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Hyunjin Kim

University of Rhode Island, hkimed@uri.edu

YoonJung Cho

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Preservice Teachers' Motivation, Sense of Teaching Efficacy, and Expectation of Reality Shock

The present study investigated how preservice teachers' motivation and their sense of teaching efficacy influence their expectation about reality shock during the first year of professional teaching. A total of 533 preservice teachers at a state university in the U.S. Midwest participated in this study. The results showed that the preservice teachers' expectation of reality shock was negatively related to teacher efficacy and intrinsic motivation while it was positively related to introjected and external motivation. The results of a hierarchical regression analysis revealed that preservice teachers' sense of efficacy and introjected motivation were strong predictors of their expectation of reality shock, when gender difference was controlled for. There was an interaction effect between intrinsic motivation and teachers' sense of efficacy in predicting the reality shock expectation. We discussed the educational implications for future research in an endeavor to reduce the reality shock among novice teachers.

Keywords: expectation of reality shock; preservice teachers; teacher motivation; sense of teaching efficacy

Many novice teachers experience reality shock during their early years of professional teaching. Studies have shown that teachers in the early stage of their teaching career experience a higher teacher turnover rate than do mid-career teachers (Ingersoll, 2000; Ingersoll & Smith, 2004; Lokan, 2003; Preston, 2000). These studies have revealed that novice teachers feel overwhelmed or frustrated when they find significant discrepancies between what they envisioned as student teachers and what they are actually experiencing during their first year of professional teaching. These discrepancies lead to unexpected reality shock during the first year of teaching, resulting in higher teacher attrition among novice teachers and further problems in the effectiveness of education in the U.S. and around the world (OECD, 2005; Sinclair, 2008).

Retaining quality teachers is of utmost importance for achieving excellence in education (Darling-Hammond, 1999). The failure to educate resilient and efficacious teachers has often been attributed to insufficient implementation of advanced teacher preparation curricula by teacher education programs (Johnson & Birkeland, 2002; Santiago, 2007). To increase teacher resiliency, it is vital not only to prepare preservice teachers to successfully deal with challenges in the real context of teaching, but also to reduce novice teachers' experience of reality shock. However, scant research has been conducted concerning the extent to which preservice teachers expect to experience reality shock during the first year of professional teaching and other factors related to the expected reality shock. Therefore, investigation of precursors of preservice teachers' expectation of reality shock is warranted, along with their implications, in order to design effective teacher education programs so that preservice teachers can be better prepared and can adjust effectively to their new teaching environments.

Numerous studies have suggested that sustaining a high sense of teaching efficacy may keep newly entered teachers from leaving the profession (Ingersoll & Smith, 2004; Johnson &

Birkeland, 2002). Efficacious teachers would not be afraid of facing unexpected challenges because they believe that they have the capability to deal with the numerous impediments imposed by the reality of the teaching profession. In addition to a sense of teaching efficacy, the autonomous motivation for teaching has been considered one of the most influential attributes for novice teachers' successful adjustment (Dowson & McInerney, 2003; Ramsey, 2000). Prior studies have shown that preservice teachers with autonomous motivation tend to endorse mastery-oriented goals for teaching (Malmberg, 2006; Roth, Assor, Kanat-Maymon, & Kaplan, 2007), and thus they are more willing to tackle challenges to improve teaching competence.

Despite the important roles of preservice teachers' motivation and their sense of teaching efficacy, no prior research has examined how these variables are associated with preservice teachers' expectation of reality shock during their first year of professional teaching. Therefore, the present study aimed to investigate the relations among preservice teachers' motivation, their sense of teaching efficacy, and their expectation of reality shock. In addition, this study examined how preservice teachers' expectation of reality shock may differ by the student teachers' gender, the type of teacher education program they are in, and their status in the program.

Literature Review

Expectation of Reality Shock

Since the emergence about two decades ago of studies on reality shock among beginning teachers which explain why a considerable number of beginning teachers leave the teaching profession soon after completing four to five years of teacher training, many scholars have

redefined this concept and have investigated its negative impact on beginning teachers (e.g., Veenman, 1984; Weinstein, 1984). Veenman (1984), for one, defined "reality shock" as a clash between the ideal expectations of teaching espoused before or during the period of teacher training, and the reality of everyday classroom life. Rather than a short-lived shock, reality shock deals with "the assimilation of a complex reality that forces itself incessantly upon the beginning teacher over a period of months and even years" (Veenman, 1984, p. 143-144).

