education (NCATE) standards are more performance based and better aligned with the standards of other professional organizations and P-12 education. Standard 1 of NCATE 2000 requires teacher candidates to know the content of their field of study and demonstrate dispositions and professional and pedagogical knowledge and skills at appropriate levels. Standard 2 requires that the performance of candidates and the effectiveness of the unit be regularly and systematically assessed, evaluated, and used to improve candidates' performance. These proposed standards will place a greater focus on candidate performance and less emphasis on inputs and processes in accrediting teacher education units.

The Need for a Survey

As our teacher education unit in a small state university in Pennsylvania prepared for a NCATE review in 1995, we adopted the theme "teacher as reflective decision maker." Changes in course objectives and assessments, including reflective exercises during field experiences (Posner, 1993) integrated this theme throughout our programs. Some instructors were also experimenting with teaching strategies informed by constructivist learning theories (Fosnot, 1996 & 1989; Richardson, 1997) and others were introducing constructivist curriculum reforms in science (Duckworth, Easley, Hawkins, & Henriques, 1990), math (Fosnot, 1989), and literacy (Cambourne, 1988; Kammi, Manning, & Manning, 1991). A new early childhood certification program included a two-semester course sequence that introduced constructivist practices that encouraged students to exam their own learning experiences while forming their beliefs about teaching (Fosnot, 1989). From students' course discussions and papers it seemed that their beliefs became more constructivist as they progressed through our teacher education program. However, we were uncertain if these changes were real or long lasting.

The desire to monitor the impact of these changes created a need for a survey to assess changes in students' beliefs related to behaviorist and constructivist learning theories as they progressed through our program and began their teaching careers. Plans for a longitudinal study included the development of a survey that could be given multiple times to all students and complimented with other assessments, like analyses of students' portfolios, observations of their videotapes or teaching, and interviews with a sample of students.

Since behaviorist learning theories have dominated American education for the last fifty years (Brooks & Brooks, 1993), we assumed that most students enter teacher education programs with behaviorist images of teaching and learning. Lortie (1975) described students' years of K-12 schooling as "a long apprenticeship." Researchers have reported difficulty in changing preservice teachers' beliefs. Some of the reasons that have been suggested include: the short duration of course and program interventions, the critical timing of field and university-based experiences,

conflicting pedagogical perspectives of universities and schools, disciplinary backgrounds of preservice teachers, and the powerful socializing influence of the school culture (Meyer-Smith & Mitchell, 1991). Nevertheless, some impact of teacher education is reported. Therefore, we assumed that students' beliefs would become more constructivist as they progressed through our program if their learning in classrooms was influenced by constructivist learning theories. However, recognizing the impact of experienced teachers and school cultures on beginning teachers (Richardson, 1996; King, 1970) we also assumed that students' beliefs would change again in the direction of the experienced professionals with whom they worked.

Both behaviorist and constructivist learning theories are impacting practices in schools today. Behaviorist theories undergird the design of many basal textbooks and standardized tests. Also, many special education and behavior management strategies are based on behaviorist theories. At the same time, teachers are implementing many curriculum reforms based on constructivist theories. Cognitive constructivism stems from the later work of Jean Piaget, social-historical constructivism from the work of Lev Vygotsky. Many inservice teachers may not use the word "constructivism," but they are familiar with elements of constructivist teaching, like building learning communities, understanding children's thinking to scaffold their learning, sharing power with students' to help them solve problems and take responsibility for themselves and others, and assessing students' learning in multiple, authentic ways. A popular, grassroots movement for literacy instruction, called whole language, incorporates all of these characteristics (Kamii, Manning, & Manning, 1991).

