Does burnout begin with student teaching?  

Analyzing efficacy, burnout, and support during the student-teaching semester

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We believe that meaningful relations exist among the constructs of teacher-efficacy, teacher-burnout, and perceived support. Previous work in the field of burnout suggests that this process may begin as early as the student teaching experience (Gold, 1985). Still, little research had been conducted on the existence and development of teacher-burnout in student-teachers. Data from forty-nine (49) student teachers were gathered at the mid-point (time 1) and end (time 2) of their student-teaching practicum. These data assessed teacher-efficacy, teacher-burnout, learning climate, and cooperating teacher support (guidance or imitation). Data were analyzed using correlational analyses, a repeated measures MANOVA, and a 2 (time) x 2 (group: high guidance; low guidance) repeated measures MANOVA, and stepwise regression. Results indicated significant increases in efficacy and decreases in burnout over time. Further, we found significant interactions in the three factors of burnout by guidance group, such that student-teachers experiencing high-guidance demonstrated lower levels of burnout at time 2.
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The culmination of most student-teachers’ professional preparation is their entrée into the classroom as a student teacher. Student teachers can be typified as having high expectations, knowledge of current pedagogy, and a heightened desire to meet the needs of their students in addition to meeting the demands of their cooperating teachers and student teaching supervisors. Student teachers, however, are in a precarious position in that their knowledge of pedagogy and child development is still naïve, and they are asked to work in ambiguous situations that require them to be both “student” and “teacher” (Fimian & Blanton, 1987). In this naïve state, student teachers are then immersed in classroom situations that may or may not afford support, encouragement, and opportunities to deepen their knowledge and experience success. Moreover, many student teachers’ see the teaching practicum as the final test of their teaching abilities and occasionally as a test of themselves as human beings (Sinclair & Nicoll, 1980). Therefore, it is important that we examine the extent to which these individuals may experience stress or burnout, as well as how personal experience (teacher efficacy) and environmental (cooperating teacher and university supervisor support) factors may serve to enhance or mitigate the stress.

Literature Review

Teacher efficacy and teacher burnout have been related to student achievement and teacher effectiveness (see Ashton & Webb, 1986; Farber, 1984; Friesen, Prokop, & Sarros, 1988; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Yet, teachers’ efficacy judgments and their withdrawal from the teaching profession as a result of exhaustion and frustration (i.e., burnout) are typically treated as separate issues in the educational literature. Further, it is our contention, and the basis of this study, that meaningful relations exist between the constructs of teacher-
efficacy and teacher-burnout, and that degree and type of perceived support received will also influence this relation. Previous work in the field of burnout suggests that individuals may begin to experience this phenomenon as early as the student teaching experience (Gold, 1985). This review describes the development of burnout, the relations among the constructs of teacher-efficacy and teacher-burnout, and the role of the environmental influence of perceived support on these psychological constructs.

**Teacher-efficacy**

*Definition.* Teacher-efficacy, defined as teachers’ beliefs in their abilities to organize and execute courses of action necessary to bring about desired results (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998), is considered a future-oriented motivational construct that reflects teachers’ competence beliefs for teaching tasks. Teachers’ efficacy beliefs have been show to be related to a number of important outcomes associated with education, including student achievement (e.g., McLaughlin & Marsh, 1978), student motivation (e.g., Midgley, Feldlaufer, & Eccles, 1989), teacher valuing of educational innovations (e.g., Cousins & Walker, 2000), classroom management skills (Woolfolk, Rosoff, & Hoy, 1990), and teacher stress (Greenwood, Olejnik, & Parkay, 1990).

Current understandings of teacher-efficacy underscore the multidimensionality and specificity of these beliefs (see Tschannen-Moran et al., 1998). For example, the Tschannen-Moran and Woolfolk-Hoy (2001) measure of teacher efficacy identified three areas for which teachers may hold differing levels of efficacy: classroom management, instructional practices, and student engagement. It may be that efficacy for each of these teaching tasks has differential relations with the three dimensions of teacher-burnout.
Sources of efficacy. Bandura (1997) identified four potential sources of self-efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and physiological cues. Mastery experiences include those opportunities in which individuals actually attempt and engage in the task under consideration. We believe for many preservice teachers, student teaching is their earliest mastery experience related to teaching. Bandura (1997) suggests that mastery experiences will have the strongest influence on an individual’s sense of efficacy for any given task. Vicarious experiences are those occasions when we can observe or learn from the experiences of another person. However, with these experiences a strong determining factor is the similarity between the model (person being observed) and the individual whose efficacy is being formed (Bandura, 1997). During student teaching, preservice teachers have the opportunity to observe and learn from their cooperating teacher as well as their peers. The strength of efficacy information originating from observations will be related to the extent to which the student teacher identifies with the person being observed.

Verbal persuasion refers to encouragement the individual receives from other sources (Bandura, 1997). In the context of student teaching an important source of verbal persuasion may come in the form of the perceived support the student teachers receives from the cooperating teacher and the university supervisors. Physiological cues are the physical reactions an individual has in relation to the task at hand. Student teachers may have sweaty palms before their first class, experience stress headaches, or even an adrenaline rush at the end of the day. All of these physical reactions to the task provide the individual with information to their ability to be successful at the task.

Thus, the student teaching practicum is a unique time in a teachers’ professional development. They are having prolonged a mastery experience, with opportunities for both
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vicarious experiences and verbal persuasion, all of which serve to facilitate the development of the preservice teachers’ teaching efficacy beliefs.