In the present study, we define preservice teachers' *expectation of reality shock during the first year of professional teaching* as anticipation of a gap between what they have learned in the teacher education program and the reality that they may face during the first year of teaching, with respect to the work of teaching and the context in which teaching will occur. Conceptually, preservice teachers' self-efficacy is associated with preservice teachers' perceptions about the first year of professional teaching in that their perceptions rely on their training experiences with classroom observation, course work, and student teaching. However, they are conceptually slightly different. "Expectation about the first year of professional teaching" also represents the gap between a preservice teacher's capacity and the teaching context, while preservice teachers' self-efficacy is solely their self-confidence regarding a teaching-related task.

Preservice Teachers' Sense of Efficacy

Preservice teachers' sense of efficacy refers to their beliefs about their capability to successfully perform teaching-related tasks (Plourde, 2002; Tschannen-Moran & Woolfolk Hoy, 2001).

Substantial research has shown that preservice teachers' efficacy beliefs have an important implication for effective teacher practices and teaching knowledge (Fives, Hamman, & Olivarez, 2007; Woolfolk & Hoy, 1990).

Prior studies have found that preservice teachers had a higher sense of teaching efficacy than inservice teachers did (Benz, Bradley, Alderman, & Flowers, 1992; De la Torre Cruz & Casanova Arias, 2007). This discrepancy in the sense of teaching efficacy between inservice teachers and preservice teachers implies that inservice teachers' sense of efficacy may have plummeted as a result of experiencing obstacles in the reality of the teaching profession. Another implication is that preservice teachers' sense of teaching efficacy can be influenced by contextual factors, including the teacher education program, the practicum, the school environment, student attitudes toward the cooperating teachers and peer preservice teachers, and other interpersonal relationships with staff and with students' families. Bandura (1994) posited that self-efficacy can be enhanced through mastery experiences and teacher educators need to provide optimal learning environments where preservice teachers experience success and gain self-efficacy as prospective teachers.

Preservice Teachers' Autonomous Motivation for Teaching

Considerable attention has been given to teachers' sense of efficacy in teacher motivation literature (Klassen, Tze, Betts, & Gordon, 2011; Tschannen-Moran & Hoy, 2001); however, relatively little research has been conducted on preservice teachers' autonomous motivation for teaching (Pelletier, Séguin-Lévesque, & Legault, 2002).

Autonomous motivation is defined as the freedom to initiate and regulate one's behavior (Patrick, Skinner, & Connell, 1993) and is considered a central construct in self-determination theory (SDT). Deci and Ryan (2002) reformulated the dichotomous view of motivation (extrinsic vs. intrinsic) into a more continuous framework in which extrinsic motivation is broken down into *external*, *introjected*, and *identified* motivation, with each type of motivation representing different degrees of autonomous motivation. External motivation denotes that one's behavior is

regulated by external forces, such as monetary rewards or external pressure (Deci & Ryan, 2002). It represents the lowest level of autonomous motivation. On the other hand, introjected motivation regulates one's behavior by internal pressures, such as a sense of obligation or feelings of guilt and anxiety. The third type of extrinsic motivation, identified motivation, is based on the self-endorsed value of a task. Preservice teachers with identified motivation are considered to be more autonomous than teachers with external or introjected motivation but they are not as fully autonomous as those with intrinsic motivation.

Preservice teachers with intrinsic motivation tend to engage in teaching because they enjoy it and they get satisfaction from doing so. Previous research has documented that teachers' autonomous motivation for teaching has important implications for teaching practices and student outcomes (Malmberg, 2006; Roth, Assor, Kanat-Maymon, & Kaplan, 2007). Preservice teachers with intrinsic motivation tend to endorse a mastery goal leading to more adaptive teaching strategies and better teaching performance (Malmberg, 2006; Roth et al., 2007) while those with extrinsic motivation tend to endorse an avoidance type of goal orientation. More importantly, teachers' intrinsic motivation for teaching has a great impact on students' enjoyment of and interest in learning (Reeve, Bolt, & Cai, 1999; Wild, Enzle, Nix, & Deci, 1999).

Program Type and Preservice Teachers' Expectation of Reality Shock

The philosophical foundation of a teacher education program can influence preservice teachers' expectation of reality shock. For example, the underlying pedagogical approaches and program philosophies in early childhood teacher education are conceptually different from those of elementary and secondary teacher education; the early childhood teacher education program has advocated the use of developmentally appropriate practice (DAP) under the influence of

constructivists, whereas the elementary teacher education and secondary teacher education programs tend less to endorse DAP (McMullen, 1999; Vartuli, 1999). These different philosophical foundations of teacher education programs may impact preservice teachers' expectation of reality shock.