In designing our survey, we gave considerable thought to the ways that the behaviorist and constructivist theories relate to one another. At first we thought of them as contrasting (Brooks & Brooks, 1993). That is, an increased belief in one theory would result in a decreased belief in the other. However, in thinking about it further and reviewing preliminary data from piloting our survey, we concluded that the two theories may impact teachers' beliefs in somewhat separate ways. For instance, it may be true that each theory explains different types of learning or that teachers apply each theory to different aspects of their teaching. Kamii, Manning, and Manning (1991) remind us that two theories can be contradictory but true, and that Piaget developed his theory, constructivism, in opposition to another scientific theory, associationism, or its better-known outgrowth, behaviorism. "Piaget explained conditioning by saying that all animals adapt to their environment. But human beings are more complicated and construct more knowledge than lower animals" (p. 9-10). In other words, Piaget thought of behaviorism as a more limited theory than constructivism. Constructivism can explain everything behaviorism can explain but the converse is not true. In constructing and validating our instrument, we elected to measure beliefs along the behaviorist and constructivist dimensions separately to enable us to track the development of both belief systems independently as students progress through our program and into their teaching careers.

Method

Phase 1: Development of Survey based on Interviews

In order to insure that our instrument was grounded in both real world practice as well as academic theory, we decided to do our initial development work with an inservice teacher sample. Fourteen elementary inservice teachers were interviewed individually for about one hour each using open-ended questions that encouraged them to discuss their beliefs about teaching. Teachers with a variety of philosophies were selected based on previous knowledge of their

classrooms and teaching gained while working with them and their student teachers. We analyzed tapes for frequently mentioned topics and statements about these topics. Seven main themes emerged: classroom learning environment, behavior management, curriculum, assessment, teaching strategies, student roles, and working with parents. Based on these interviews and a literature review about behaviorist and constructivist models of learning and teaching, we developed the first version of the Teacher Beliefs Survey. Using the teachers' language, we created 38 statements, which covered the themes that emerged from our interviews. We included both behaviorist and constructivist statements. Questions about teachers' years of teaching, subjects, grade levels, sex, age, and education were also added. We gave the survey to the initial 14 interviewees, and compared their responses to the impressions we had of them from the interviews. We also asked them to make suggestions regarding the language of items and the format of the survey. All interviewees returned the survey. Based on their feedback and an initial review of the data, we removed four items from the survey and continued into the next phase of our test with the remaining 34 items. (See Appendix for items in final survey.)

Phase 2: Study of Survey Reliability and Validity

In phase 2, we gave the Teacher Beliefs Survey to 137 grade K-6 inservice teachers at faculty meetings and mailed the survey to elementary teachers working with our student teachers. When possible at the faculty meetings, we also asked teachers choose a colleague familiar with their work to rate them on a Rating Scale--devised for this purpose--which contained fewer items but covered the same topic areas as the initial survey. We collected Rating Scale data for 75 of the teachers in our sample, and this was used for the validation of our instrument. The survey was also tested with 61 preservice student teachers in our elementary or dual early childhood-elementary education programs. The purpose of testing the instrument with both inservice and preservice teacher populations was two-fold: a) to give us a sense of how the belief systems of preservice teachers compare to inservice teachers; and b) to allow us to develop an instrument that will be valid with teacher education students now and later as they progress into their teaching careers.

