

THE RELATIONSHIP BETWEEN IN-SERVICE TEACHERS' MINDSET TYPES AND THEIR INSTRUCTIONAL STRATEGIES

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Abstract

Mindset is the belief of whether people's abilities can be improved or not. It has been an essential phenomenon in education, and the value of this concept cannot be ignored in teachers' educational career. Teachers' mindset plays a pivotal role in learner achievement and building up self-esteem. On the other hand, there has not been much research done to examine teachers' mindset and teacher efficacy in instructional strategies. Thus, this study aims to investigate the relationship between in-service teachers' mindset types and their efficacy in instructional strategies. 130 EFL instructors who are teaching at the English Preparatory Program from state and foundation universities, which are located in Turkey, participated in this research. Teachers' Self-Efficacy Scale (TSES) and Teachers' Mindset Instrument (TMI) were used as data collection tools. TSES and TMS were found the most trustable and valid tools to measure the teachers' instructional strategies and their mindset. The reliability of the Teacher Mindset Instrument was measured as ($\alpha = 0.79$). The reliability of Teachers' Self-Efficacy Scale was measured as ($\alpha = 0.86$) for efficacy in instructional strategies. Pearson Correlation Analysis and Regression Analysis was conducted to reveal the relationship between teachers' mindset and teacher efficacy in instructional strategies. The results of the study indicate that there is a significant difference between teachers who have a growth mindset and a fixed mindset in terms of using instructional strategies. The teacher efficacy in the instructional strategies is more powerful when the teachers adopt growth mindsets. Researching these two concepts might contribute to teachers' success in the future. Also, this study can shed light on the teacher development programs that universities will offer to their teachers.

Keywords: Mindset, Self-efficacy Beliefs, English Language Teaching

Introduction

In the world, there is an increasing demand for people who have a mastery of the English language. English belongs to the world and mostly non-native speakers – who today far outnumber native speakers. This situation has led many nations to concentrate on teaching English and urge them to discover ideas to implement better English teaching techniques. There are many factors that affect a successful educational process, but Hattie (2012) states that teachers are the biggest and most important contributors to this process. Teachers are responsible for the educational processes of students all over the world and they play an active role in this process. Being a teacher can be defined as a profession that involves carrying out different tasks that are complex and extraordinarily difficult. Effective teachers should know how to cope with the growing problems of the system and adapt quickly to frequently changing applications. Effective teachers are expected to be an expert in their profession and be role-models with their beliefs, attitudes, and behaviors. Teachers' behaviors and teaching strategies are found to be affected by their self-efficacy and their mindset (Bandura, 1977; Dweck, 1999).

Bandura (1977) reveals that self-efficacy belief has an impact on people's motivations, cognitive processes, and behaviors. People with high self-efficacy beliefs persevere more when they face difficulties and they do not give up when they encounter challenges (Tweed, 2013). From an educational perspective, the self-efficacy beliefs of the teachers determine how persistent they will be in planning, organizing, and maintaining their activities (Skaalvik & Skaalvik, 2010). Teachers with high efficacy try to produce new ideas and do not hesitate to apply new methods which will contribute to the learning process of students (Berman et al. 1977, Guskey, 1984; Stein & Wang, 1988). At the same time, these teachers are more tolerant

of students' mistakes in their learning processes (Ashton & Webb, 1986). Also, teachers with high efficacy are more enthusiastic about their profession (Guskey, 1984; Allinder, 1994). There is a positive relationship between teachers' efficacy beliefs and teachers' behaviors and this positive effect contributes to the education system (Podell & Soodak, 1993; Ross, 1994).