Preservice Teachers' Status in their Teacher Education Program and their Expectation of Reality Shock

Preservice teachers experience professional growth as they progress through teacher education coursework and practicums. As they are more exposed to pedagogical content and knowledge training, as well as classroom teaching experience, their views on teaching and their expectation of experiencing reality shock in their own classrooms are anticipated to evolve over time.

However, considerable research has reported that preservice teachers' pre-existing beliefs about teaching tend to stay static and are resistant to change over the course of the teacher education program (Alger, 2009; Lim & Chan, 2005; Thomas, & Pedersen, 2003; Pajares, 1992; Zeichner & Gore, 1990). Nevertheless, some researchers have documented that there are significant changes in teaching beliefs as a function of a well-designed teacher preparation program (Barcelos, 2003). Yet, even within the same program in early childhood education, depending on the grade level, preservice teachers may have different expectations about reality shock (Buchanan, Burts, Bidner, & White, 1998).

Methods

Participants

Participants were a total of 533 preservice teachers (women 86.5%, men 13.5%) attending teacher education programs at a state university in the U.S. Midwest. The participants were enrolled in courses in early childhood education (33.5%), elementary education (35.1%), secondary education (11.4%), and general education or others (20%) at the time of the data collection. Among the participants, 12.6% were undecided on their major in teacher education; 29.6% had declared their major as early childhood, elementary, or secondary education but were not fully admitted; 25.9% had passed the state general educator test and were admitted to the professional education unit (PEU) program; 9% were in their first practicum; 8.3% were in their second practicum; 0.9% were resident teachers taking one or two courses in the teacher education program. The average age of the participants was 23.03 years ($SD = 0.86$, range = 18-49 years); 85.9% were Caucasian White; 76.5% were single.

Procedure

Potential participants were solicited via preservice teacher packets, which included a letter of support from the teacher education program coordinators, an informational letter about the study, a consent form, a flier for the classroom visit, and questionnaires. We provided two survey options, in-class and online survey. For the in-class survey, our research team visited the class and administered the survey using paper questionnaires after we explained our research and procedures. If the instructors preferred an online survey rather than an in-class survey, the participants were solicited to the survey via e-mail invitation and online teacher packets, which included the questionnaires as well as the above-mentioned materials.

Initially, we distributed approximately 560 survey questionnaires (including the email invitations for online survey) to preservice teachers in the early childhood, elementary education,

and secondary education programs through collaboration with program coordinators and instructors in the three teacher education programs. As a result, a total of 533 questionnaires were included in this study. As there were some missing variables, we treated them as system missing for our analyses. It took approximately 20 - 25 minutes for the preservice teachers to complete the questionnaires.

Instruments

Expectation of Reality Shock. A total of 9 items were formulated for the preservice teachers' expectation of reality shock during the first year of professional teaching. The specific items for the reality shock measure are available in Table 1. All items were rated on a 7-point Likert scale ranging from 1 (not at all true) to 7 (very true). The Cronbach's alpha value for the construct was .88. The result of exploratory factor analysis with the maximum likelihood method indicated one factor solution. The scree plot and Kaiser-Meyer-Olkin (.90) for the measure of sampling adequacy were also evaluated and all 9 items showed factor loading values greater than .60 (see Table 1).

[Insert Table 1 about here]

We used a mean score to represent preservice teachers' expectation of reality shock. Higher mean scores on this scale correspond to higher levels of concern about the reality shock experience during their first year of professional teaching. The mean and standard deviation for this construct were 3.84 and 1.17, respectively.

Motivation to Teach. The Work Tasks Motivation Scale for Teachers (Fernet, Senécal, Guay, Marsh, & Dowson, 2008) (WTMST) was used for this study. We modified the original items to assess the extent to which preservice teachers have autonomous motivation, ranging from

intrinsic motivation (e.g., “I find teaching interesting to do”), to identified motivation (e.g., “Teaching is important to me”), to introjected motivation (e.g., “If I don’t become a teacher, I will feel bad”), and to external motivation (e.g., “I feel like I am obligated to be a teacher”). Each construct comprises three items and all items were rated by a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach’s alpha values for intrinsic motivation, identified motivation, introjected motivation, and extrinsic motivation were .97, .89, .74, and .90, respectively. We used the mean scores in subsequent analyses.

