THE EFFECT OF BACKGROUND CHARACTERISTICS ON SELF-EFFICACY BELIEFS OF ENGLISH AS FOREIGN LANGUAGE TEACHERS IN ONE SELECTED MIDDLE-EAST COUNTRY

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ABSTRACT
Teachers’ sense of efficacy has been shown to influence teachers’ actions and student outcomes. This study explored self-efficacy beliefs among English as Foreign Language teachers in the language centres in one selected Middle-East country. Data were collected through a survey administered to 187 teachers. The Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) was used to assess efficacy for management, engagement, and instructional strategies. Results showed that teachers’ perceived efficacy was correlated with some of teachers’ background characteristics. Results also indicated that teachers’ efficacy for classroom management was higher than efficacy for instructional strategies and student engagement.

Keywords: Self-efficacy, Foreign language education, English as a foreign language, Language centre.

1. INTRODUCTION
Research on teachers’ beliefs and their impact on teacher cognition has been a relevant topic for educational inquiry over the last four decades.

Understanding teachers’ perceptions and beliefs is important because teachers, heavily involved in various teaching and learning processes, are practitioners of educational principles and theories (Jia, Eslami & Burlbaw, 2006). Findings from research on teachers’ perceptions and beliefs indicate that these perceptions and beliefs not only have considerable influence on their instructional practices and classroom behavior but also are related to their students’ achievement (Grossman, Reynolds, Ringstaff & Sykes, 1985; Hollon, Anderson & Roth, 1991; Johnson, 1992; Morine-Dershimer, 1983; Prawat & Anderson, 1988; Wilson & Wineburg, 1988). Thus, knowing the perceptions and beliefs of teachers enables one to make predictions about teaching and assessment practices in classrooms. One important belief that appears to be an important influence on teacher and student outcomes is teachers’ sense of efficacy.

Teacher efficacy, underlie many important instructional decisions which ultimately shape students’ educational experiences (Soodak & Podell, 1997, p. 214). Pajares (1992) mentioned, “beliefs are formed early and tend to self-perpetuate. The earlier a belief is incorporated into the belief structure, the more difficult it is to alter” (pp. 324–325). Efficacy is likely such a belief. Teachers’ perceived capabilities to teach seem to have a direct impact on teaching practices. Teachers’ perceived efficacy influences not only the kind of environment they create for their students but also their judgments about the different tasks they perform to bring about student learning (Bandura, 1993, 1997).
This study is based on self-efficacy theory proposed by Bandura, 1997. Self-efficacy theory, applied in the educational realm, has sparked a rich line of research into how teachers’ self-efficacy beliefs are related to their actions and to the outcomes they achieve (Tschannen- Moran et al., 1998).

Self-efficacy is a component of Bandura’s social cognitive theory (Bandura, 1997). It operates along with other components of the theory to influence people’s thoughts, motivation and actions. "Perceived self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3).

It is important to note that self-efficacy is a motivational construct based on self perception of competence rather than actual level of competence. Actions and behaviors are better predicted by beliefs rather than actual accomplishments (Barnyak & McNelly, 2009).

A teacher’s self-perceived level of competence may be either higher or lower than an external assessment of teaching skill. Bandura (1997) suggested that it is most fruitful when teachers slightly overestimate their actual teaching skills, as their motivation to expend effort and to persist in the face of setbacks will help them to make the most of the skills and capabilities they do possess (Bandura, 1977; Tschannen-Moran et al., 1998).

Teacher self-efficacy is cyclical in nature. At first, information about one’s efficacy comes from four sources: mastery experience, vicarious experiences, verbal persuasions and physiological arousals (Bandura, 1997). According to Pajares & Urdan (2006), teachers then process the information by analyzing the teaching task and assessing their personal teaching competence. After the information is analyzed, teachers generate efficacy judgments or teacher self-efficacy. Next, teachers use these judgments or self-efficacy beliefs to set their goals, determine the amount of effort they invest in achieving these goals, and their level of persistence. The performance and outcomes of their efforts provide new mastery experiences that lead to future efficacy judgments. It is noted that "like all self-efficacy judgments, teacher self-efficacy is context-specific" (p. 118).