Bandura (1994) revealed four sources that make up the self-efficacy beliefs as mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states. Firstly, mastery experiences are the results that people deduce after their own experiences. Mastery experiences are the most important factors of self-efficacy. Successful results of action increase teachers' efficacy belief, however, failures or unsuccessful results reduce teachers' efficacy beliefs. The applicability of this theory into the English teaching area might result in teachers who have achieved their goals with their students in the past can anticipate succeeding with alike insights or methods in similar circumstances in the future (Mehmood, 2019). Secondly, vicarious experiences are the results that people obtain by observing other people. Although people draw conclusions from their own experiences, they can also create self-efficacy beliefs from other people's experiences. For example, a teacher can make inferences by observing another colleague. "When a credible model teaches well, the efficacy of the observer is improved. When the model performs poorly, the efficacy expectations of the observer reduces" (Hoy & Spero, 2005, p. 245). Thirdly, social persuasion is the feedback that people receive as a result of their performance. The feedback teachers receive from their students or supervisors and their performance evaluations with their colleagues are examples of social persuasion (Mulholland & Wallace, 2001). Lastly, physiological and emotional states can be defined as biological situations that people are in. Stress, anxiety, happiness, as well as moodiness of people, can affect their self-efficacy levels. Negative emotions cause self-efficacy levels to decrease (Pajares, 2002).

Tschannen-Moran, Woolfolk Hoy & Hoy (1998) define teacher efficacy as teachers' belief in their own abilities of how successfully they can complete a task. Berman et al. (1977) observed that teachers with high efficacy use new and different methods to increase students' success. Caprara et al. (2006) observed the teachers' self-efficacy and their job satisfaction and

its impact on students' success. When teachers have high self-efficacy beliefs, they also have higher levels of job satisfaction. This situation increased the motivation of the teachers. Accordingly, teachers with higher motivation can offer their students a more successful educational process. Jerald (2007) distinguished some behaviors based on teachers' sense of efficacy. Teachers with higher self-efficacy gave more value to preparation and coordination, were more welcoming to novel approaches and attempted to use new teaching ways and strategies according to the necessities of their learners, were more steady when the course progress did not go as assumed, and they criticized less the learners who made mistakes more frequently than the other learners. Guo et al. (2012) examined the effect of teacher efficacy on teacher behavior and student achievement. According to the study, teachers with high efficacy offered a more positive learning environment and contributed more to the development of their students' skills. Muijs & Reynolds (2015) also observed the relationship between teacher efficacy and teacher behavior. According to the research, teachers' self-efficacy beliefs directly affect teacher behaviors. Tschannen- Moran and Woolfolk Hoy (2001) stated that teacher beliefs determine whether teachers perceive themselves as competent or not in terms of students' learning process outcomes. Teachers' sense of efficacy beliefs is not an assessment of their abilities, but their beliefs about their competencies in specific situations. In this study, Teacher Sense of Self-efficacy scale was used to measure teachers' efficacy beliefs. This scale measures teachers' beliefs in three different areas such as efficacy in instructional strategies, classroom management, and student engagement. Gibson & Dembo (1984) state that teachers who have high efficacy in instructional strategies believe that all students can learn. In order to achieve this, they offer extra effort and different techniques. Teachers who have low instructional efficacy, on the other hand, do not believe in teachers' contribution to the learning process if the students' motivation is low, or they are behind their classmates academically. These teachers give up their students more easily and criticize their failures in their learning process.

Dweck (1999) reveals that mindset can affect people's behavior, motivation, and resilience against setbacks. Mindset is people's belief that intelligence and abilities are either

fixed or developable (Dweck, 2006). Brooks, Goldstein & DeVries (2013) described mindset regarding teachers: “Mindsets are assumptions and expectations we have for ourselves and others that guide our teaching practices and our interactions with students, parents, and colleagues” (p. 74). Dweck (2006) divided the mindsets into two groups such as a growth mindset and a fixed mindset. People with fixed mindsets do not believe that intelligence and abilities can be improved. They believe that they were born with certain capacities and those would not develop with time and effort. Therefore, people with fixed mindsets tend to give up in the face of difficulties and avoid showing the features that they see to be lacking in themselves. On the contrary, people with growth mindsets believe that intelligence and abilities can be improved, so they do not hesitate to take risks in challenging tasks. They give importance to the learning process as they believe that their intelligence and abilities will improve by investing time and effort (Dweck, 2006). The mindsets of teachers affect their purpose and the effort and behavior they will strive for that aim (Webb, 2015). At the same time, the mindset of teachers has a direct impact on students' learning processes and achievements (Mowbray, 2014; Webb, 2015). Teachers with fixed mindsets think that some of the students have skills, while they ignore the ones who do not have the necessary skills. This causes them to focus on the successful students and ignore the unsuccessful ones (Webb, 2015). When English teachers think that their students do not have language skills, this may cause them to ignore some of their students. On the other hand, teachers with growth mindsets perceive their students equally and no matter the level of the students, they believe that their skills and intelligence will improve over time (Dweck, 2006). Teachers with growth mindsets do not hesitate to offer new and challenging instructions when they believe that they will contribute to their students' development process in the classroom. Therefore, the mindset that teachers have affects classroom environments. In their research, Swann & Snyder (1980) investigated the outcomes of teachers' mindset and preferred instruction strategy in the classroom. According to the results of the research, it was revealed that teachers' mindset had a significant relationship with the teaching strategy they practiced. Teachers who thought that intelligence was fixed used fewer efficient methods and usually encouraged students whom they perceived as more intelligent. On the contrary, teachers who thought that intelligence could be developed had used more