Teacher’s Sense of Efficacy. Preservice teachers’ sense of efficacy was assessed by the Tschannen-Moran and Woolfolk Hoy (2001)’s Teachers’ Sense of Efficacy Scale. This measure consists of 24 items that assess the degree to which preservice teachers feel efficacious about their capabilities to deal with issues in relation to student engagement, instructional strategies, and classroom management. Each subscale comprises eight items to gauge the preservice teacher’s sense of efficacy.

A sample item reflecting teacher’s sense of efficacy for classroom management states, “I can control disruptive behavior in the classroom”. One sample item, reflecting teacher’s sense of efficacy for student engagement states, “I can help my students value their learning.” Lastly, a sample item reflecting teacher’s sense of efficacy for instructional strategies states, “I can respond to difficult questions from my students.” All of these items were rated on a 7-point Likert scale, ranging from 1 (not at all true) to 7 (very true). The Cronbach’s alpha values for the three constructs ranged from .91 to .93 and the Cronbach’s alpha value for the overall scale was .97.

We used mean scores to represent total teacher efficacy ($M = 5.87$, $SD = 0.84$). Therefore, higher mean scores on this scale represent stronger levels of teacher efficacy.

Preservice teachers' status in the program. We sorted the preservice teachers' status in the program into five levels: (1) undeclared, (2) declared ECE/ELE but not fully admitted, (3) admitted to PEU, (4) completed practicum I, and (5) completed practicum II. The Professional Education Unit at this university includes academic programs in the College of Education, the College of Agriculture, the College of Arts and Sciences, and the College of Human Environmental Sciences. Students in the teacher education programs who want to be teachers should apply for admission to the PEU. To be admitted to the PEU, all candidates must demonstrate certain qualifications and take prerequisites before their official interviews. Once they are admitted to the PEU, they are considered teacher candidates who can take advanced courses in teacher education programs in early childhood, elementary or secondary teacher education. All teacher candidates are then required to perform their practicums for two consecutive semesters to complete the teacher preparation program. During the practicum, teacher candidates are placed in their school site all day long for 10 weeks per semester. Teacher candidates are supposed to take a guidance capstone course during their first and second practicums for 4 weeks prior to their placement. Once the preservice teachers completed all requirements to be certified as teachers, they are required by the state regulation for professional educational unit to teach as resident teachers for 1 year under the supervision of three committee members.

Data Analysis

As preliminary analyses, we performed confirmatory factor analyses using the Mplus 5.2 to examine the construct validities of instruments (teaching motivation and sense of teaching

efficacy) for the preservice teachers. All other analyses were performed with the SPSS 18 program. We examined the internal consistency for each measurement, the normal distributions of variables, and violation of multicollinearity prior to the major analyses for the study.

A *t*-test and univariate analyses of variance were performed to examine group differences in preservice teachers' expectation of reality shock. We employed hierarchical multiple regression to examine the predictive utility of preservice teachers' sense of teaching efficacy and autonomous motivation on their expectation of reality shock. Hierarchical multiple regression is useful to disclose the additional variance explained by independent variables when new sets of variables are entered (Leech, Bartett, & Morgan, 2008). To examine the interaction effects between teacher's sense of efficacy and motivation variables, we computed the interaction terms using *z* scores prior to the final analysis. We then added the interaction terms into the regression model to predict the overall degree of preservice teachers' expectation of reality shock during the first year of teaching. The nature of interaction effects between teacher's sense of efficacy and motivation for teaching on the expectation of reality shock were further examined by simple slope tests.

Results

Preliminary Analyses on Instruments

As preliminary analyses, using the Mplus 5.2, we conducted confirmatory factor analyses to test the construct validities of the key instruments: preservice teachers' sense of efficacy and preservice teachers' teaching motivation for the study.

The result of a confirmatory factor analysis revealed that the factorial structure of self-determined motivation to teach is supported by our sample of pre-service teachers. The model fit

indices showed acceptable model fit: $\chi^2 = 128.69$, $df = 48$, $p < .05$, CFI = .93, TLI = .90, RMSEA = .067, SRMR = .062.

We conducted a confirmatory factor analysis to make certain that the factorial structure of the preservice teachers' sense of efficacy scale is supported by the data collected from preservice teachers as well. The model fit indices from the confirmatory factor analysis did not show a good fit between the initial measurement model and the observed data: $\chi^2 = 1443.57$, $df = 249$, $p < .05$, CFI = .89, TLI = .87, RMSEA = .096, SRMR = .045. As suggested by the modification indices, we reviewed item contents and added two correlated errors, which resulted in significant improvement in the model. The revised measurement model showed an acceptable model fit to the data: $\chi^2 = 1227.07$, $df = 247$, $p < .05$, CFI = .91, TLI = .90, RMSEA = .078, SRMR = .042.