Results

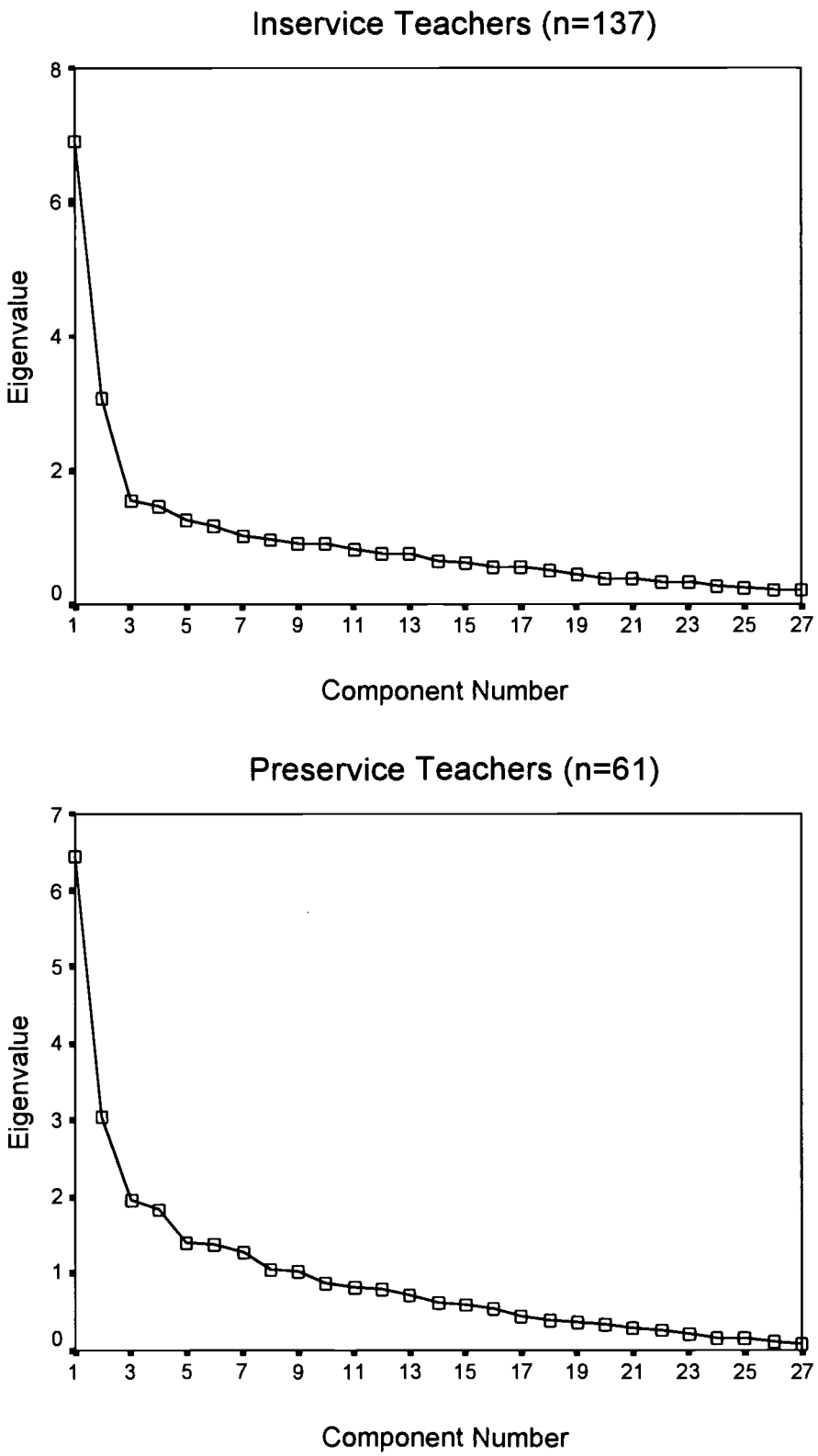
We began our analysis by conducting exploratory factor analyses on the survey data collected in the second phase of the survey development. A preliminary item analysis--examining the intercorrelation of individual survey items, as well as their means and ranges--as well respondent feedback about items that were misleading or confusing led us to eliminate 7 items and retain only the remaining 27 for substantive analysis. The factor pattern matrix for our final solution and associated statistics can be found in Table 1. While an oblique rotation would have been preferred on theoretical grounds (because we predicted that the scales would be correlated), such an approach failed to converge in an acceptable number of iterations (e.g. less than 1,000) and thus we elected to use principal components analysis with varimax rotation. Examination of scree plots (Figure 1) of the initial eigenvalues suggested that four meaningful factors existed in both the preservice and inservice teacher samples (Nunnally & Bernstein, 1994). On further examination of rotated factor solutions, combined with our own theoretical judgement, we determined that four factors offered the most parsimonious solution for explaining the interrelationships of the items. In looking at the factor loadings for this solution in Table 1, the items roughly clustered into categories which we have named "Behaviorist Management," "Behaviorist Teaching," "Constructivist Teaching," and "Constructivist Parents." We calculated coefficients of congruence