efficient teaching practices and assisted learners who had fewer capabilities than other learners. Watanabe (2006) examined the relationship between teachers' mindset and their chosen teaching strategies. The researcher divided teachers into groups and gathered qualitative data from them. Based on the data collected from interviews, an important connection was discovered between the teachers' mindset and the teaching strategies they practiced. The teachers, who had growth mindsets, offered new teaching strategies in line with their students' inadequacies. On the other hand, teachers with fixed mindsets accused the students' capability when they failed. Gutshall (2013) conducted a study with 238 educators and, through a questionnaire, measured how teachers regarded students' skills. Subsequently, teachers were classified into two categories as a fixed mindset and a growth mindset. The researcher presented scenarios to the teachers about the students who were struggling in several aspects of the school but demonstrated positive behaviors during the learning process. As a result of this study, the researcher observed a fundamental link between teachers' mindset and their responses to the scenarios given. The teachers who had growth mindsets thought that the learners' intelligence and skills could be developed over time with effort. However, teachers with fixed mindsets were not interested in students' effort and concentrated mostly on their academic results. Butler (2000) and Plaks et al. (2001) surveyed teachers' beliefs through a questionnaire whether they conceived intelligence as fixed or growth. According to these studies, teachers who thought that intelligence could grow and expand also believed in progress over time. Hence, teachers' mindsets influenced the teaching approaches they employed and their assistance to their learners. While holding a growth mindset had positive outcomes, holding a fixed mindset had disadvantageous effects. Teachers with fixed mindsets tended to generate unfavorable classroom settings. In their classroom setting, errors were not tolerated, and learners who failed were often disregarded. Students with bad performances continued to perform poorly in the classroom of teachers with fixed mindsets. On the other hand, low performing learners had an opportunity to develop themselves, and they could even perform greater with a growth-minded teacher.

Teachers' beliefs influence their performance in the classroom (Lee, 1996; Deemer, 2004; Dupeyrat & Marine; 2005). Educators with growth mindsets consider the learning process and accept challenging learners as a component of this process. They care about the struggles of the learners and recognize the students' errors as part of the learning process (Lee, 1996). Lee (1996) observed teachers' approaches to learners according to their mindset. Teachers with fixed mindsets based their ideas about student performance on intelligence and skill. On the contrary, teachers with the growth mindset were more focused on the strategies, and the struggle learners put into the education process. Teachers with the growth mindset acknowledged mistakes as part of the learning process. On the contrary, those with fixed mindsets explained the errors as hindrances to be eliminated. Teachers who believe that learners have a determined amount of intelligence provide more limited assistance to their learners. Contrarily, when teachers think that intelligence is developable, they are anticipated to present their learners with the required strategies to resolve problems and give more assistance in their learning processes. Besides, since teachers with fixed mindsets do believe that abilities can be developed, their beliefs are comparatively more limited than teachers with the growth mindset for their enrichment to the improvements in students' learning process (Deemer, 2004). That is why they concentrate more on students whom they recognize conceivably better than the others. Overall, teachers should demonstrate their satisfaction when learners make progress, develop, or work laboriously. Therefore, the actual support that learners require is that whatever their current level of intelligence, their teachers' belief in each one of the learners can develop with effort and the right strategies. Teachers and their mindset types become prominent in that sense.