Descriptive Statistics and Correlation among Key Variables

Prior to identifying differences in preservice teachers' expectation of reality shock during the first year of professional teaching by independent variables and to estimate predictors of preservice teachers' expectation of reality shock during the first year of professional teaching, we examined descriptive statistics and correlations among key variables using SPSS 18.

Overall, on a scale of 1 to 7, our sample of preservice teachers showed relatively high levels of preservice teacher's sense of efficacy ($M = 5.87$, $SD = .84$), intrinsic motivation ($M = 6.21$, $SD = 1.04$), and identified motivation ($M = 5.54$, $SD = 1.24$), and relatively low levels of expectation of reality shock ($M = 3.84$, $SD = 1.17$), introjected motivation ($M = 2.39$, $SD = 1.63$), and external motivation ($M = 3.39$, $SD = 1.10$) (See Table 2).

The results of the correlation analysis revealed that the preservice teachers' expectation of reality shock was negatively related to preservice teachers' sense of teaching efficacy ($r = -.22, p < .01$) and intrinsic motivation for teaching ($r = -.14, p < .01$) while it was positively related to introjected and external motivation ($r = .18, p < .01; r = .13, p < .01$, respectively).

[Insert Table 2 about here]

Group Mean Differences by Gender, Teacher Education Program, and Student Status

An independent t -test and analysis of variance (ANOVA) were performed to examine whether there were significant group mean differences in preservice teachers' expectation of reality shock during the first year of teaching by preservice teachers' gender, and teacher education program. The results of the t -test revealed that there was a significant gender difference in the preservice teachers' expectation of reality shock during the first year of teaching, $t(475) = 4.07, p < .001$. The male preservice teachers ($M = 4.33, SD = 1.02$) showed a higher expectation of reality shock during the first year of teaching than their female counterparts ($M = 3.72, SD = 1.15$) (see Table 3).

[Insert Table 3 about here]

In addition to gender difference, preservice teachers' expectation of reality shock was found to vary significantly depending on students' status in their teacher education program, $F(4, 440) = 3.30, p < .05$, while it did not differ significantly as a function of teacher education programs, $F(4, 471) = 1.96, p > .05$. To further examine the effect of preservice teachers' program status on their expectation about reality shock, a post-hoc analysis was performed using the Turkey test, which is often used to identify between which groups the differences were significant. Preservice teachers who had not yet decided on their major in teacher education

tended to show the highest expectation of reality shock ($M = 3.72$, $SD = 1.15$) but there was a significant decrease in their expectation of reality shock after declaring their major in teacher education or after the first practicum.

Predictors of Preservice Teachers' Expectation of Reality Shock

A hierarchical regression analysis was conducted to examine how preservice teachers' sense of efficacy and motivation for teaching (e.g., intrinsic, identified, introjected, and external motivation) predict their expectation of reality shock. To reduce multicollinearity problems, predictor variables were standardized (Aiken & West, 1991), and then interaction terms were created by multiplying the standardized predictor variables. Preservice teachers' gender was dummy coded and entered as a covariate in the first step of the regression model and preservice teacher's sense of efficacy and the four constructs of teacher motivation variables (i.e., intrinsic, identified, introjected, and extrinsic motivation) were entered as main effect predictor variables in the second step of the model, followed by interaction terms between preservice teacher's sense of efficacy and four constructs of teacher motivation in the third step. Based on a preliminary regression analysis, the only significant two-way interaction term between teacher's sense of efficacy and intrinsic motivation remained in the final regression model.

The overall regression model was significant, $F(7, 468) = 13.00$, $p < .001$, $R^2 = .16$, with a significant increase in R^2 in each step. The results showed that preservice teachers' gender ($\beta = -.12$, $t = -2.62$, $p < .01$) and teacher's sense of efficacy ($\beta = -.31$, $t = -5.85$, $p < .001$) were negatively related to their expectation of reality shock, with male preservice teachers and inefficacious preservice teachers reporting a higher level of expectation of reality shock (see Table 4). Entry of the four types of teacher motivation resulted in a significant increase in R^2 and introjected motivation emerged as a strong, positive predictor of the expectation of reality shock

($\beta = .14, t = 2.98, p < .01$). This indicates that preservice teachers whose motivation for teaching is drawn from a feeling of personal responsibility (e.g., to avoid feeling guilty) are likely to have a great expectation of reality shock during the first year of teaching. Although intrinsic motivation was not a significant predictor of expected reality shock, there was a significant interaction effect between intrinsic motivation and preservice teachers' sense of efficacy ($\beta = -.24, t = -4.83, p < .001$) in predicting the expectation of reality shock. Preservice teachers' sense of efficacy and gender effects remained significant even after the main effect predictors and interaction term were added to the regression model.