Having self-efficacy theory in mind, this study focused on teachers’ self-efficacy working in the English language centers in one Middle-East country.

In order to examine the interaction effect of background characteristics and Teachers’ self-efficacy beliefs, the following research questions were proposed for this study:
1. What are the current levels of the self-efficacy beliefs for teaching English among English language center teachers?
2. What is the interaction effect between English teachers’ background characteristics and self-efficacy beliefs?

Based on the above research questions the following null hypothesis was investigated
HO: There is no interaction effect between English teachers’ background characteristics and self-efficacy beliefs.

2. METHOD
2.1. Participants
The target population for this study consisted of English teachers working in the English language centers in the TESOL context in one Middle-east country in Asia. The questionnaire adopted a convenience sampling method and the researcher distributed more than 200 sets of the questionnaires among the teachers.

2.2. Research Design
This study included both descriptive research methods and correlational research methods. The study was designed to explore English language center teachers’ sense of efficacy and its interaction effect with background characteristics of English teachers, so a descriptive correlational design was used.
2.3. Instrumentation

The instrument used in this study consisted of two questionnaires: 1) Teachers’ sense of efficacy in teaching English and 2) teachers’ personal background information. The first questionnaire was Likert-type scale and for the second questionnaire the participants provided the information in the space given.

2.3.1. Teachers Sense of Efficacy in Teaching English

This section was designed to measure the teachers’ sense of efficacy (or confidence) in teaching English. For this, the 12-item short version of the Teacher’s Sense of Efficacy Scale (TSES) by Tschannen-Moran & Woolfolk Hoy (2001) was adapted to fit the English language center context.

The TSES items were Likert scale from one to nine. Participants would indicate the degree to which they can do with each item. A rating of one indicated that the respondent could do nothing about the statement presented. A rating of nine indicated that the participant could do a great deal about the statement.

Three factors were identified in the TSES: 1. Efficacy for student engagement, 2. Efficacy for instructional strategies, and 3. Efficacy for classroom management.

The reliability of the original TSES was .90 with all of the 12 items (.86 with the instructional strategies items, .86 with the classroom management items, and .81 with the student engagement items) (Tschannen- Moran and Woolfolk Hoy, 2001). This showed that TSES could have been considered a reliable measurement of teacher self-efficacy.

2.3.2. Teachers Personal and Professional Background Information

The purpose of this section was to obtain information about the teachers’ personal and professional background. The 7 questions were seeking information about the following: gender, age range, highest level of education, and type of degree achieved, Major of study, years of teaching English, level of teaching, taught that level before, getting IELTS or TOEFL, IELTS or TOEFL result.

2.4. Procedure

2.4.1. Validity

The construct validity of some instruments of the present study was partially established by the instruments on which the current instruments drew. However, as some items were modified and some were newly added for the present study, there was a need to re-establish the validity of the instruments.

In the present study, content validity and face validity were established by the judgment of a panel of 3 experts and field testing. A panel of the experts and 5 English language center teachers who were teaching at different levels were asked to review the instruments in terms of validity, suitability, and clarity. They were requested to comment on appropriateness of expressions and general readability of the instruments. Comments on instrument’s wording, ambiguities, and appropriateness were welcomed. Based on the advice of the panel of experts and field test participants, the instruments were modified and later the approved and corrected format was distributed among participants.

Tschannen-Moran and Woolfolk Hoy (2001) examined the construct validity of the TSES questionnaire. The results of the analyses indicated that TSES could be considered reasonably valid and reliable. It is of reasonable length and is a useful tool for researchers interested in exploring the construct of teacher self-efficacy. Positive correlations with other measures of personal teaching efficacy provided evidence for construct validity.

2.4.2. Reliability

After field-testing the instrument, the reliability coefficient of the test was calculated by using Cronbach alpha coefficient. Cronbach reliability coefficients of the scales were: .96 (Instructional
Strategies), .95 (Classroom Management), and .95 (Student Engagement) for the present study. It showed that Self-efficacy questionnaire was completely reliable.