Teacher-burnout

**Definition.** Freudenberger (1974) coined the term "burnout" as he watched a group of volunteers enter a helping field, give totally of themselves, and eventually overextend themselves to the point of emotional exhaustion. Based on his observations Freudenberger (1974) ultimately defined the term *burnout* as: "the state of physical and emotional depletion resulting from conditions of work" (p. 160). He further noted that it was "the dedicated and the most committed" who were the most likely to burnout as they "work too much, too long, and too intensely" (Freudenberger, 1974, p. 161).

Maslach and Jackson (1981) developed a definition and measure of burnout for individuals in helping professions. Maslach and Jackson’s (1981) definition entailed three components of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion refers to the feeling of having given all that one can, that the teacher has put all of his or her energy and focus into the task of teaching and has finally run out of resources, this is the most common aspect of burnout, and is frequently what people mean when they complain of this malady (Anderson & Iwanicki, 1984). Depersonalization occurs when the teacher develops negative feelings and cynicism towards his or her students and perhaps even the school community. Depersonalization is the formation of "a very cynical and dehumanized perception of [clients]...in which they are labeled in derogatory ways and treated accordingly" (Maslach & Pines, 1977, p. 101). The final aspect of burnout, reduced personal accomplishment, relates to a negative self evaluation in regard to students and not being happy with teaching as a profession (Anderson & Iwanicki, 1984). The result of this negative self-
evaluation is a sense of distress and failure in the pursuit of ideals, leaving the teacher with a feeling of demoralization and abject failure (Friesen, et al., 1988).

*Development of burnout.* A teacher does not wake up one morning suddenly burned-out, rather this is a process that takes place over time, through a multiplicity of causes. Thus, the state of emotional exhaustion, depersonalization, and lack of personal accomplishment, may vary from one individual to another. At any given moment a teacher may be in the process of burning-out which may go unnoticed by co-workers, administrators, and students, so that when he or she hits bottom it appears to be a surprise. In reality, burnout is the result of experiencing direct and unwavering stress on an individual with insufficient coping skills for a prolonged period of time (Friesen, et al, 1988).

The potential causes of teacher burnout vary in the literature but several main causes have emerged across multiple studies. These causes include: lack of administrative support, overall work stress, dissatisfaction with recognition and status, job challenge, and need deficiencies in the areas of esteem, and self actualization (Farber, 1984; Friesen, et al, 1988; Blase, 1982). Each of these areas can be (and most have been) studied and researched in detail, yet none occur in isolation and it is the amalgamation of all of these stressors on a teacher who is dedicated and passionate about his or her work, that creates teacher burnout (Farber, 1984). According to Farber (1984) burnout is not the result of stress, which may exists in all helping professions, rather it is caused by *unmediated* stress, having no way out, and lacking a support system.

*Perceived Support*

The examination of any psychological construct cannot be successfully achieved without consideration of contextual factors that influence how individuals function and think about their environment. As discussed in the preceding sections efficacy and burnout are linked both
theoretically and empirically to individuals’ perceived support. In the context of the present study we focused on the perceived support student teachers received from their cooperating teachers and their university supervisor.

Support from cooperating teachers. Cooperating teachers are typically portrayed as having a considerable influence on student teachers (Hollingsworth, 1989; Lortie, 1975). Hamman and Olivarez (2005) developed a measure of interaction between cooperating and student teachers. This measure utilized a theoretical framework of dyadic interaction proposed by Grannot (1993). This framework consisted of two continua along which interactions may be classified. The first continuum is concerned with the degree of collaboration. Grannot described this continuum as ranging from isolated work with only limited interaction, to instances where dyad members shared goals and actively collaborated. The second continuum is concerned with the relative expertise of the two actors. Expertise may range from symmetric expertise, meaning both members of the dyad have approximately equal knowledge, to an asymmetric condition where one clearly has more expertise than the other. We assumed that interactions regarding instruction between cooperating and student teachers would most accurately be categorized as an asymmetric (expert-novice) condition.

Within the asymmetric condition, Grannot (1993) identified types of interactions that might occur depending on the degree of collaboration. A case where there is a low level of collaboration between the cooperating and student teacher may be described as imitation. This classification primarily describes a situation where the cooperating teacher provides little help to the student teacher. The student teacher, left to her or his own devices, must learn to teach simply by observing and imitating the cooperating teacher. Such a situation is roughly parallel to the cooperating teachers Borko and Mayfield (1995) identified as not actively participating in the
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learning of the student teacher. The next level of collaboration is characterized by the cooperating teacher’s guidance of the student teacher, or treating her or him as an apprentice. In such a situation, the cooperating teacher engages in periods of active directing of the student teachers’ learning. The cooperating teacher might observe and then evaluate activities of the student teacher, or demonstrate actions and procedures for the student teacher. In this type of situation, the cooperating teacher directs the interaction by having definite goals and standards for the student teacher and using interaction to help her or him approximate the desired outcomes. Cooperating teachers who engage in guidance-types of interaction are taking an active role in the student teachers’ learning.

Support from the university supervisor. Additionally, the learning environment in which the student teachers find themselves, and their weekly seminar held by a university supervisor provides another avenue of perceived support. Deci and Ryan (2002) have developed an instrument to assess the influence of the social context or learning environment on students’ motivation. Specifically, learning environments perceived to be autonomy supportive rather than controlling are believed to be more adaptive for positive motivational and performance outcomes (Deci & Ryan).