[Insert Table 4 about here]

[Insert Figure 1 about here]

To better understand the nature of the two-way interaction, we conducted simple slope tests and graphed regression lines at a low (1 *SD* above the mean) and a high (1 *SD* below the mean) level of preservice teachers' sense of efficacy (see Figure 1), following the guidelines proposed by Aiken and West (1991). The simple slope tests revealed that standardized regression coefficients for intrinsic motivation are significantly different from zero for the preservice teachers who scored high on their sense of teaching efficacy, $\beta = .30, t = 3.25, p < .001$, while they were not significantly different from zero for the preservice teachers who scored low on teacher's sense of efficacy, $\beta = .06, t = .85, ns$. The result implied that intrinsic motivation had a significant influence on the expectation of reality shock only when preservice teachers had a high sense of teaching efficacy, with low intrinsic motivation leading to a higher expectation of reality shock and high intrinsic motivation leading to a lower expectation of reality shock. Therefore,

high intrinsic motivation resulted in the lowest expectation of reality shock when it was accompanied by preservice teachers' strong sense of efficacy.

Discussion

Teaching is complex and challenging. Teacher education programs are designed to equip preservice teachers with theoretical knowledge and practical skills so that they are able to deal with the myriad of challenges they may encounter in the real contexts of teaching. However, considerable research has shown that teachers, especially during the first few years of teaching, tend to experience varying degrees of reality shock. These novice teachers' reality shock is associated with the significant discrepancies between theories and practices, unexpected obstacles imposed by the teaching environment, the complex role of the teacher, and the heavy workload.

The results of our study revealed that there were significant differences in preservice teachers' expectation of reality shock by their gender and status in the teacher education program. In turn, male preservice teachers were more likely to expect a greater degree of future reality shock at the early stage of their teaching career than their counterpart female preservice teachers. As more and more male teachers are disappearing from the classroom, this result fuels our concern relating to gendered professional role models and gender stereotypes in the teaching profession. As Darling-Hammond (2002) cautioned, there is a danger that teaching may become exclusively a female job, or that it may not serve as a long term profession for males, as resilient and qualified male teachers leave the teaching profession or do not consider teaching to be a profession for males. The results showed that preservice teachers' expectation of reality shock

fluctuated as they progressed through the teacher education program. Students who had not yet declared their teacher education major exhibited the highest level of expectation of future reality shock, but their expectation of reality shock significantly decreased after having decided on their major in the teacher education program. However, preservice teachers' expectation of reality shock bounced up after their second practicum experience. This finding implies that preservice teachers may develop more realistic expectations about reality shock through their field experience and practicums at school sites (Hoy & Woolfolk, 1990), because their experiences and their exposure to the real contexts of teaching allow them to understand the importance of the teacher's role beyond classroom teaching (i.e., beyond simply delivering what they have learned in the teacher education program). While teachers' professional career paths are considered to be linear (Huberman, 1993; Katz, 1972), preservice teachers' beliefs and pedagogical orientations seem to transform over the course of the teacher education program.

Although the results of the correlation analysis revealed that intrinsic motivation is positively linked to the expectation of experiencing reality shock while extrinsic motivation is negatively linked to it, intrinsic and extrinsic motivation did not yield additional benefits above and beyond the other teacher motivation variables in the regression analysis. However, when gender and motivation variables were controlled for, two variables of preservice teachers' sense of efficacy and introjected motivation remained significant predictors suggesting that preservice teachers who feel less efficacious as teacher candidates are likely to have high expectations that they may encounter more challenges at the early stages of their careers. In addition, preservice teachers who have internal pressure to become teachers and who pursue the teaching profession for more controlled reasons (i.e., introjected motivation) are likely to expect a greater degree of reality shock. This result lends support for the proposition from the self-determination theory that

controlled reasons or motives underlying an individual's motivation lead to maladaptive functions and lack of well-being (Ryan & Deci, 2000; Wild, Enzle, Nix, & Deci, 1999).

