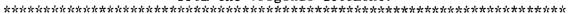ABSTRACT

        Increased interest in teacher cognition has led to
new ways of explorating teachers' thoughts and beliefs. The study
described here combines elements of two previous studies to make
comparisons among similes and simile categories and approaches to
classroom teaching. The purpose of the study was to determine the
relation between support for classroom teaching approaches and
support for similes for teacher, student, and classroom. Education
majors (N=200) ranked a list of similes, indicating how often each
simile was thought to be true, and completed an instrument rating
approaches to teaching. The second sample (N=450) consisted of
elementary education students only, who ranked a simile list
containing only similes for the teacher. Results suggest that general
relationships exist between beliefs about the nature of teaching,
expressed through metaphors, and other aspects of teaching such as
support for specific teaching approaches, positive self-concept, and
teacher efficacy. Results suggest that if metaphors can be identified
related to the goals of teacher education programs, efforts can be
made to reframe education students' notion of teaching. If education
students' beliefs about teaching can be shaped to reflect advocacy
and change instead of authority, they may be more likely to adopt
teaching approaches that facilitate learning and problem solving.
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Similes for Teaching and Classroom Teaching Orientations

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October, 1992

Running Head: SIMILES AND ORIENTATION

Similes for Teaching and Classroom Teaching Orientations

As interest increases in the area of teacher cognition, new
ways of exploring teachers' thoughts and beliefs have been
developed. Tobin, Munby, and others have used personal metaphors
to help understand the beliefs and myths of teachers concerning
teaching. It has been demonstrated that classroom practices
reflect the attitudes and beliefs of the teacher (Richardson,
Anders, Tidwell, & Lloyd, 1991; Tobin, 1990). Using qualitative
techniques Tobin (1990) found that teachers demonstrated
classroom practices consistent with the metaphors they hold for
teaching.

Another movement in education and educational research
focuses on approaching classroom activities as thinking and
problem solving challenges. Marshall (1988) found that there
were three general orientations to classroom teaching: learning
oriented, work-oriented, a neutral orientation not clearly
learning- or work-oriented. Much of the research by Palinscar
and others involves instructional strategies designed to take
place in learning-oriented classrooms.

This study combines elements of two previous studies to make
comparisons among similes and simile categories, and approaches
to classroom teaching. Marchant (in press) used a list of
similes for teachers, students, and classrooms to determine
categories of metaphors. After each simile, such as "a teacher
is like a boss," was a Likert-type scale indicating how often
that statement was true (never, sometimes, often, always). A
factor analysis of the responses yielded eight interpretable
factors (see Table 1 for the factors and similes each contained).
Teachers with more experience and those teaching or preparing to
teach at the elementary level indicated that teaching was more
often a CAREGIVING activity.

In a study on support for and beliefs concerning the ease of
implementation of various teaching strategies, Marchant, Newman,
and Al Hilawani (1991) found that teachers and education students
were more supportive of learning oriented approaches. However,
they also believed that these same strategies were more difficult
to implement in the classroom, especially in an urban setting.

Methods

This study used two samples and two slightly different
instruments to determine the relation between support for
classroom teaching approaches and support for similes for
teacher, student, and classroom.

Complete Lists
The instrument containing all of the similes listed in Table
1 was used with the first sample of 200 undergraduate and
graduate education students. As previously mentioned, the
respondents would indicate how often each simile was thought to
be true. Factor scores were developed by adding a numerical
value for each simile in the factor and dividing that number by
the number of similes included in the factor (as indicated by the

means in Table 1).

The students also completed an instrument that contained 17 approaches to teaching. Some of these approaches were designed to indicate a learning orientation, others were designed to suggest a work orientation, other approaches were considered neither. Using a five point scale from very poor to very good, the students were asked to indicate how good they thought each approach was and how easy each would be to implement (1 representing very difficult and 5 representing very easy). The students filled out two instruments that were identical except that in one instance they were asked to respond in terms of a stereotypical urban setting, and in the other a stereotypical suburban setting was presented. A factor analysis was conducted for quality and ease of implementation in each setting. A canonical correlation was used to compare factors, and items consistent across factors were used to create a learning-oriented subscale and a work-oriented subscale for quality and ease of implementation for both settings.