3. FINDINGS
3.1. Levels of English teacher efficacy dimensions

The mean score of each component was calculated in order to examine the teachers’ level of self-efficacy in teaching English. In order to calculate the mean score of each component, component scores were first calculated by summing up the scores of the items that loaded on the component and then dividing the summed score by the number of the items.

The teachers rated their self-efficacy in teaching English at rather high level in the all dimensions of Instructional Strategies, Classroom Management, and Student Engagement (Table 1). In other words, they believed that they could have some influence in the three dimensions. The teachers responded that they felt more confident in Classroom Management (M = 7.54) than in any of the other dimensions. In the meantime, it was found that the teachers felt least confident in their Instructional Strategies (M = 7.10).

Table 1. Means and standard deviation of teacher efficacy in teaching English

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>7.21</td>
<td>1.558</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.54</td>
<td>1.550</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.10</td>
<td>1.870</td>
</tr>
</tbody>
</table>

Note: 1 = Nothing/not at all, 3 = Very little, 5 = Some influence, 7 = Quite a bit, and 9 = A great deal

In examining the teachers’ self-reported efficacy or confidence levels in teaching English, note that the present study did not report the overall teacher efficacy level by aggregating the three factors. The researcher believed that each dimension had its unique domain, while not convinced of the absolute value of the overall score in explaining the teachers’ sense of efficacy in English teaching in general.

Besides that, the researcher decided to calculate the inter-item correlation of the self-efficacy items for each sub-category. Table 2 shows that the items in student engagement sub-category have quite high correlation together and all the correlations are above .80 which is considered high.

Table 2. Inter-Item Correlation Matrix of Student Engagement

<table>
<thead>
<tr>
<th>Self-efficacy no.2</th>
<th>Self-efficacy no.3</th>
<th>Self-efficacy no.4</th>
<th>Self-efficacy no.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>.878</td>
<td>.860</td>
<td>.806</td>
</tr>
<tr>
<td>.878</td>
<td>1.000</td>
<td>.918</td>
<td>.834</td>
</tr>
<tr>
<td>.860</td>
<td>.918</td>
<td>1.000</td>
<td>.840</td>
</tr>
<tr>
<td>.806</td>
<td>.834</td>
<td>.840</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Table 3 pictures the correlation among the items in Classroom Management sub-category. The correlations are considered high and significant. Except for item 8, all the other three items have correlations above .80.
Table 3. Inter-Item Correlation Matrix of Classroom Management

<table>
<thead>
<tr>
<th>Self-efficacy no.1</th>
<th>Self-efficacy no.6</th>
<th>Self-efficacy no.7</th>
<th>Self-efficacy no.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy no.1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy no.6</td>
<td>.915</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy no.7</td>
<td>.920</td>
<td>.885</td>
<td>1.000</td>
</tr>
<tr>
<td>Self-efficacy no.8</td>
<td>.746</td>
<td>.812</td>
<td>.771</td>
</tr>
</tbody>
</table>

Table 4 depicts the correlations matrix of the items in Instructional Strategy sub-category of the self-efficacy questionnaire. Here the correlations are quite high and all are above .80 which is significant.

Table 4. Inter-Item Correlation Matrix of Instructional Strategies

<table>
<thead>
<tr>
<th>Self-efficacy no.5</th>
<th>Self-efficacy no.9</th>
<th>Self-efficacy no.10</th>
<th>Self-efficacy no.12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy no.5</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy no.9</td>
<td>.865</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy no.10</td>
<td>.838</td>
<td>.905</td>
<td>1.000</td>
</tr>
<tr>
<td>Self-efficacy no.12</td>
<td>.863</td>
<td>.917</td>
<td>.935</td>
</tr>
</tbody>
</table>

Meanwhile, the researcher checked the correlation among the three sub-categories of self-efficacy (Student Engagement, Classroom Management, and Instructional Strategy). The Cronbach alpha coefficient was .956 which is significant and considered high. It means that all the three subcategories of self-efficacy beliefs are highly correlated and this number supports that the whole test is a reliable measurement of self-efficacy beliefs.