An intriguing finding was that the effect of preservice teachers' intrinsic motivation on their expectation of reality shock was determined by the level of a preservice teacher's sense of efficacy. High intrinsic motivation played an important role in decreasing the severity of the reality shock expectation when a preservice teacher's sense of efficacy was high. However, preservice teachers' high intrinsic motivation did not play a significant role in reducing their expectation of reality shock when a preservice teacher's sense of efficacy was low. Therefore, intrinsic motivation may be necessary but not sufficient to develop a positive outlook on the future reality of teaching because it fails to buffer the negative consequence of the lack of a preservice teacher's sense of efficacy.

Based on the educational implications of the results, we make some suggestions for the effective teacher education program to reduce reality shock among preservice teachers and to prepare more resilient and efficacious teachers. First of all, we suggest that teacher education programs should professionally direct preservice teachers to build supportive teaching networks with their cohorts during the program so that they can share their experiences with colleagues. It would be worthwhile to inform preservice teachers before they enter the teaching profession, that, to some degree, all first-year teachers experience reality shock, and it is common among them, not a devastating individual hardship that should affect their sense of teaching efficacy. Such interpersonal assistance will help first-year teachers regain their initial motivation to teach and preserve their sense of teaching efficacy (Ingersoll & Kralik, 2004), allowing them to feel satisfied and confident in their teaching careers even when faced with this reality shock.

Second, we suggest that timely reality checks in teacher education programs may allow preservice teachers to balance their initial expectations about the teaching profession with their current preparation to be a teacher. In this way, preservice teachers can reflect on their professional development and preparation to become the qualified teachers they want to be. In order to provide information regarding optional intervening times for reality shock, in future research, a longitudinal study should examine preservice teachers' transformative changes in their perceptions about their teaching efficacy and their expectations about the first year of professional teaching.

Third, teacher education programs should require preservice teachers to explore and develop reflective and constructive responses to teaching realities by providing them with extensive field experience and practicums in real classroom contexts. Clearly, such realities include the roles and actions that teachers can expect to face in the local contexts of the schools that employ them as well. Through the systematic field experience and practicum, preservice teachers should also be prepared for the broader reality of changing education policy, a significant aspect of professional teaching; teacher education programs should actively address it by reflecting updated policies in their own training in a timely manner and also by providing preservice teachers with adjustment strategies.

In conclusion, the teacher education program should plan a curriculum and course for preservice teachers to be prepared, pedagogically, intellectually, and psychologically, to meet all educational stakeholders' expectations in their first year of professional teaching. This preparation should balance the tensions between preferred and negotiated realities among preservice teachers so as for the novice teachers to gain occupational and political resilience, and thus to remain in the teaching profession. As the effectiveness of primary education and teacher

quality are of rising interest, globally (OECD, 2005; Sinclair, 2008), we hope this study attracts scholars' attention to reality shock and that future studies investigate how best to help preservice teachers develop and maintain a high sense of teaching efficacy and intrinsic motivation so that more qualified teachers remain in the teaching profession and provide quality education for preservice teachers.

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Table 1. Items and factor loadings in expectations of reality shock

Items	<i>FLs</i>
1. The reality of classroom management will be different from the theories taught to teachers.	.65
2. It will be hard to plan an effective lesson to meet all students' needs inside the classroom because the reality of the current class poses various obstacles.	.70
3. School policies will be very complicated and hard to implement into the classroom teaching.	.68
4. The reality of teaching methods being used in the classroom will be different from what I was taught as a student teacher.	.69
5. The lack of a teaching community with my colleagues will constrain my professional development.	.63
6. There will be professional stratifications in the school system that I was not taught to navigate professionally as a student teacher.	.74
7. There will be more clerical tasks in addition to teaching than I thought, as a student teacher.	.63
8. Establishing classroom rules or disciplines will in reality be much more complex than what theories say about classroom management.	.69
9. Managing students' defiant behavior will be really challenging even though I trained in depth regarding how to deal with it during my internships as a teacher candidate.	.62

Note. *FLs* = factor loadings

Table 2. Correlation and descriptive statistics for key variables

Variables	1	2	3	4	5	6
1. Expectation of reality shock	1	-.22**	-.14**	-.08	.18**	.13**
2. Teacher efficacy		1	.51**	.47**	.01	.10*
3. Intrinsic motivation			1	.74**	.06	.14**
4. Identified motivation				1	.25**	.30**
5. Introjected motivation					1	.43**
6. Extrinsic motivation						1
α	.88	.97	.97	.89	.74	.90
M	3.84	5.87	6.21	5.54	2.39	3.39
SD	1.17	.84	1.04	1.24	1.63	1.10

* $p < .05$, ** $p < .01$. α = Cronbach's alpha.