The learning-oriented subscale contained the following items:

1. A goal of school and assignments is to make learning interesting and fun.
2. The teacher holds high standards and expectations for all of the students.
3. Lessons are designed to challenge the students' minds.
4. The teacher directs the students by challenging their thinking.

The work-oriented subscale contained the following items:

1. Lessons are designed to get work done.
2. The teacher punishes the students when they are not working.
3. Corrections to errors are assigned as additional work.

Multiple regression equations were used to determine if simile factor subscale scores could predict learning- and work-oriented subscale scores for quality of approach and ease of implementation in urban and suburban settings.

Partial Lists, Self-Concept, and Teacher Efficacy

The second sample consisted entirely of elementary education students (N=450). The instrument they completed had selected items from the previously described instruments as well as additional items. The simile list contained only similes for the teacher. The 11 items contained the most salient (as determined by factor loadings) simile from each factor (advocate, boss, parent, orchestra conductor, party host, referee, slave, and student) as well as 3 extra similes (brother/sister, coach, and sculptor). A learning-oriented item (#1 from above) and a work-oriented item (#1 from above) were included on the instrument.

The instrument also contained a measure of self-concept and teacher efficacy. Eight positive adjectives followed by a Likert-type scale of agreement yielded a measure of the student's positive self-concept. The eight adjectives were "attractive", "cooperative", "creative", "friendly", "helpful", "intelligent", "knowledgeable", and "understanding". The scores from the nine

adjectives were combined to yield positive self-concept score. The combination of two items followed by a Likert-type scale produced a teacher efficacy measure:

1. Compared to other students trained to be teachers, I feel that I will be a much better teacher.
2. I feel that as a teacher I will be capable of getting any able student to learn, regardless of background or outside factors.

The teacher similes were entered into multiple regression equations predicting the learning- and work-oriented items, the positive self-concept measure, and the teacher efficacy score.

Results

Complete Lists

The simile factors were found to be significant predictors of the perception of the quality of learning-oriented approaches in both urban and suburban settings (see Table 2). The CHANGE subscale had a beta accounting for a significant amount of variance beyond the equation for both contexts. The AUTHORITY subscale contributed a significant amount of unique variance in the urban context, however the weighing was in the opposite direction. The simile factors also predicted the ease of implementation score for the learning-oriented subscale within the suburban context (however the R^2 was only .08). Again, the CHANGE subscale accounted for a significant amount of unique variance. The R^2 was not large enough to be considered significant for ease of implementing learning-oriented approaches in the urban context ($R^2 = .07$). The R^2 was also small ($R^2 = .06$) for quality and ease of implementation for the work-oriented subscales in both contexts.

Partial Lists, Self-Concept, and Teacher Efficacy

The teacher similes were significant in the multiple regression equations predicting the learning- and work- oriented items, the positive self-concept measure, and the teacher efficacy score (see Table 3). Only the "party host" simile had a significant weighing for the "school and school assignments should be fun" item. The "advocate" simile was correlated with this item ($r = .09$, $p < .05$), but was not significant beyond the equation. For the "lessons are designed to get work done" item, the teacher similes of "student", "boss", "advocate", and "referee" predicted a significant amount of unique variance beyond the equation ("student" had a reverse/negative loading). The "advocate" simile was a significant predictor above the equation for both the positive self-concept measure and the teacher efficacy score (see Table 4). "Coach" and "sculptor" were also significant beyond the equation for the teacher efficacy score.