Later, the researcher examined the correlations among all three subcategories of self-efficacy. It was shown that all of them are highly correlated together. The highest correlation was between Student Engagement and Instructional Strategy dimensions.

Table 5. Correlations among dimensions of self-efficacy

<table>
<thead>
<tr>
<th></th>
<th>Student Engagement</th>
<th>Classroom Management</th>
<th>Instructional Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Management</td>
<td>.880**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>.905**</td>
<td>.883**</td>
<td>1</td>
</tr>
</tbody>
</table>

3.2. Relationships Between Teachers’ Background Characteristics and Sense of Efficacy in Teaching English

Table 6 summarized the correlations of the background variables with the three dimensions of the teachers’ self-efficacy (i.e., Instructional Strategies, Classroom Management, and Student Engagement). Overall, the correlations were significant and ranged from low (r = .202) to very high (r = .844).

Gender: The teachers’ gender had a stronger relationship with Classroom Management (r = .486, p < .001) than Instructional Strategies (r = .343, p < .001) or Student Engagement (r = .273, p < .001) but the magnitude was moderate. The direction of the correlations indicated that male teachers considered themselves more efficacious than female teachers in all three dimensions of self-efficacy and they were more confident in managing their classrooms than females. While Chacon (2002, 2005) and Lee (2009) found no correlation between gender and teachers’ self-efficacy beliefs.
Age: Age showed statistically significant and substantial correlations with Student Engagement ($r = .668$, $p < .001$), Classroom Management ($r = .600$, $p < .001$), and Instructional Strategy ($r = .584$, $p < .001$) but the magnitude was the highest for student engagement. The directions of the correlations indicated that the older the teacher was, the more confident he/she was in applying the dimensions of self-efficacy in the English classroom.

While Lee (2009) found a negative relationship between age and instructional efficacy dimension of self-efficacy beliefs. Saying that one who was older felt less confident in carrying out instructional strategies. On the other hand, Chacon (2002, 2005) suggested that age did not seem to have an impact on Venezuelan EFL teachers’ self-efficacy beliefs.

Highest degree earned: Highest degree earned had positive relationships with all of the teacher efficacy dimensions. This meant that the higher degree earned, the more confident they were in using Instructional Strategies, carrying out Classroom Management, and Engaging Students in the English classrooms. However, the relationship was stronger and substantial with Instructional Strategy ($r = .584$, $p < .001$). It seemed plausible, as the teachers who have higher degrees like master or PhD might be more familiar with Instructional Strategies and would apply more strategies than the others in their English classrooms. Lee’s (2009) findings confirmed the result of this study although she found a very low positive relationship between self-efficacy beliefs and the highest degree earned.

Major of study: Similarly to degree, major had the highest correlation with Instructional Strategy ($r = .584$, $p < .001$). Based on the result it could be concluded that those who majored in English, reported themselves more efficacious in using Instructional Strategy, carrying out Classroom Management, and Engaging Students respectively. This result completely supports Lee’s (2009) study. Among her variables, whether or not one had majored in English had significant positive relationships with all of the dimensions of the teachers’ self-efficacy beliefs.

Teaching experience: The more experienced the teachers were, the more efficacious they considered themselves to be. Though, the correlation was stronger with Student Engagement ($r = .834$, $p < .001$). It meant that more experienced teachers engage students more than less experienced ones.

Lee (2009) reported a negative relationship between teaching experience and self-efficacy beliefs. She found that those who had longer teaching experience tended to feel less confident. In contrast, Chacon’s (2002, 2005) studies reported that teaching experience was not systematically related with teachers’ beliefs in their capability to teach English.

Level of teaching: The level of teaching had high positive relationships with all of the teacher efficacy dimensions. This result confirmed Lee’s (2009) study; English teaching experience as a specialist teacher had a significant relationships with all dimensions of self-efficacy beliefs. However, the relationships were beyond the negligible level only with Instructional Strategies ($r = .18$).