Teacher-efficacy, Teacher-burnout and Perceived Support in Student Teachers

The research questions examined in the present study address concerns for preservice teachers relative to their level of stress, particularly the development of teacher-burnout. Although the majority of research on teacher-burnout has focused on practicing teachers (cf., Vandenbergh & Huberman, 1999), it has been suggested that the development of teacher-burnout begins with the student teaching experience (Gold, 1985). It is during student teaching that preservice teachers begin to learn the habits of the profession and begin to develop adaptive or
maladaptive coping skills for dealing with the stress of teaching (Gold, 1985; Greer & Greer, 1992). Further, these individuals have often experienced academic success and are distressed when they learn that this does not necessarily translate to success as a teacher (Bowers, Eicher, & Sacks, 1983).

Little research had been conducted on the existence and development of teacher-burnout in preservice teachers. Fimian and Blanton (1987) investigated the factor structure of preservice, first year, and experienced teachers’ sense of burnout and established the existence of the three components of burnout in preservice teachers. Still, their work did not attempt to explain the development of this phenomenon nor the influence of any mediating or moderating factors in its development (Fimian & Blankton, 1987). Therefore, our goal is to extend this initial work and explore the development of burnout in preservice teachers.

As mentioned previously, Byrne (1999) identified three sets of variables that influence burnout: background, organizational, and personality factors. With this in mind, we investigated the relations of background (grade level), personal (teacher efficacy) and organizational (perceived support) factors in student teachers’ experience of burnout. The questions underscoring the present study rest in concerns for preservice teachers relative to their sense of stress, particularly burnout, and the potential influential factors of teacher efficacy, and perceived support. Research on experienced teachers has found that teachers in the state of burnout tend to have, impaired performance, low morale, high absenteeism, and high turnover (Friesen, Prokop, and Sarros, 1988). Additionally, Farber (1984) identified reduced sympathy toward students, less frequency and care in lesson planning, a lower frustration level in dealing with students, and a general irritable, depressed and anxious demeanor, as effects of teacher burnout. Researchers concerned with teacher burnout also cite high attrition rates in new teachers (Duke, 1984)
Does burnout begin with student teaching? particularly of those who may have been the best suited for teaching (Schlechty & Vance, 1981).

Research on experienced teachers has identified several variables which seem to contribute to teachers’ experience of burnout. Byrne (1999) who identified three contributing variables to burnout: background, organizational, and personality factors. Background factors included gender (e.g., Anderson & Iwanicki, 1984; Ogus, Greenglass, & Burke, 1990), age (e.g., Pedrabissi, Rolland & Santinello, 1993), years experience (e.g., Borg & Falzon, 1989), marital/family status (e.g., Pierce & Molloy, 1990), grade level taught (e.g., Anderson & Iwanicki, 1984), and type of student taught (Beck & Gargiulo, 1983). Organizational factors related to teacher burnout included role conflict and role ambiguity (Cunningham, 1982, 1983), work overload (e.g., Borg & Riding, 1991), classroom climate (e.g., Blasé, 1986), decision making (e.g., Natale, 1993), and social support (e.g., Farber, 1984). With regard to personality factors, research has found teachers’ sense of control (i.e., locus of control, e.g., Farber, 1984) and self esteem (Hogan & Hogan, 1982) to be related to teachers’ sense of stress and burnout. More recently, Brouwers and Tomic (2000) have investigated the relation of teachers’ efficacy to burnout. Specifically, these researchers have studied, longitudinally, the relation of self-efficacy and burnout finding that these constructs seem to be related in experienced secondary teachers (Brouwers & Tomic, 2000).

Research Questions

The purpose of the present study was to explore the extent to which preservice teachers engaging in their student teaching experience exhibit teacher burnout. Moreover, we sought to examine the development of this construct situated in salient background (i.e., grade level taught), organizational (i.e., perceived support), and individual (i.e., teacher efficacy) constructs
that have been found to relate to burnout among experienced teachers. Therefore we forwarded three research questions:

1. What relations exist among student teachers’ efficacy beliefs, reports of burnout, and perceived support from university supervisor (learning climate) and cooperating teacher?
2. Do student-teachers reports of efficacy, burnout, and support change over the course of the teaching practicum?
3. What differences do student-teachers, reporting varying levels of cooperating teacher support, demonstrate with respect to efficacy, burnout, and supervisor support during the teaching practicum?

Methodology

Participants

Forty-nine student-teachers completing their student teaching experience were included in this study. These participants were predominantly female (89.5%), and their average age was 24.1 years old. Participants described themselves as European American (88%), Hispanic (8%), African American (2%) and other (2%). There was some variation in student teaching placement. Approximately 60% of the student teachers were placed in elementary classrooms, while 40% were placed in secondary-level classrooms. Additionally, 51% of student teachers chose to have a single placement in one classroom for the entire practicum semester, while 49% chose to have a split placement, spending one-half of the semester in one classroom at a specific grade level (e.g., Grade 1), and one-half of the semester in another classroom at a different grade (e.g., Grade 4).
Materials and Measures

Background Information. Participants provided relevant background information that included: their student teaching placement, area of study, grade level taught, as well as general demographic information (i.e., age, gender, and ethnicity).