Table 1

Factor Pattern Matrix, Eigenvalues, and Coefficients of Convergence for a Principal Components Analysis with Varimax Rotation for both Inservice (n=137) and Student Teachers (n=61)

	Inservice Teachers				Preservice Teachers			
	1	2	3	4	1	2	3	4
Behaviorist Management (BM)								
1. Important to establish control first	.67	.109	-.197	.126	.568	.071	-.036	.280
12. I intervene in disputes immediately	.47	.182	.013	-.356	.199	.590	.052	.100
13. Students learn best on fixed schedule	.41	.270	.058	-.475	.011	.656	-.020	.303
19. I direct events to prevent chaos	.32	.568	-.225	.051	.313	.586	-.340	-.249
29. Decorate classroom with posters, etc	.26	.348	-.091	-.365	.530	.072	-.183	.115
30. I take care of learning materials for students	.06	.503	-.271	-.273	.639	.194	.078	.087
31. Students need to learn to obey rules	.63	.293	-.079	-.179	.753	.214	-.118	.001
Behaviorist Teaching (BT)								
5. Feel responsible to make choices for children	.25	.461	.060	-.183	.492	.490	-.039	-.304
6. Base student grades on homework, quizzes, and tests	.15	.562	-.033	-.181	.128	.681	-.165	-.114
8. I follow a textbook or workbook	.03	.778	.014	-.058	.200	.635	.045	-.032
9. Teach subjects separately/aware of overlap	.12	.646	-.156	-.127	.558	.135	-.016	-.564
20. Student spend seatwork time individually	.38	.510	-.250	-.258	.470	.209	-.338	-.077
21. Interested in what students can do independently	.47	.499	-.184	.096	-.143	.659	-.080	.113
25. Use guide to lead discussions	.03	.648	.018	.046	.588	.382	.001	-.020
27. Textbooks are best sources for curriculum	.08	.718	-.142	.025	.459	.578	.103	-.114
32. Believer in paper and pencil tests	.14	.497	-.468	-.180	.443	.435	-.094	-.177
Constructivist Teaching (CT)								
2. Build on student ideas in dev curriculum	.36	-.102	.546	.284	-.010	-.193	.110	.745
3. Prefer to cluster desks	-.28	-.162	.581	.148	-.164	-.053	.807	-.036
4. Invite students to create bulletin boards	-.01	-.178	.486	.290	-.031	-.069	.518	.267
10. Involve students in evaluating work	-.01	-.231	.637	.001	-.608	.283	.504	.211
15. Priority to have students work together	-.43	.072	.566	.148	.181	-.132	.808	.092
26. Assess students informally	-.11	-.031	.719	.001	-.219	.102	.620	-.079
33. Create thematic units based on student interests	-.03	-.127	.647	.096	-.210	-.364	.017	.287
Parents (Par)								
7. Part of my role is supporting family	-.08	.042	.564	.135	.305	.285	.180	.457
14. Communicate w/parents thru report cards (reverse-scored)	-.13	-.312	.105	.677	-.262	-.617	-.029	.102
17. Make it easy for parents to contact me	.02	.261	.307	.632	.127	-.057	.001	.262
23. Invite parents to volunteer/visit anytime	.07	-.013	.298	.680	-.073	.366	.079	.683
Eigenvalues	**2.3**	**4.62**	**3.59**	**2.36**	**4.03**	**4.37**	**2.61**	**2.28**
Coefficient of Congruence (Between Inservice and Student Teacher Factors)	**.5**	**.80**	**.77**	**.46**				

Figure 1
Scree Plots of Initial Eigenvalues from Factor Analyses of Inservice and Preservice Teacher Data



to compare the loadings on each factor in the inservice teacher sample to the corresponding factor in the preservice student teacher sample, which can also be found in Table 1 (Gorsuch, 1983). All were sufficiently large enough to give us confidence that the factor structure was similar for both samples. The one congruence estimate that was noticeably weaker than others is the one corresponding to factor 4 (.46). In all subsequent analyses, we will utilize factor-based scales, comprised of the unweighted mean response for the items in each of the groupings indicated in Table 1.