Taught that level before: In addition, asking the teachers on if they had taught that level before, gave negative results. It meant that those who had the experience of teaching that level before reported themselves more efficacious. The correlation was higher with Student Engagement and the magnitude was substantial ($r = .672$, $p < .001$).

IELTS or TOEFL: Taking IELTS or TOEFL had negative corrections with the three dimensions of self-efficacy. It meant that those who had taken the tests considered themselves more efficacious than those who had not taken any one of the tests before. The correlations were substantial. It was noted that the correlation was higher with Student Engagement ($r = .531$) than the other aspects of teachers’ self-efficacy; Classroom Management ($r = .522$) and Instructional Strategy ($r = .514$).

IELTS or TOEFL result: It had a low positive-significant correlation with all aspects of self-efficacy. Although the correlation value was low, having higher grades in IELTS or TOEFL would result in higher self-efficacy.
Table 6. Correlation Matrix between teachers’ background characteristics and self-efficacy

<table>
<thead>
<tr>
<th></th>
<th>SE</th>
<th>CM</th>
<th>IS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.273**</td>
<td>-.486**</td>
<td>-.343**</td>
</tr>
<tr>
<td>Age range</td>
<td>.668**</td>
<td>.600**</td>
<td>.584**</td>
</tr>
<tr>
<td>Degree achieved</td>
<td>.562**</td>
<td>.451**</td>
<td>.584**</td>
</tr>
<tr>
<td>Major of study</td>
<td>.474**</td>
<td>.541**</td>
<td>.584**</td>
</tr>
<tr>
<td>Experience</td>
<td>.834**</td>
<td>.766**</td>
<td>.757**</td>
</tr>
<tr>
<td>Level of teaching</td>
<td>.844**</td>
<td>.769**</td>
<td>.783**</td>
</tr>
<tr>
<td>Taught that level before</td>
<td>-.672**</td>
<td>-.627**</td>
<td>-.576**</td>
</tr>
<tr>
<td>IELTS or TOEFL</td>
<td>-.531**</td>
<td>-.522**</td>
<td>-.514**</td>
</tr>
<tr>
<td>IELTS or TOEFL result</td>
<td>.202**</td>
<td>.204**</td>
<td>.222**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the .01 level (2-tailed)

4. DISCUSSION

In the current study, the teachers rated their self-efficacy in teaching English at rather high level in all dimensions of Instructional Strategies, Classroom Management, and Student Engagement. In other words, they believed that they could have some influence in the three dimensions. The teachers responded that they felt more confident in Classroom management (M = 7.54) than in any of the other dimensions. In the meantime, it was found that the teachers felt least confident in their Instructional Strategies (M = 7.10).

In relation to the teacher efficacy levels among the teachers in the present study, it is important to note that the teachers’ self-reported English teaching efficacy or confidence levels in the present study were found to be higher than those in the previous studies adopting the TSES. It indicated that the teachers in the present study feel more confident in carrying out the teaching tasks than the teachers in other studies. For example, in the only study that adopted the TSES to examine teachers’ English teaching-specific self-efficacy beliefs in the EFL context, Chacón (2002, 2005) reported that her Venezuelan middle school English teachers rated their capabilities to carry out teaching tasks with their confidence at the “quite a bit” level (M = 6.59 on Student Engagement; M = 7.00 on Classroom Management; M = 7.13 on Instructional Strategies). Tschannen-Moran and Woolfolk Hoy (2007), taking a non-subject specific approach, have documented similar degrees of self-efficacy beliefs reported by U.S. teachers. Besides, Lee (2009) reported lower results in comparison with the others. Her teachers rated their capabilities to carry out teaching tasks with their confidence at the “some influence” (M = 5.53 on Student Engagement; M = 5.70 on Classroom Management; M = 5.36 on Instructional Strategies).