Teacher Sense of Efficacy Scale. Student-teachers’ efficacy was assessed with the Teachers’ Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk-Hoy, 2001). This 24-item measure asked participants to respond to the question “How much can you do?” in relation to a series of common teaching tasks. Participants respond using a nine-point scale indicating the degree to which they feel they can do to accomplish the indicated task. Ratings are as follows: 1 (nothing), 3 (very little), 5 (some influence), 7 (quite a bit) and 9 (a great deal). Factor analysis of the 24 items has revealed the three-factor solution identifying areas of efficacy for instructional practices, classroom management, and student engagement (Tschannen-Moran & Woolfolk-Hoy, 2001). Tschannen-Moran and Woolfolk-Hoy (2001) reported reliabilities for responses to the overall scale ($\alpha = .94$), and the subscales (instructional practices: $\alpha = .91$; classroom management: $\alpha = .90$; and student engagement: $\alpha = .87$). Factor Analyses of the present data revealed a similar factor structure. This instrument provided an un-weighted mean for overall teacher efficacy ($\alpha = .97$) and un-weighted means for each of the three sub-scales: instructional practices efficacy (IP, $\alpha = .94$), classroom management efficacy (CM, $\alpha = .96$), and student engagement efficacy (SE, $\alpha = .93$).

Maslach Burnout Inventory. The Maslach Burnout Inventory – Educator’s Survey (MBI – ES) was used to measure the levels of burnout for each participant (Maslach & Jackson, 1981). The MBI is the most common measure used to ascertain levels of occupational burnout (Byrne, 1991). This 22 item, Likert-type survey measured three indicators of burnout, emotional
exhaustion (EE), depersonalization of clients/students (DP) and personal accomplishment (PA). Studies by Iwanicki and Schwab (1981) and Gold (1985) served to substantiate the validity and reliability of the MBI-ES. Both of these studies employed factor analysis on their data and findings support the three-factor structure of the MBI-ES. Additionally, reliabilities for each of the three scales ranged from .76 - .90 (Iwanicki & Schwab, 1981) and .72-.88 (Gold, 1985). Reliabilities for each scale in the present study were: $\alpha = .90$ for emotional exhaustion, $\alpha = .82$ for depersonalization of students, and $\alpha = .77$ for feelings of reduced personal accomplishment.

Participants experiencing high levels of burnout demonstrated high scores on the EE and DP subscale and low scores on the PA subscale.

*Learning to Teach Questionnaire.* The Learning to Teach Questionnaire (LTQ; Hamman & Olivarez, 2005) was used to assess student teachers’ perceptions of interaction they experienced with their cooperating teacher related to instruction. This is a 10-item 6-point Likert-type measure. Participants were asked to respond by indicating how frequently each statement was true of the interaction they experienced with their cooperating teacher. Participants identified the level of frequency for each item by selecting: 1 (never), 2 (almost never), 3 (sometimes), 4 (often), 5 (almost always), or 6 (always). Previous work with this instrument has identified two factors which indicate the type interaction between the cooperating and student teacher. The first factor indicates the extent to which the student teacher received guidance from the cooperating teacher (e.g., My cooperating teacher and I have worked *together* to improve my instruction this semester). The second factor reflected the extent to which the student teacher imitated the cooperating teacher (e.g., I watch what my cooperating teacher does during instruction and then try it myself). Three un-weighted means scores were calculated for this
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study: a total level of interaction ($\alpha = .94$), guidance from the cooperating teacher ($\alpha = .95$), and imitation of the cooperating teacher ($\alpha = .90$).

Learning Climate Questionnaire. The Learning Climate Questionnaire (LCQ; Deci & Ryan, 2002) was used to assess student teachers’ evaluation of the learning climate they experience at the university. This instrument has been used to assess students’ perceptions of the environment which instructors create (Williams, Wiener, Markakis, Reeve, & Deci, 1994). The LCQ was developed by self-determination theory (SDT) researchers (e.g., Deci & Ryan, 2002) to assess the influence of the social context or learning environment, on motivation. Specifically, SDT characterizes social environments by the degree to which those environments are autonomy supportive or controlling (Deci & Ryan, 2002). Further, SDT hypothesizes that autonomy-supportive environments are more adaptive for positive motivational, developmental, and performance outcomes.

The LCQ served to assess the degree to which the student teachers’ perceived their university supervisor to be autonomy supportive. The LCQ is assessed on a 7-point scale which indicated the degree student teaching supervisors are perceived to be autonomy supportive by the student teachers. Higher scores on this 15-item measure indicate greater perceived autonomy support. Reliabilities for this scale have repeatedly been .90 or higher (e.g., Black & Deci, 2000). Data for the present study demonstrated a reliability of .88.

Data Collection Procedures

Participants for this study were recruited from the student teaching cohort located at a large southwestern university. Researchers associated with the study attended an orientation meeting for student teachers held early in the practicum semester prior to the beginning of their teaching experience. At this meeting, student teachers were informed of the study and the
procedures and timelines for participation. Additionally, information was gathered from interested student teachers so that they could be contacted.

The study measures were made available to participants in an online format. Each student exhibiting interest in participating in this research was assigned a code and password to enable them access to the site. Students were sent a series of emails informing them when to complete the measures. Data were collected at two points: in the middle of the student teaching experience (time 1), and at the end of the experience (time 2).

Results and Discussion

Before addressing the main research questions, we conducted several preliminary analyses to better guide our investigation and ensure that we met necessary assumptions for our analyses. Initial differences for efficacy, burnout, learning climate, and interaction with the cooperating teacher were examined for two grouping variables: placement type (one placement for the whole semester vs. two placements for half of the semester each) and school level (elementary vs. secondary) at time one. This was done to ensure that these groups could be combined without masking potential differences due to environmental conditions. No differences were found in the dependent variables based on placement type or for school level, with one exception. Burnout was found to differ significantly at the multivariate level based on school levels of the student teaching experience [Wilks’ $\lambda = .803, F (3, 45) = 3.68, p = .02$].