Table 3. Group mean differences in expectation of reality shock by gender, program type, and status in the program

Variable	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Sig.</i>
Gender	Male	66	4.33	1.02	$t(475) = 4.07,$ $p < .001$
	Female	411	3.72	1.15	
Program Type	Early Childhood Education	149	3.66	1.25	$F(4, 471) = 1.96,$ $p > .05$
	Elementary Education	172	3.78	1.16	
	Secondary Education	56	4.08	1.04	
	General Education	99	3.93	1.02	
Status in the Program	Undeclared major	67	4.16 ^a	1.03	$F(4, 440) = 3.30,$ $p < .05$
	Declared EE/ECE, but not fully Admitted	155	3.68 ^a	1.22	
	Admitted to Professional Education Unit	136	3.85	1.12	
	1st practicum	45	3.51 ^a	1.09	
	2nd practicum	42	4.05	1.07	

Note. Same superscript denotes significant differences as a result of post-hoc analysis ($p < .05$). EE/ECE = Elementary Education/Early Childhood Education.

Table 4. Hierarchical multiple regression analysis predicting expectation reality shock

Predictor Variables	Expectation of Reality Shock					
	Step 1		Step 2		Step 3	
	β	t	β	t	β	t
Step 1						
Gender	-.18	-4.06**	-.12	-2.73**	-.12	-2.62**
Step 2						
Teacher Efficacy			-.23	-4.50**	-.31	-5.85**
Intrinsic Motivation			-.02	-.29	-.09	-1.31
Identified Motivation			.00	.00	.01	.20
Introjected Motivation			.15	3.03**	.14	2.98**
Extrinsic Motivation			.08	1.54	.08	1.54
Step 3						
Teacher Efficacy \times Intrinsic Motivation					-.24	-4.83**
R^2	.03		.12		.16	
R^2 Changes			.09		.04	
F	16.45**		10.77**		13.00**	

* $p < .05$, ** $p < .01$

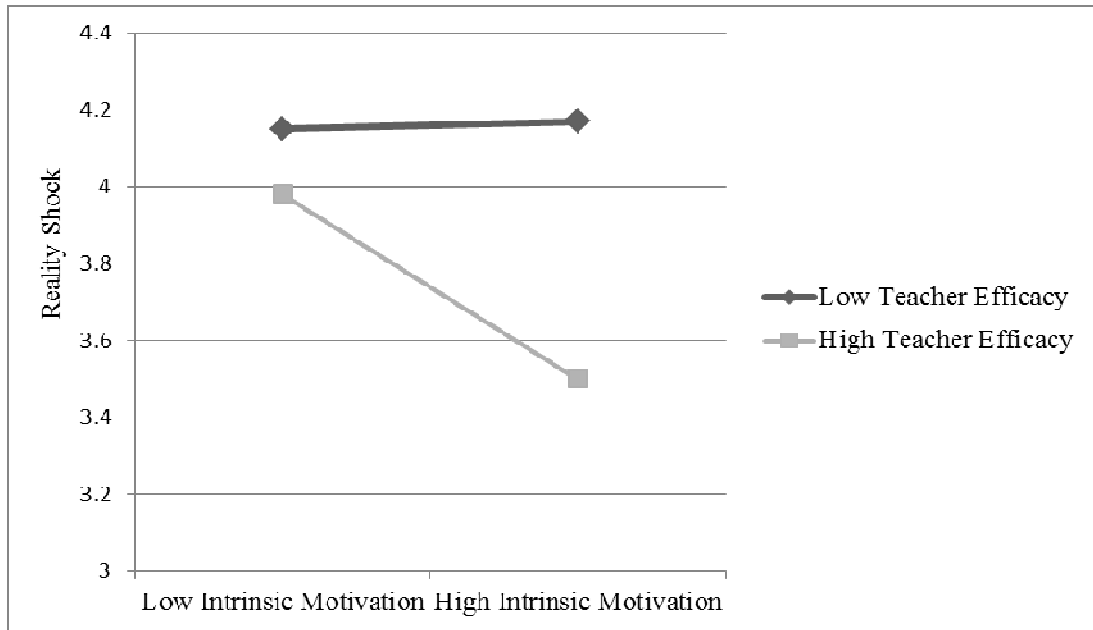


Figure 1. Interaction effects between teacher efficacy and intrinsic motivation on expectation on reality shock