A review of the literature shows that teachers' mindset and self-efficacy have an impact on teacher practitioners. Self-efficacy and mindset may change with the experiences of people (Bandura, 1997; Dweck, 2006). Teachers with high efficacy are aware of their competencies and reflect the positive effects of this on their students (Bandura, 1997). However, Bandura (1997) emphasized that efficacy is variable in different areas. Therefore, teachers who believe that they are proficient in instructional strategies may believe that they do not have the same competence for classroom management. Examining the self-efficacy levels of teachers in the

setting of the university can shed light on the professional developments that school administrations will provide to increase teachers' sense of efficacy. In addition to self-efficacy, teachers' mindset has important effects on the student. Teachers with fixed mindsets believe that intelligence is fixed, so they avoid challenging activities for their students. Teachers who have growth mindsets believe that intelligence can be improved, thus they offer activities to improve their students (Dweck, 2006). Teachers with growth mindsets are more resilient to difficulties and their expectations for their students are equal. Both concepts have an impact on teachers' behavior and classroom teaching techniques. Teacher behavior and teaching methods have an impact directly on student success. Teachers who have a growth mindset and a high efficacy belief also have a higher chance of success. On the contrary, teachers who have fixed mindsets and a low self-efficacy belief can negatively affect student achievement. In this context, it is important to investigate the relationship between teachers' self-efficacy beliefs and mindset. This study focuses on teachers' efficacy in the instructional strategies and their mindset regarding English language teachers. Considering the contributions of teacher efficacy and mindset to teaching processes and education process, examining both concepts becomes mandatory.

Methodology

Research Model

In this study, the Quantitative Research method was preferred because the researcher tried to objectively observe and measure and convey facts numerically (Mertens, 2010). The relationship between the two variables mindset and teacher efficacy in instructional strategies are examined. The participants were contacted by e-mail and asked to complete a questionnaire. The questionnaire employed to the participants includes three parts: demographic information, Teachers' Sense of Efficacy Scale, and Teacher Mindset Instrument. The quantitative data obtained from the questionnaire were analyzed with SPSS v.25 statistical analysis program. Pearson Correlation Analysis and Regression Analysis was conducted to reveal the relationship between teachers' mindset and teacher efficacy in instructional strategies.

Universe and Example

This study was conducted in foundation and state universities in different regions of Turkey. Participants are 130 English teachers who are working in English Preparatory programs of these universities. Teachers who are working in the English Preparatory Programs are a unique population because the mindset and teacher efficacy in instructional strategies have never been studied with this group before. The table below demonstrates the demographic characteristics of the participants.

Table 1. Demographic Characteristics of the Participants

	Groups	N
		%
Gender	Male	36 27,7
	Female	94 72,3
	Total	130 100,0

Place of Work	State University	62
		47,7
	Foundation University	68
		52,3
	Total	130
		100,0

Graduate Department	English Language Teaching	46
		35,4
	English Translation and Interpreting	25
		19,2
	Linguistics	4
		3,1
	English Language and Literature	40
		30,8
	American Culture and Literature	15
		11,5

	Total	130 100,0
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Highest Education Level	Bachelor's Degree (B.A)	71 54,6
	Master's Degree (M.A)	45 34,6
	Doctor of Philosophy (Ph.D.)	14 10,8
	Total	130 100,0
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Training Program Or Certificate	Yes	70 53,8
	No	60 46,2
	Total	130 100,0

Teaching	0-2	8
Experience	2-5	6,2
	5-10	22
	10-20	16,9
	21 +	33,1
	Total	45
		34,6
		12
		9,2
		130
		100,0