Although one should be cautious in making direct comparisons of the scores reported in different cultures due to the possibility that survey responses may reflect cultural biases (King, Murray, Solomon, & Tandon, 2004), Such a comparison can provide useful information in examining where the teacher efficacy levels reported by teachers in the present study are located in relation to other teachers, especially when there are no previous studies conducted in the Middle-East EFL context using the same instruments.

Regarding the relationship between background characteristics and self-efficacy, the correlations were significant and ranged from low (r = .202) to very high (r = .844).

It should also be added that Chacon (2002, 2005) found that one’s participation in professional development program(s) was the only teacher characteristic significantly related with his/her self-efficacy beliefs in teaching English. While Lee (2009) reported that the teachers’ participation in in-service teacher training programs (either at basic or advanced programs) had no significant relationships beyond the negligible level with their English teaching-specific efficacy.

5. CONCLUSION

The teachers in the present study rated their self-efficacy in teaching English at the high level. They rated their efficacy or confidence higher for Classroom Management, and Student
Engagement than Instructional Strategies. Their relatively low confidence in carrying out teaching tasks related to the Instructional Strategies in an English class indicates there is a need to support teachers in order to enhance their efficacy in this area more than the other areas.

However, it should also be noted that the current efficacy or confidence levels for the three dimensions of English teaching (i.e., Instructional Strategies, Classroom Management, and Student Engagement) were found to be at high level. In fact, compared to other studies that adopted the same instrument as the present study (i.e., Tschannen-Moran & Woolfolk Hoy’s TSES, 2001); the self-efficacy scores reported in the current study were considerably higher. This indicates that the teachers in the present study did feel in general very confident in carrying out tasks related to teaching English to the EFL language center students.

Regarding the relationship between background characteristics and self-efficacy, the correlations were significant and ranged from low (r = .202) to very high (r = .844), so the null hypothesis was rejected.

6. RECOMMENDATION FOR FUTURE STUDIES
As the first study that adopted the notion of teacher efficacy in conceptualizing teachers’ confidence in teaching English in the EFL language center education context, the present study provides possible direction for future research as follows:

1. Teachers’ perceived efficacy is a multifaceted construct that varies across tasks and contexts where teachers do their teaching. Additional research needs to be conducted to assess teachers’ capabilities to teach English as a situated activity immersed in a sociocultural milieu. It would be useful to explore teachers’ perspectives through additional studies that provide a deeper understanding of how teachers’ sense of efficacy influences teachers’ actions and decision-making in planning and conducting lessons. Observations of teaching performance, teaching techniques as well as multiple interviews should be used as another source of data to explore teachers’ sense of efficacy and the teaching of foreign languages, English and others.

2. Given the fact that the present study was based exclusively on self-reported data, additional research is needed that could include quantitative data on teachers’ perceived efficacy in teaching English as foreign language using independent measures to investigate the relationship on this variable and student outcomes (e.g., ability to speak English as measured by purposeful sampling interviews). This type of study is needed to determine if teachers’ sense of efficacy correlates in statistically significant ways with student learning of English as a foreign language in certain contexts (e.g., language centers in EFL context).

3. More research studies are needed to assess the teachers’ sense of efficacy of teachers of English as a foreign language. The instrument used in this study was designed to measure self-efficacy in EFL teaching for engagement, management, and instructional strategies. However, new studies using additional independent variables are recommended to determine predictors of teachers’ sense of efficacy of English as foreign language teachers in EFL context and elsewhere.

4. Longitudinal studies are also recommended to investigate whether teachers’ perceived efficacy to teach EFL varies across years. It is recommended to follow-up teachers to investigate whether or not and how their efficacy changes over the years.

REFERENCE

Chacón, C. T. 2002. Teachers, sense of efficacy and selected characteristics of selected English as a foreign language Venezuelan middle school teachers, unpublished doctoral dissertation. The Ohio State University, Columbus, Ohio.


Morine-Dershimer, G. 1983. Tapping teacher thinking through triangulation of data sets. Austin, TX: Research and Development Center for Teacher Education, University of Texas at Austin.