Relations Among Efficacy, Burnout, Autonomy Support, and Interaction Support

Correlation analyses were performed on the dependent variables at both time 1 and time 2 (see Table 1). At time 1, efficacy for student engagement, instructional practices, and classroom management were positively related to guidance for instruction from the cooperating teacher. Efficacy for instructional practices and classroom management were also related to the burnout
factors of perceived personal achievement (positively), and related to depersonalization of students (negatively). Perceived autonomy support from the university supervisor (learning climate) was negatively related to student teachers’ depersonalization of students and to their emotional exhaustion. There was no relation at time 1 between any of the efficacy factors and emotional exhaustion. At time 2, a somewhat different pattern of relations emerged. First, efficacy for instructional practices and student engagement continued to be related to guidance but efficacy for classroom management was no longer significantly related. Additionally, modest relations of efficacy for instructional practices and student engagement with imitation of cooperating teacher also became evident at time 2.

Further, significant relations emerged among the burnout and efficacy variables at time 1 and at time 2. At time 1, efficacy for instructional practices and classroom management were negatively related to depersonalization of students. This indicates that individuals with greater confidence in their instructional and managerial abilities were less likely to depersonalize their students early in their student teaching experience. However, at time 2, a greater number of significant relations emerged among the burnout and efficacy factors. Specifically, all of the efficacy factors demonstrated negative relations with emotional exhaustion and depersonalization of students. Thus, student teachers with higher efficacy levels at time 2 were less likely to experience emotional exhaustion and depersonalize students. Additionally, efficacy for student engagement and instructional practices continued to be positively related to feelings of personal accomplishment. This indicates that those student teachers who were more confident in their abilities to engage students and meet instructional needs also experience greater feelings of accomplishment or satisfaction with their teaching experience.
These results seem to suggest that the relations among efficacy, burnout, autonomy support, and interaction support are somewhat fluid during the student teaching practicum. Early on, student teachers may derive efficacy information through interaction with their cooperating teacher, but toward the end of the practicum, salient efficacy information is also derived from their own feelings of burnout. Likewise, the university supervisor may play a particularly important role at the outset of the teaching practicum, but over time, as student teachers gain mastery, other factors become more salient to feelings of burnout and efficacy.

Changes in Efficacy, Support, and Burnout Over Time

Efficacy changes. A one-way repeated measures MANOVA was performed to examine changes in student teachers’ efficacy between the early portion of the practicum (time 1) and the later portion of the practicum (time 2 - see Table 2). This analysis revealed a significant difference at the multivariate level [Wilks’ $\lambda = .64, F(3, 46) = 8.61, p < .001, \eta^2 = .36$]. Follow-up univariate analyses also revealed significant differences in efficacy for student engagement [$F(1, 48) = 11.44, p = .001, \eta^2 = .19$], instructional practices [$F(1, 48) = 25.35, p < .001, \eta^2 = .34$], and classroom management [$F(1, 48) = 10.08, p = .003, \eta^2 = .17$]. These results indicate that over time, student teachers’ felt increasing more confident in their abilities relative to student engagement, instructional practices and classroom management.

The results from analyses of change over time suggest that efficacy beliefs increase significantly over the course of the student-teaching practicum regardless of placement type or school level. This finding is somewhat surprising given earlier work showing decreases in efficacy beliefs attributable to school-based experiences (e.g., Brousseau, Book, & Byers, 1988). The fact that student teachers provided these ratings shortly after beginning their practicum experience, instead of prior to beginning, may account for the positive change.
Changes in feelings of burnout. Participants in this study were found to have differing levels of burnout at time 1 relative to the school level in which they taught. Therefore, to examine changes in perceptions of burnout, a 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and school level (elementary and secondary) as the independent variables, and the three burnout subscales as dependent variables (emotional exhaustion, depersonalization of students, and personal achievement – see Table 3). Results from this analysis revealed a significant interaction effect at the multivariate level between time and school level [Wilks’ $\lambda = .77$, $F(3, 45) = 4.37$, $p = .009$, $\eta^2 = .22$] as well as significant multivariate main effects for both school level [Wilks’ $\lambda = .73$, $F(3, 45) = 5.51$, $p = .003$, $\eta^2 = .27$] and time [Wilks’ $\lambda = .38$, $F(3, 45) = 24.69$, $p < .001$, $\eta^2 = .62$]. Analysis of univariate results for the interaction effect indicated that only one burnout variable, depersonalization of students, was statistically significant [$F(1, 47) = 11.66$, $p = .001$, $\eta^2 = .19$] (see Figure 1). This indicates that while elementary level student teachers reported higher amounts of student depersonalization at the beginning of the practicum than did secondary level student teachers, at the end of the semester these elementary student teachers had reported significantly lower levels of student depersonalization at the end of the semester than did the secondary level student teachers. Over the course of the semester depersonalization of student decreased across both groups but this decrease was greater for elementary level teachers.

Univariate results for the main effect of time, both emotional exhaustion [$F(1, 47) = 70.55$, $p < .001$, $\eta^2 = .60$], and depersonalization of students [$F(1, 47) = 37.90$, $p < .001$, $\eta^2 = .45$] were statistically significant. For the main effect of school level, none of the burnout variables reached statistically significance at the univariate level.
Like efficacy, feelings of burnout also seemed to change over time. Changes in burnout, however, may also be more sensitive to the level at which the student teacher is working. Specifically, student teachers working at the elementary level, compared to student teachers working at the secondary level, indicated less of a tendency to depersonalize their pupils at the end of their student teaching experience. There was no main effect for school levels, however, for student teachers’ feelings of emotional exhaustion or personal accomplishment.