As shown in Table 1, out of 130 teachers, 36 (%27,7) teachers are male, and 94 (%72,3) of them are female. 62 (%47,7) teachers stated that they were working in a state university; 68 (%52,3) teachers said that they were working in a foundation university. In terms of the undergraduate studies, 46 (%35,4) teachers studied English Language Teaching, 25 (%19,2) teachers studied English Translation and Interpreting, 4 (%3,1) teachers studied Linguistics, 40 (%30,8) teachers studied English Language and Literature, and 15 (%11,5) teachers studied American Culture and Literature. Concerning the highest level of education, 71 (%54,6) teachers had a bachelor's degree. 45 (%34,6) teachers had a master's degree. 14 (%10,8) teachers had a doctoral degree. As to extra qualifications, 70 (%53,8) teachers stated that they had attended to teacher training or certificate programs, 60 (%46,2) teachers said that they had

not attended any teacher training or certificate programs. Regarding the years of teaching experience, 8 (%6,2) teachers had 0-2 years of experience, 22 (%16,9) teachers had 2-5 years of experience, 43 (%33,1) teachers had 5-10 years of experience, 45 (%34,6) teachers had 10-20 years of experience, 12 (%9,2) teachers had 21 years and more experience.

Data Collection Tools

The questionnaire employed by the participants includes three parts. In the first part, there are questions about the demographic information of the participants such as their gender, workplace, experience in teaching, graduate department, highest education level, and attendance to a teacher training program. The second part consists of questions related to Teachers' Sense of Efficacy (TSES) scale. This instrument tries to find out teachers' perceived self-efficacy beliefs about their teaching competences. Tschannen-Moran and Hoy (2001) developed the Teacher Sense of Efficacy Scale which consists of three factors: efficacy in instructional strategies, efficacy in classroom management, efficacy in student engagement. In this study researcher only focused on teachers' efficacy in the instructional strategies sub-factor. Tschannen-Moran & Hoy (2001) found an alpha of 0.86 for efficacy in instructional strategies (p. 800). TSES short form contains 12 items and determines how much participants agree with the statements through a 9-point Likert scale ranging from (1) nothing to (9) a great deal. A greater score on TSES and subscales implies higher efficacy in one's beliefs in the capability to implement diverse teaching methods successfully. The instructional strategies subscale consists of questions 5, 9, 10, and 12. These questions are:

- To what extent can you craft good questions for your students?
- How much can you use a variety of assessment strategies?
- To what extent can you provide an alternative explanation or an example when students are confused?

- How well can you implement alternative strategies in your classroom? (Tschannen-Moran & Hoy, 2001: 800)

The last part includes questions related to the Teacher Mindset scale (TMI). Teacher Mindset scale measures teachers' mindset through the questions related to teachers' beliefs in their teaching abilities either they are fixed or developable. The teacher Mindset scale was found to have an inter-item correlation ($\alpha = .79$) (Gero, 2013). Each statement in the questionnaire determined teachers' perceptions of skills, whether they agree or disagree with statements through a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The first four questions of the questionnaire were reverse scored. While getting high scores are classified as a growth mindset, low numbers represent a tendency to fixed mindsets. Teacher Mindset Instrument consists of 7 questions. These questions are:

- The kind of teacher someone is, is something very basic about them and cannot be changed very much.

- Some teachers really do not benefit from professional learning because they have a natural ability.

- Teachers can change the way they teach in the classroom, but they cannot really change their teaching ability.

- Some teachers will be ineffective no matter how hard they try to improve.

- No matter how much natural ability you have, you can always find important ways to improve.

- Every teacher, no matter who they are, can significantly improve their teaching ability.

- Teachers can contribute to improving their practice throughout their career (Gero, 2013: 113).

Analysis of Data

The quantitative data obtained from the survey results were analyzed with SPSS v.25 statistical analysis program. Pearson Correlation Analysis and Regression Analysis was conducted to reveal the relationship between teachers' mindset and teacher efficacy in instructional strategies.

Findings

Table 2. Pearson Correlation Analysis Between English Teachers' Mindset and Their Perceived Self-Efficacy Beliefs

Scales	Teacher Mindset Scale
Instructional Strategies	,203
	,005*

According to table 2, there is a positive correlation between teachers' mindset scores and their instructional strategies in terms of their mindset ($p < .05$).