The intercorrelations, reliability estimates, and scale statistics for each of the four scales for the inservice teachers are displayed in Table 2 and for the preservice teachers in Table 3. The expected pattern of intercorrelations among the scales are observed in both samples; the two behaviorist scales are significantly positively correlated with each other while significantly negatively correlated with the two constructivist scales, and vice versa. Cronbach's Alpha, an index of reliability, is .70 or above for all scales with the exception of the "Constructivist Parents" scale, in which it is at .57 for the inservice teacher sample and only .10 for the preservice student teachers. The relatively weaker performance of this scale, especially among inservice teachers, could be largely due to the smaller number of items which comprise it relative to the other scales. In addition, within the preservice student teaching sample, it is highly likely that the lack of concrete experience among these respondents leads to a lack of internal consistency in beliefs about managing relationships with parents, an area which will likely be more fully developed with teaching experience.

Additionally, we further tested the construct validity of the four scales within the inservice teacher sample by having our respondents ask a colleague who is familiar with their teaching to rate them in the four areas corresponding to the four scales on the Teacher Beliefs Survey. The resulting multi-trait, multi-method matrix is displayed in Table 4. As shown in the table, colleague ratings correlate significantly with teachers' own beliefs about themselves in the areas of Behaviorist Management, Behaviorist Teaching, and Constructivist Teaching. The correlation between ratings and survey scores for Constructivist Parents, however, is only .08. It could be the case that this is an area that is difficult for teachers to observe with respect to their colleagues, since there would be few lasting overt indicators regarding a teacher's beliefs about their relationship with students' parents. The reasons behind the low validity of this scale will require further exploration.

Overall, therefore, these analyses suggest that at least three out of four of the survey scales of the Teacher Beliefs Survey are highly reliable and valid indicators of teachers' beliefs regarding behaviorist and constructivist teaching practices. If researchers are interested in further exploring the relationship of teachers' beliefs about parents to other aspects of teaching, then future work should focus on developing and adding items to this scale to make it both more reliable and valid.

Discussion

In this paper we have described the process we used for designing, testing, and validating a survey instrument to measure inservice and preservice teacher beliefs about behaviorist and constructivist teaching practices. Our final product, the Teacher Beliefs Survey (see Appendix 1) is an instrument consisting of 27 items organized into the following four scales:

1. The Behaviorist Management (BM) scale contains seven statements about the extent to which the teacher is in charge of discipline, the schedule, and the physical and social climate of a

Table 2
Intercorrelations and Scale Statistics for Inservice Elementary Education Teacher Scales (n=137)

	BM	BT	CT	Par
Behaviorist Management (BM)	1.00	.66**	-.33**	-.22**
Behaviorist Teaching (BT)		1.00	-.41**	-.21**
Constructivist Teaching (CT)			1.00	.50**
Parents (Par)				1.00
Mean	4.36	3.98	4.09	4.36
S.D.	.76	.84	.84	.84
Range	3.86	4.11	3.55	4.75
Cronbach's Alpha	.72	.84	.77	.57

*** Correlation is significant at the 0.01 level (1-tailed)*

Table 3
Intercorrelations and Scale Statistics for Preservice Student Teachers (n=61)

	BM	BT	CT	Par
Behaviorist Management (BM)	1.00	.76**	-.34**	-.10
Behaviorist Teaching (BT)		1.00	-.42**	-.23*
Constructivist Teaching (CT)			1.00	.35**
Parents (Par)				1.00
Mean	3.61	2.88	5.02	5.01
S.D.	.79	.78	.54	.54
Range	4.57	3.78	2.43	2.33
Cronbach's Alpha	.70	.82	.71	.10