Changes in perceptions of support from the university supervisor and the cooperating teacher. A one-way repeated measures MANOVA was performed to examine changes over time in student teachers’ perceptions of support from their university supervisor (learning climate), and the type of interactions (guidance and imitation) they had with their cooperating teachers concerning instruction. Results from this analysis revealed a statistically significant difference in support at the multivariate level based on time [Wilks’ λ = .25, F(3, 46) = 44.73, p < .006, η² = .74]. Follow-up univariate tests indicated that this significant difference was due solely to an increase in the degree to which student teachers perceived autonomy support from their university supervisors [F(1, 48) = 134.08, p < .001, η² = .73, time 1 = 3.80 (.99); time 2 = 5.93 (.86)]. No significant differences were found in the extent to which student teachers perceived themselves to either receive guidance from their cooperating teacher, or to imitate the instructional actions of their cooperating teacher.

These results suggest an interesting pattern in the way student teachers perceive autonomy support over the course of their student teaching experience. The extent to which they perceive support from their university supervisor appears to increase dramatically from the beginning to the end of the semester. This change may be attributable, in part, to the assistance student teachers receive during seminar meetings to the university supervisor’s release of control
and transference of autonomy to student teachers during the course of the student-teaching semester. These supervisors may feel a greater ability and need to shift control onto these student teachers as they grow and develop as teachers. Further, the supervisors may be responding to the student teachers needs to exert and experience greater control over their own learning. The manner in which student teachers interact with their cooperating teachers concerning instruction, however, does not appear to change over the course of the practicum semester. This too is an interesting finding in that as student teachers gain greater experience in the classroom, one might expect that cooperating teachers would alter the frequency of guidance regarding instruction, and that student teachers would perceive themselves to be imitating their mentor less. The results from these analyses, however, suggest otherwise.

Relating Change in Efficacy and Burnout to Support During Student Teaching

The analyses that follow were undertake in order to examine how support from cooperating teachers and autonomy support from university supervisors might be related to differences in efficacy and burnout among student teachers. A median split was used to create two groups (high vs. low) for each of the support variables at time 2 (autonomy support from university supervisor, guidance from the cooperating teachers, imitation of the cooperating teacher). Analyses were conducted to determine if differences existed in efficacy and burnout based upon whether the student teacher perceived autonomy support from the university supervisor and the cooperating teacher.

Effect of university supervisor autonomy support. A 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and support level (higher vs. lower) as the independent variables; and efficacy for instruction, student engagement, and classroom instruction as the dependent variables. No significant differences in efficacy were identified [Wilks’ $\lambda = .93$, $F(3,$
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45) = 1.02, \( p < .39, \eta^2 = .06 \)]. A second 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and support level (higher vs. lower) as the independent variables; and emotional exhaustion, depersonalization, and personal accomplishment as the dependent variables. No significant differences in the burnout measures were identified [Wilks’ \( \lambda = .89, F(3, 45) = 1.78, p = .16, \eta^2 = .10 \)]. These results seem to indicate that autonomy support from the university supervisor had little influence on student teachers’ efficacy beliefs or their feelings of burnout.

*Effects of cooperator guidance.* A 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and guidance level (high vs. low) as the independent variables; and efficacy for instruction, student engagement, and classroom instruction as the dependent variables. This analysis revealed significant time by guidance group differences at the multivariate level (see Table 4) [Wilks’ \( \lambda = .83, F(3, 45) = 3.08, p = .037, \eta^2 = .17 \)]. Follow-up univariate tests revealed significant time X guidance group differences in efficacy for instructional practices \[ F(1, 47) = 6.24, p = .016, \eta^2 = .11 \] (see figure 2). This suggests that student teachers who experience higher levels of guidance over the course of the student teaching experience develop significantly higher levels of efficacy for instructional practices than those who receive lower amounts of guidance. Thus, high guidance support from cooperating teachers is associated with student teachers increased feelings of confidence in their abilities related to instructional practices.

In terms of efficacy for student engagement, we found significant differences for the main effects of time \[ F(1, 47) = 10.60, p = .002, \eta^2 = .18 \], and guidance \[ F(1, 47) = 8.17, p = .006, \eta^2 = .15 \], but not for the interaction effect \[ F(1, 47) = 2.42, p = .12, \eta^2 = .05 \]. Likewise, for efficacy for classroom management, we found differences for the main effects of time \[ F(1, 47) = 9.02, p = .003, \eta^2 = .17 \], and guidance \[ F(1, 47) = 5.06, p = .03, \eta^2 = .10 \], but not for the interaction effect \[ F(1, 47) = 161, p = .69, \eta^2 = .003 \].
A second 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and guidance level (higher vs. lower) as the independent variables; and emotional exhaustion, depersonalization, and personal accomplishment as the dependent variables. This analysis revealed no significant differences in burnout measures based on extent of guidance from the cooperating teacher \( \text{Wilks' } \lambda = .85, F (3, 45) = 2.62, p = .06, \eta^2 = .14 \).