Table 3. Regression Analysis for predicting Teachers' Mindset Scale Scores by Teachers' Sense of Efficacy Scale

Dependent Variable	Independent Variable	B	Standard Error B	Standardized Beta	t
Mindset	Constant	21,306	4,245		5,019
	Instructional Strategies	,354	,140	,203	2,525
$R = ,203$ $R^2 = ,041$ $df: 1/149$ $F: 6,376$ $p = ,013^*$					

In table 3, regression analysis results for predicting Teachers' Mindset Scale scores by Teachers' Sense of Efficacy Scale scores are given. While constructing the regression model, the 'Stepwise' method was preferred. When the results are evaluated, Instructional Strategies subscale scores were found as predictors of Teachers' Mindset Scale scores. The established model has been found to be statistically significant. ($F(1/149) = 6,376$; $p < 0.05$). It has been determined that Instructional Strategies subscale scores explain 4,1% of the variance of Teachers' Mindset Scale scores.

Discussion, Conclusion, Recommendations, and Limitations

As indicated by results, when the teacher efficacy in instructional strategies scores improve, the mindset scores also increase. That is to say, the teacher efficacy in the instructional strategies are more powerful when the teachers adopt growth mindsets. Teachers who have growth mindsets accept that intelligence can be improved (Dweck, 1999). Beliefs of teachers influence their performance in the classroom (Lee, 1996; Deemer, 2004; Dupeyrat & Marine; 2005). Teachers with growth mindsets consider the education process and recognize the challenging students as a component of this process. They heed the efforts of the learners and recognize the students' errors as part of the learning process (Lee, 1996). Accordingly, they do not hesitate to strive to implement a helpful education approach to their learners. Teachers with growth mindsets pursue to find innovative ideas and techniques to reach out to their learners and they base their assumptions about student success on effort and improvement over time (Butler, 2000; Plaks et al., 2001; Rattan, Good & Dweck, 2012). Butler (2000) and Plaks et al. (2001) noted in their study that teachers who had growth mindsets were not judgmental to students' mistakes in the education process. They regarded making mistakes as usual outcomes of learning and they did not neglect unsuccessful students in their classroom settings. Rattan, Good & Dweck (2012) also asserted that teachers with growth mindsets were not judgmental towards unsuccessful students. One of the most important reasons behind this approach can be teachers' high efficacy in terms of instructional strategies. They do not only focus on prosperous students but also the unfortunate ones. Since they try to engage unsuccessful students in the education process, this situation might enhance their efficacy in instructional strategies. So, teachers with growth mindsets have higher expectations in terms of their offering to students' learning processes (Deemer, 2004). Self-efficacy beliefs define how much attempt people will make and how strong they will be to achieve their goals (Bandura, 1977). Therefore, it was witnessed that teachers with higher self-efficacy did not give up in challenging situations and kept their motivation (Pajares, 1996). In this case, these findings are not surprising because it can be said that teachers with growth mindsets do not give up on challenging students and aspire to reach them by promoting new approaches. Swann and Snyder (1980) remarked that teachers' mindset influenced the strategies they applied in the classroom. Teachers who had growth mindsets favored applying different methods and approaches. Watanabe (2006) also reported

that teachers with growth mindsets were endeavoring for suggestions in line with their students' demands. Teachers with fixed mindsets, on the other hand, suspected students' skills when the method they used did not provide to the progress of the students. So, it is not unusual that teachers with growth mindsets have higher self-efficacy beliefs in instructional strategies. However, there are some limitations to this research. One of the constraints of this research is its quantitative scope. A questionnaire is a measurement type where teachers respond based on their thoughts. The study depends on teachers' responses on both the Teacher Sense of Efficacy Scale (TSES) and the Teacher Mindset Scale (TMS). Therefore, there may be discrepancies in the answers given by the teachers between their real behaviors in the classroom and the answers given to the questionnaire. The researcher assumed that teachers would answer to questionnaires most accurately and efficiently. Also, the point that the questionnaires used are self-reporting, they expected teachers to answer truthfully. Therefore, the answers of the participants may have influenced reliability. Participants' feelings and biases when solving the survey may have affected the survey results. The researcher asserted that the participants' data would be kept confidential and therefore acknowledged that they gave honest answers. At the same time, their misinterpretation of the questions in the survey may have changed their answers. This study was carried out solely in universities, and results might have changed in various settings such as high schools, primary schools. This research is also restricted to 130 participants. It can be hard to generalize with only 130 teachers. All these circumstances may have affected the validity of the research. More participants could have participated in raising the effectiveness and reliability of the research.

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