*** Correlation is significant at the 0.01 level (1-tailed)*
* Correlation is significant at the 0.05 level (1-tailed)

Table 4

Multi-trait, Multi-Method Correlation Matrix Comparing Survey Scores with Colleague Ratings on All Scales for Inservice Teachers (n=75)

		Survey				Colleague Rating			
		BM	**BT**	**CT**	**Par**	**BM**	**BT**	**CT**	**Par**
Survey	**BM**	(.72)							
	BT	.51**	(.84)						
	CT	-.19*	-.20*	(.77)					
	Par	-.07	-.11	.15	(.57)				
Colleague Ratings	**BM**	.30**	.35**	-.02	-.06	(.66)			
	BT	.43**	.47**	-.05	.10	.48**	(.64)		
	CT	-.40	-.53	.20*	-.01	-.16	-.49	(.66)	
	Par	-.23*	-.17	.22*	.08	-.14	-.28**	.38**	(.50)

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

classroom. A teacher who agrees with the statements on the BM scale believes in being in charge by directing events, rather than sharing power with students.

2. The Behaviorist Teaching (BT) scale contains nine statements about the extent to which the teacher is in charge of planning, directing and assessing students' learning. A teacher who agrees with the statements on the BT scale believes in separate subjects, curricula following textbooks, having students work independently, and assessing students in traditional ways (e.g., homework, quizzes, and tests).

3. The Constructivist Teaching (CT) scale contains seven statements about the extent to which the teacher involves students in planning, directing and assessing. A teacher who agrees with the statements on the CT scale believes in a student-centered classroom with students creating bulletin boards, curricula based on students' interests, subjects integrated, and informal assessments.

4. The Constructivist Parent (CP) scale contains four statements about working closely with parents. A teacher who agrees with the statements on the CP scale believes in communicating frequently, making parents welcome in the classroom, and supporting a student's family to enhance a child's learning.

The statistical analyses presented here provide initial evidence regarding the reliability and validity of these scales, and their suitability for use in subsequent research.

Throughout the process of developing and testing this survey, we examined our own conceptual understanding of the relationship between behaviorist and constructivist theories as well as the process of development through which students' beliefs evolve. From this, we distilled two important lessons. The first involves the independence of the behaviorist and constructivist theories as they relate to teachers' beliefs. In our initial framework for the survey, we intended that behaviorist and constructivist items would be treated as opposites of one another, with declines in behaviorist scores over time treated as evidence of students' becoming more constructivist. But as we examined our initial survey data and talked with inservice teachers, we found that there was considerable information lost in reverse-scoring behaviorist items and considering them the complements of constructivist items. Indeed, it could very well be true that teachers are behaviorist in some aspects of their teaching and constructivist in others, and by combining the two theories into one scale we might miss an opportunity to learn this. For instance, our factor analyses suggested that many teachers are behaviorist in the area of "classroom management," regardless of their beliefs regarding the other aspects of their teaching. Therefore, our views have shifted slightly and now we believe, as quoted in the opening of the paper, that some behaviorist practices may be a subset of a belief system that is overall constructivist. This is reinforced by what we have learned from preliminary data from a study of student teachers (Woolley, Woolley & Hosey, 1999). In that study, we saw that prior to student teaching, preservice teachers in our program scored much higher on the constructivist scales than on the behaviorist scales, but then exhibited significant declines in constructivist beliefs while virtually no change in behaviorist beliefs following their student teaching experience. Had we combined the two belief systems into the same scales, we would not have learned about the ways student teaching impacts students independently.