*Effects of student teacher imitation of the cooperating teacher.* A 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and imitation level (higher vs. lower) as the independent variables; and efficacy for instruction, student engagement, and classroom instruction as the dependent variables. This analysis revealed no significant differences in efficacy based on extent to which the student teacher felt they imitated the instruction of the cooperating teacher \( \text{Wilks' } \lambda = .86, F (3, 45) = 2.34, p = .08, \eta^2 = .13 \). A second 2 X 2 repeated-measures MANOVA was conducted with time (1 and 2) and imitation level (higher vs. lower) as the independent variables; and emotional exhaustion, depersonalization, and personal accomplishment as the dependent variables. This analysis also revealed no significant differences based on imitation group \( \text{Wilks' } \lambda = .90, F (3, 45) = 1.56, p = .21, \eta^2 = .09 \).

Overall, the results from these analyses suggest that the effects of support from the university supervisor and the degree to which student teachers imitate the instructional behaviors of their cooperating teachers have a limited effect on student teachers’ feelings of efficacy or burnout. Efficacy beliefs about instructional practices do seem to be influenced, however, by the extent to which student teachers perceive themselves to be receiving guidance from their cooperating teacher concerning instruction. One may posit that cooperating teachers who use guidance techniques serve to enhance the mastery experiences of those student teachers. This may occur in a number of ways. First, these student teachers are provided opportunities to teach
on their own and initiate their own techniques and practices. Second, in the guidance relationship the cooperating teacher offers directive feedback that may serve to ensure successful teaching and, as such, a positive mastery experience. Finally, through opportunities to collaborate and discuss the teaching situation, the cooperating teacher may be enhancing the student teacher’s ability to analyze the task and understand their own competency in ways that support positive feelings of efficacy.

**Identifying Support Predictors of Burnout for Student Teachers**

The previous analyses revealed little about what types of support might influence change in student teachers’ feelings of burnout. In order to better understand what factors may influence changes in student teachers’ feelings of burnout, we used regression analysis to identify possible predictors from the early portion of the semester that might be related to feelings of depersonalization toward the end of the practicum semester. For this analysis, we calculated a change score only for the factor of depersonalization of students. This decision was based on the results from previous analyses (see Table 3) that found significant change in the depersonalization variable over time. This score was calculated by subtracting student teachers’ ratings of depersonalization at time 2 from their ratings of depersonalization at time 1. Calculation of this change score revealed that changes were predominantly positive, meaning a decrease in the amount of depersonalization, with slightly less than 80% of the student teachers exhibiting a reduction in the extent to which they had feelings of depersonalization toward their students.

A stepwise regression analysis was conducted with perception of support from university supervisor at time 1, perceived guidance for instruction from cooperating teacher at time 1, and perceived imitation of cooperating teacher’s instruction at time 1, as the predictor variables, and
degree of change in depersonalization of students as the dependent variable (see Table 5). This analysis indicated that both autonomy support from the university supervisor and degree of imitation of the cooperating teachers’ instruction predicted changes in the extent to which student teachers depersonalized their students \[F(2, 46) = 6.86, p = .001, \text{Adj-R}^2 = .22\].

There are at least two points about these results that are of particular interest. First, an autonomy supportive learning climate is a “negative” predictor of change in student teachers’ depersonalization of pupils. This means that greater autonomy support from the university supervisor is associated with less change in feelings of depersonalization. One explanation for this outcome is that a stronger endorsement of ratings related to autonomy support from the university supervisor may indicate that the student teacher is experiencing a greater demand for self-regulation, self-reliance and autonomy. In such a case, when the university supervisor requires the student teacher to exercise greater control of their teaching activities, the student teacher may become overwhelmed, or may cope with this stress by depersonalizing students.

As to the association between change in depersonalization and imitation, this is interesting also, because it suggests that the more a student teacher imitates the instruction of his or her cooperating teacher early on in the practicum, the greater their decrease in the extent to which student teachers depersonalize their students.

Combined, the findings about change in efficacy and the predictors of change in depersonalization suggest that the student teaching experience is a fairly stressful experience for student teachers, and that the degree of structure (e.g., elementary classrooms with student contact and set routines; ability to imitate the cooperating teacher rather than be a “do-it-yourselfer”) may help reduce feelings of depersonalization, but does little to affect feelings of efficacy.
Conclusions

The results of this study allow us to forward several conclusions. First, we found that preservice teachers demonstrate significantly different levels of burnout depending on the school level they are working in such that elementary level student teachers demonstrate less burnout than secondary level student teachers. This is an important finding for teacher educators and secondary school administrators to consider as secondary level teachers are prepared and begin their first years of teaching. It may be that the structure of the secondary school environment provides greater stress on these novice teachers and as such puts them at greater risk for burnout.

Second, the correlational analysis conducted in this study illustrated that significant relations exist among efficacy and burnout factors. Further, when these relations are examined across Time 1 and Time 2 we see that these relations become stronger. Moreover the direction of these relations is such that as student teachers levels of efficacy increase their degree of burnout decreases. This suggests that efficacy may serve as a means of ameliorating teachers’ feelings of burnout. It could be that over time these student teachers’ sense of efficacy increases because their teaching abilities actually improved, thereby, improving their classroom instruction and decreasing the number of stressors that might emerge in a learning environment due to the inadequacy of the teaching.

Extending this contention then suggests that one potential means of decreasing teachers’ burnout is to provide them with efficacy-enhancing opportunities. That is, rather than just working to decrease stressors in the teaching environment during the teaching practicum, which may be impossible, instead teacher educators should focus on providing teachers with mastery and vicarious experiences that would enhance both their teaching competency as well as their
feelings of efficacy. This suggestion seems to be supported by the finding regarding the effects of guidance on student teachers’ efficacy for instruction.