Discussion

This study suggested that general relationships exist between beliefs about the nature of teaching, expressed through

metaphors, and other aspects in teaching such as support for specific teaching approaches, positive self-concept, and teacher efficacy. Those who viewed teaching as an activity of change where the teacher is viewed as an "advocate" in the molding of students and a "ball of clay" or a "sponge" were more supportive of learning-oriented approaches across settings. Viewing teaching from an authority framework was not conducive to support for a more learning-oriented approach in an urban setting. The notion that a teacher is an advocate also was related to a positive self-concept of the education students as well as their sense of teaching efficacy.

Although the results were not completely consistent when related to the specific teaching approaches, the indication that relationships do exist between metaphors in teaching and support for certain teaching approaches holds promise for future research and practical applications. Pajares (1992) suggested that teachers' beliefs are a valuable psychological construct in teacher education. If metaphors can be identified related to the goals of teacher education programs, then efforts can be made to reframe education students notion of teaching. If education students beliefs about teaching can be shaped to reflect advocacy and change instead of authority, they may be more likely to adopt teaching approaches that facilitate learning and problem solving.

Qualitative research has suggested that this type of change and reframing is possible on an individual level. This study suggested that general relationships exist. More in-depth qualitative research could serve to follow-up this study, and identify ways that reframing and changes in beliefs might be facilitated within teacher education programs.

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Table 1

Categories from factor analysis of similes for teacher, student, and classroom.

Factor	Mean	SD	Teacher Similes	Student Similes	Classroom Similes
Change	2.67	(.57)	Advocate	Ball of clay Sponge	
Competition	2.49	(.40)	Referee	Audience Worker	Test Business
Caregiving	2.29	(.38)	Doctor Parent Brother/sister Minister Friend Counselor	Patient Daughter/son Brother/sister	Hospital Home Sunny day Church Community
Trial	2.15	(.45)	Student	Teacher Jury Mountain Obstacle Question	Courtroom
Production	2.11	(.43)	Orchestra conductor Movie director Politician		Concert Stage Gameboard Factory Farm
Fun	2.03	(.39)	Party host		Party Carnival Playground Zoo
Authority	1.93	(.41)	Animal trainer Enemy Boss Judge Police officer Prison warden	Wild animal Enemy Pawn	Jungle Battlefield
Captives	1.57	(.43)	Slave Victim Fishbowl	Slave Prisoner	Cage Prison

Note.   1=never, 2=sometimes, 3=often, 4=always
         Adapted from Marchant (in press)

Table 2

Multiple regression equations using simile categories as predictors of a learning-oriented approach.

Predicting support for learning-oriented approaches in a suburban context.

R^2=.11   Stan.Error=.40   df=8,184   MS=.47,.16   F=2.90   p<.005

Factor	β	SE β	Beta	t	p<
Change	.15	.06	.20	2.56	.05
Authority	-.12	.10	-.12	-1.22	ns
Caregiving	.08	.09	.07	.88	ns
Trial	-.04	.07	-.04	-.47	ns
Business	.07	.09	.07	.82	ns
Fun	.15	.09	.15	1.71	ns
Product	.06	.09	.06	.66	ns
Captives	.02	.09	.02	.17	ns
(Constant)	3.79	.25		15.12	.001

Predicting support for learning-oriented approaches in an urban context.

R^2=.11   Stan.Error=.52   df=8,188   MS=1.27,.65   F=1.95   p<.005

Factor	β	SE β	Beta	t	p<
Change	.17	.07	.18	2.36	.05
Authority	-.34	.13	-.26	-2.74	.01
Caregiving	.09	.12	.06	.75	ns
Trial	-.07	.11	-.05	-.60	ns
Business	.14	.11	.11	1.24	ns
Fun	.04	.11	.03	.33	ns
Product	.14	.11	.11	1.23	ns
Captives	.17	.11	.13	1.44	ns
(Constant)	3.72	.32		11.47	.001

Predicting ease of implementation for learning-oriented approaches in a suburban context.