A second major learning from this survey development process relates to our understanding of the development of the belief systems of preservice versus inservice teachers. In reviewing our factor analyses, we saw that student beliefs, prior to teaching experience, appear to be relatively undifferentiated when compared to inservice teachers. For instance, while we saw that inservice

teachers have distinct views with regard to parents--distinct from their beliefs about teaching practices or classroom management--the preservice teachers did not, as evidenced from the weaker factor loadings and low scale reliability. Judging from this data, the preservice teachers appear to identify themselves as either in the behaviorist or constructivist "camp," with little differentiation within those major categories. It may be the case that, with teaching experience, these teachers will evolve and differentiate in such a way that they may become behaviorist in some areas and constructivist in others. Future research might include a follow-up study with students a few years after graduating from the program to discover if this is indeed what happens.

Future Work

As mentioned at the beginning of this paper, this survey was developed in an effort to document the impact of the teacher education program at our university. Therefore, efforts are already underway to use the instrument as part of a longitudinal study to document the beliefs that students have when they enter the program, how those beliefs change throughout their coursework, and how their beliefs further evolve as the students move on into their teaching careers. Our intent is to combine this information with other qualitative data such as interviews, observations, and student writing assignments so that we may better understand the ways in which we can shape teachers' beliefs.

We also intend to continue our development work and to further evolve the survey. One major weakness indicated by the analyses presented here involves the "Constructivist Parents" scale; we believe that by adding positively correlated items, as well as items that touch on a broader range of parent-teacher relationship attributes, that this scale will become a more reliable and valid indicator of teachers' beliefs in this area. Additionally, because our program includes both elementary and secondary teacher education, in the future we may develop a second version of the survey that would be more pertinent to the beliefs of teachers working with older students. And, finally, as we reflect on feedback received in the course of discussions of this work with colleagues and others, we anticipate that we will find more dimensions along which we wish to compare behaviorist and constructivist theories. Therefore, we consider the work described here as an initial starting point from which we hope to continue to evolve our thinking.

APPENDIX: Teacher Beliefs Survey Items

BEHAVIORIST MANAGEMENT SCALE (BM)

1. It is important that I establish classroom control before I become too friendly with students.
12. When there is a dispute between students in my classroom, I try to intervene immediately to resolve the problem.
13. I believe students learn best when there is a fixed schedule.
19. I direct classroom events to prevent chaos.
29. I decorate my classroom primarily with posters and pictures, teaching charts, and/or seasonal decorations.
30. In my classroom I take care of the learning materials and set them out for students when they need them.
31. It is more important for learners to learn to obey class rules than to make their own decisions.

BEHAVIORIST TEACHING (BT)

5. I feel a responsibility to make curriculum choices for children because they can't know what they need to learn.
6. I base student grades primarily on homework, quizzes, and tests.
8. To be sure that I teach students all necessary skills (e.g., phonics, spelling, English, etc.) I follow a textbook or workbook.
9. I teach subjects separately, although I am aware of the overlap.
20. My students spend the majority of their seatwork time working individually.
21. For assessment purposes, I am interested in what students can do independently.
25. I generally use the teacher's guide to lead class discussions of a story or text.
27. I find that textbooks and other published materials are the best sources for creating my curriculum.
32. I am a firm believer in paper and pencil tests.

CONSTRUCTIVIST TEACHING (CT)

2. I believe that expanding on students' ideas is an effective way to build my curriculum.
3. I prefer to cluster children's desks or use tables so children can work together.
4. I invite students to create many of my bulletin boards.
10. I involve students in evaluating their own work and setting their own goals.
15. I make it a priority in my classroom to give students time to work together when I am not directing them.
26. I prefer to assess students informally through observation and conferences.
33. [C-cu] I often create thematic units based on the students' interests and ideas.

CONSTRUCTIVIST PARENTS (CP)

7. An essential part of my teacher role is supporting a child's family.
14. I mainly communicate with parents through report cards and parent teacher conferences. [reverse code]
17. I try to make it easy for parents to contact me at school or home.
23. I invite parents to volunteer or visit my classroom almost anytime.

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