Third, we found significant changes over time in student teachers’ perceptions of efficacy, burnout, and perceived support from their university supervisor. For efficacy, all participants regardless of grade level taught demonstrate significant increases in their levels of efficacy from Time 1 to Time 2. This seems to provide support for the need to have opportunities for student teachers to engage in a safe mastery experience. An interesting question raised by this interpretation is whether these increases in efficacy are maintained through these student teachers’ first year of teaching when the supports afforded them in the student teaching experience are removed.

Previous research has indicated that novice teachers begin their careers with high levels of efficacy which frequently plummet during their first year of teaching and then slowly increase with experience (e.g., Podell & Soodak, 1993). The present study does not necessarily refute these findings for a number of reasons. First, we collected initial teacher efficacy scores approximately two weeks into the student teaching semester. Therefore, this initial plummet in efficacy may have already occurred. Next, student teaching is still a relatively safe and supportive environment for student teachers when compared to their first year of teaching. Student teaching may be an efficacy building time and may serve as a cushion for the efficacy drop in the first year of teaching. Finally, the measure of efficacy used in this study is based on more recent understandings of teacher efficacy and utilizes more specific measures of this construct, whereas previous work has treated teacher efficacy more globally.

Like efficacy, student teachers’ sense of burnout also changed over time. Student teacher reported significantly less emotional exhaustion, and less depersonalization of their students.
Beyond the relation of burnout to self-efficacy, it is not clear what may be responsible for these changes. According to our findings, support from the cooperating teacher remained constant over time, and changes associated with university supervisor support apparently were not related to change in burnout. This finding raises the question, of what factors during the student teaching practicum, may be responsible for such changes.

We also found that student teachers perceived their university supervisors to be more autonomy supportive over time. This suggests that toward the end of the student teaching semester these student teachers felt that their university supervisors were providing them with greater control and a stronger voice in their learning experiences. This may be a developmentally appropriate model of instruction for these student teachers who will soon become teachers themselves and as such will gain full authority of the learning environment of their own students. However, further research in this area would help us to better ascertain the benefits and risks of this movement toward greater autonomy during student teaching.

Fourth, we found that the degree and type of support student teachers received from their cooperating teacher influenced student teachers’ efficacy for instructional practices. Specifically, we found that students who reported experiencing high levels of guidance from their cooperating teacher early in the semester had significantly higher levels of efficacy for instructional practices at the end of the semester than those students who reported less guidance. This indicates that cooperating teachers who guide their student teachers may be providing them with greater opportunities to enhance and build their efficacy beliefs. Moreover, the focus of those opportunities influenced student teachers’ confidence for instructional practices. It may be that cooperating teachers should be provided with explicit training in how to provide guidance to the student teaching with whom they work.
Implications

This research contributes to both educational theory and practice. From a theoretical perspective, this work brings together for study two critical constructs that directly impact the lives of teachers: efficacy and burnout. Additionally, this work supports that of Brouwers and Tomic (2000), who have been exploring the relations of efficacy and burnout in practicing teachers, by providing complementary evidence of this relationship during student teaching.

Further, this research provides a limited developmental description of change in teachers’ experience of burnout and teaching efficacy. This information might be useful to teacher educators by identifying potential contributions to feelings of burnout among student teachers. It also helps by showing what may contribute to their feelings of efficacy and how it changes over the course of the student-teaching practicum. Specifically, this study highlights the influential roles of both the cooperating teacher and the university supervisor. These findings suggest that it may be beneficial for cooperating teachers to receive some explicit training in how to provide guidance support for student teachers.

While there is much work to be done in terms of understanding the relations among teacher-efficacy, teacher-burnout and perceived support, this study presents a major first step towards this goal and as such the goal of improving the educational experience for students and teachers. In response to our title question: Does burnout begin with student teaching? We can offer a mixed response. Student teachers do experience levels of burnout, however, over the course of the semester these feelings of burnout seem to decrease, further, the cooperating teacher and university supervisors can play a role in helping to reduce feelings of burnout. What remains to be seen, however, is the further development of these feelings as these student teachers enter their first years of teaching.
References


Does burnout begin with student teaching?


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*Correlation and Descriptive Statistics for Efficacy, Burnout, Support and Interaction at Time 1 and 2*

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*Mean Differences in Efficacy Time 1 to Time 2*

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*Mean Differences in Burnout by Time and School Level (Elementary and Secondary)*

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Table 4

*Descriptive Statistics for Efficacy Variables by Time and Guidance Group*

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Guidance group: high = 27; low = 22.
Table 5

*Sequential Regression of Support Variables on Change in Student Teacher’s Depersonalization*

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<td>-.451</td>
<td>.141*</td>
</tr>
<tr>
<td>Imitation</td>
<td>.26*</td>
<td>.16</td>
<td>.269</td>
<td>.236</td>
</tr>
<tr>
<td>Guidance</td>
<td>.19</td>
<td>.24*</td>
<td>.66*</td>
<td>.128</td>
</tr>
</tbody>
</table>

Intercept = 1.125

| M         | .98 | 3.80 | 4.27 | 4.42 |
| SD        | 1.07 | .99 | .94 | 1.25 |

R² = .26

Adj-R² = .21

R = .51*

*p < .01
Figure Caption

Figure 1. Interaction effect of time and school level on preservice teachers’ depersonalization of students.
Figure Caption

Figure 2. Interaction effect of time and guidance on preservice teachers’ efficacy instructional practices.