R^2=.8   Stan.Error=.82   df=8,185   MS=1.36,.67   F=2.03   p<.05

Factor	β	SE β	Beta	t	p<
Change	.29	.11	.20	2.50	.05
Authority	-.23	.20	-.12	-1.19	ns
Caregiving	.09	.19	.04	.46	ns
Trial	-.07	.18	-.03	-.37	ns
Business	.27	.18	.13	1.46	ns
Fun	.29	.18	.15	1.61	ns
Product	.11	.18	-.06	-.62	ns
Captives	-.14	.18	-.07	-.76	ns
(Constant)	2.52	.51		4.94	.001

Table 3

Multiple regression equations with similes for teacher predicting learning-
and work-oriented items.

Predicting support for "Lessons are designed to get work done."

R^2=.11   Stan.Error=.99   df=11,382   MS=4.32,.97   F=4.44   p<.0001

Factor	β	SE β	Beta	t	p<
Student	-.20	.06	-.18	-3.28	.005
Boss	.29	.08	.20	3.62	.001
Brother/sister	.10	.07	.08	1.38	ns
Advocate	.15	.07	.10	1.97	.05
Slave	-.00	.08	-.00	-.06	ns
Coach	.07	.09	.04	.77	ns
Referee	.19	.09	.12	2.10	.05
Orch. conductor	-.01	.08	-.01	-.10	ns
Parent	-.02	.09	-.01	-.24	ns
Sculptor	-.10	.07	-.09	-1.48	ns
Party host	-.06	.10	-.04	-.58	ns
(Constant)	2.30	.32		7.16	.001

Predicting support for "School and school assignments should be fun."

R^2=.06   Stan.Error=.58   df=11,382   MS=.80,.34   F=2.36   p<.01

Factor	β	SE β	Beta	t	p<
Student	.05	.04	.07	1.30	ns
Boss	-.03	.05	-.04	-.65	ns
Brother/sister	.08	.04	.10	1.74	ns
Advocate	.07	.04	.09	1.65	ns
Slave	-.02	.05	-.02	-.45	ns
Coach	.05	.05	.06	.99	ns
Referee	-.09	.05	-.10	-1.69	ns
Orch. conductor	-.08	.05	-.10	-1.55	ns
Parent	-.03	.05	-.04	-.61	ns
Sculptor	.07	.04	.10	1.69	ns
Party host	.13	.06	.14	2.15	.05
(Constant)	3.96	.19		20.83	.001

Table 4

Multiple regression equations with similes for teacher predicting learning-
and work-oriented items.

Predicting positive self-concept.

R^2=.07   Stan.Error=.   df=11,382   MS=.27,.10   F=2.58   p<.005

Factor	β	SE β	Beta	t	p<
Student	.00	.02	.00	.01	ns
Boss	-.03	.03	-.06	-1.00	ns
Brother/sister	.03	.02	.07	1.26	ns
Advocate	.07	.02	.14	2.70	.01
Slave	-.03	.03	-.06	-1.01	ns
Coach	.05	.03	.11	1.86	ns
Referee	.01	.03	.11	.18	ns
Orch. conductor	.00	.03	.01	.09	ns
Parent	-.03	.03	-.07	-1.15	ns
Sculptor	.03	.02	.10	1.60	ns
Party host	.02	.03	.04	.57	ns
(Constant)	3.90	.11		36.86	.001

Predicting teacher efficacy

R^2=.14   Stan.Error=.   df=11, 382   MS=1.38,.25   F=5.53   p<.0001

Factor	β	SE β	Beta	t	p<
Student	-.04	.03	-.07	-1.29	ns
Boss	-.04	.04	-.06	-1.06	ns
Brother/sister	.03	.04	.04	.79	ns
Advocate	.09	.04	.11	2.24	.05
Slave	-.02	.04	-.03	-.52	ns
Coach	.19	.04	.24	4.40	.001
Referee	-.04	.04	-.05	-.93	ns
Orch. conductor	-.07	.04	-.09	-1.57	ns
Parent	-.08	.04	-.09	-1.72	ns
Sculptor	.13	.03	.22	3.89	.001
Party host	.07	.05	.09	1.40	ns
(Constant)	3.24	.16		19.84	.001